U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Report No.: 89-06/89-06

Docket No.: 50-220/50-410

License No.: DPR-63/NPF-69

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: May 13, 1989 through July 7, 1989

Inspectors: W. Cook, Senior Resident Inspector
R. Temps, Resident Inspector
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Approved by: for William Cook 7/26/89
P. Koltay, Acting Chief Date
Reactor Projects Section No. 1B
Division of Reactor Projects

Inspection Summary:

Areas Inspected: Routine inspection by the resident inspectors of Unit 1 outage activities and Unit 2 power operations, licensee action on previously identified items, plant tours, surveillance testing reviews, maintenance reviews, LER reviews and allegation followup. This inspection involved 372 hours by the inspectors which included 87 hours of backshift inspection coverage and 30 hours of weekend and holiday inspection coverage on June 3, 17, 24, July 1 and July 4.

Results: A violation for inadequate corrective actions in three seperate areas involving both units is discussed in Sections 1.1.b, 1.1.c, 1.1.e, 1.1.g, 2.2.c and summarized in Section 9.a. These three examples are also all repeat violations. Two Unit 1 non-cited violations are discussed for deficiencies in surveillance procedures identified during the development of the TS Matrix Program (Section 1.1). A Unit 1 ESF actuation due to inadequate assessment of

plant impact on pulling control power fuses is discussed in Section 1.1. An update of a Unit 1 open item on fire barrier penetration deficiencies is discussed in Section 2.1. A review of your TS Matrix program is discussed in Section 9. Two Unit 2 non-cited violations are discussed in Sections 1.2.a and 2.2.d concerning missed shift check data and circulating water penetration deficiencies, respectively. A potential Unit 2 violation (unresolved item) regarding operability of Division II service water is discussed in Section 1.2.b.

DETAILS

1. Review of Plant Events (71710, 71707, 93702)

1.1 Unit 1

During this period the unit remained in cold shutdown with the core off-loaded. The licensee continues to follow corrective actions in their Restart Action Plan to support reload of the core. The licensee recently revised their schedule projections for core reload and readiness for restart to August 6 and October 5, 1989, respectively.

On June 21, 1989, the licensee presented an overview of their self-assessment process to be used in their determination of readiness for Unit 1 restart. The presentation was given to members of the NRC's Nine Mile Point 1 Restart Assessment Panel and was held in the Region I Office. Handouts supplied by the licensee at the meeting are attached to this report as Attachment (1).

a. On March 11, 1989, the licensee determined that the vessel isolation signal generated from the Main Steam Line (MSL) radiation monitors was not being tested in accordance with TS surveillance requirements. As described in LER 89-03, the condition was discovered by a consultant performing technical reviews of Technical Specification (TS) required surveillance procedures.

During testing of the upscale trip function of the MSL radiation monitors, three automatic protective functions are generated. One of these protective functions is vessel isolation of various systems including main steam, post accident sampling and emergency condensers. TS surveillance 4.6.2.(b) requires that each trip system shall be tested each time the respective instrument channel is tested. Surveillance procedure N1-ST-W4, "Main Steamline High Radiation Instrument Channel Test", did verify and document that two of the automatic protective functions associated with the upscale trip of the MSL radiation monitors operate properly. However, the vessel isolation function is never verified in the procedure eventhough the vessel isolation function does occur during performance of the test. The omission from the procedure of a sign-off to verify the vessel isolation function was never previously questioned.

As stated in the LER, the cause of the event was a procedural deficiency in that surveillance test N1-ST-W4, in use since 1975, did not document the vessel isolation function on an upscale trip of the MSL radiation monitors. The root cause of the event, as identified by the licensee, was an ineffective management review process of procedures impacting Technical Specifications. The procedure has since been revised to include the vessel isolation function verification.

The inspector determined that prior to 1975, the Operations Department performed a weekly functional check of the MSL Radiation monitor vessel isolation function per surveillance test 3-W-6. However, when the surveillance test was revised in 1975, this portion of the test was inadvertently omitted.

In that the licensee identified this violation, as part of their ongoing and extensive effort to review and verify that TS surveillances are being met, and in accordance with the Enforcement Policy Guidance of 10 CFR 2, Appendix C, Section V.G, no Notice of Violation is being issued for this TS violation. NON-CITED VIOLATION (50-220/89-06-01)

b. On April 30, 1989, it was determined that a fire watch patrol was not maintained in accordance with Technical Specifications (TS) for fire detection zone DA-4237 which had been removed from service. A summary of the events leading to this TS violation are documented in Licensee Event Report (LER) 89-05 and are summarized below.

On April 28, detection zone D-4207, located in the Reactor Building (RB), was removed from service for the performance of a maintenance activity involving welding and grinding. Removal of this detection zone had been arranged ahead of time and the proper administrative procedures were followed to ensure the TS compensatory actions were taken, including tracking of the zone by the Fire Chief to ensure the area was patrolled by a roving fire patrol. Removal of detection zones from service is a coordinated activity involving the Fire Department and the Chief Shift Operator (CSO). The CSO is responsible for the mark-up, (i.e. tagout), and removal from service of detectors once the Fire Chief has initiated tracking and compensatory action.

Subsequent to the removal of zone D-4207 and to prevent actuation of additional nuisance alarms due to this maintenance activity, the CSO was requested to remove zone DA-4237 from service. The CSO removed zone DA-4237 from service and added it to the same tagout for zone D-4207. However, when zone DA-4237 was removed from service compensatory action in the form of a firewatch patrol was not initiated.

Zone DA-4237 was removed from service at 10:10 a.m. on April 28. Eventhough a firewatch was not specifically assigned to patrol this zone, it was coincidentally patrolled as a result of a fire watch patrol instituted for zone D-4267. The firewatch passed through zone DA-4237 in order to cover zone D-4267. However, zone D-4267 was returned to service at 1:14 a.m. on April 30, and the patrol was secured. At 3:30 a.m. on April 30, the Fire Chief noted that zone DA-4237 was removed from service as indicated on his status board, but that it was not being patrolled. At that time he instituted a firewatch patrol to cover zone DA-4237.

The root cause of this event, as described in the LER, was a lack of adequate administrative control governing the addition of a detection zone to an existing mark-up and a breakdown in communication between the CSO and the Fire Chief. At the time the CSO removed the zone from service, the CSO should have informed the Fire Chief so that tracking could be initiated. It was determined that zone DA-4237 was placed on the Fire Chief's tracking board, but how this was accomplished remains unclear. Inspector assessment of this Fire Protection Program violation is discussed further in Section 9.a of this report.

c. On May 17, the licensee determined that a Technical Specification (TS) Fire Protection Program requirement was violated. Contrary to T.S. 3.6.6.a.1, an hourly firewatch patrol was not maintained in an area with inoperable fire detection equipment.

As described in LER 89-06, on May 16, 1989, at 7:50 p.m., fire detection zone DA-2013N was removed from service. Per T.S. 3.6.6.a.1, a firewatch patrol was initiated and sign-in sheets posted in the area. On May 17, two temporary NMPC firewatches received and reviewed their fire patrol assignments, but they failed to notice that a new sheet had been added from the previous day. The new sheet provided a location description similar to a patrol already in existence. Firewatch patrols were made by these individuals at 3:00 p.m. and 3:30 p.m. At 4:21 p.m., a NMPC fire fighter assigned to the patrol for the oncoming shift discovered that the two previous patrols had missed the area.

The root cause of this event, as identified by the licensee, was cognitive personnel error due to a lack of attention to detail. Corrective actions taken are described in detail in LER-89-06. Inspector assessment of this Fire Protection Program violation is discussed further in Section 9.a of this report.

d. On May 22, 1989, the licensee determined that the Primary Containment Vacuum Relief System was not being tested in accordance with TS surveillance requirements. As explained in LER 89-07, TS 4.3.6 requires that all vacuum breakers be tested each refueling outage to determine the force required to open each valve from fully closed to fully open. However, the surveillance procedure used to satisfy this requirement, N1-ST-R3, determines the opening force by manually opening the vacuum breakers using a torque wrench and recording the value at which the vacuum breaker is unseated. The required surveillance force to fully open the vacuum breakers has not been determined or documented in procedure N1-ST-R3.

The licensee is currently developing the Inservice Testing (IST) Program for the Second Ten-Year Interval. Under this program, quarterly full stroke opening force tests of all Vacuum Relief System vacuum breakers will be performed and documented in accordance with procedure N1-ST-024.

Per LER 89-07, the root cause for this event was a procedural deficiency due to an inadequate technical review. Surveillance procedure N1-ST-R3 has been inadequate for meeting TS requirements since its implementation in 1975. Also, periodic reviews since its implementation in 1975 failed to identify the deficiency.

This event was identified by the licensee as part of their ongoing program to review TS required surveillance tests and the technical adequacy of the associated surveillance procedures to meet the TS commitments. In accordance with the Enforcement Policy Guidance of 10 CFR 2, Appendix C, Section V.G, no Notice of Violation is being issued for this TS violation. NON-CITED VIOLATION (50-220/89-06-02)

e. On June 9, 1989, the licensee determined that a fire watch patrol was not established on June 6, 1989, in violation of the plant's Technical Specifications. The root cause of this event was determined to be an inadequate administrative control process governing the request and issuance of fire protection/detection equipment mark-ups. Contributing to this event was the involvement of a third party in the issuance of the equipment mark-up.

The inspector determined that the CSO who issued the mark-up for several fire detectors removed a different detector from service than the one originally requested by the Fire Department. He then failed to adequately inform the fire chief of this change. Therefore, when the mark-up for the detectors was processed, the fire zone associated with the detector that the CSO changed on the mark-up did not have a fire watch patrol assigned to it. The zone was removed from service on June 6, 1989, and the problem was not discovered until June 9, 1989.

Corrective actions included immediately instituting a fire watch for the effected zone. Additionally, on June 11, 1989, a general fire watch patrol was instituted which covers all Technical Specification areas despite whether detection is out of service. Inspector assessment of this Fire Protection Program violation is discussed in Section 9.a of this report.

f. On July 3, 1989, an Engineered Safety Feature (ESF) actuation involving the Emergency Ventilation (EV) system occurred. The event was caused by the deenergization of the process radiation monitors. Loss of power to certain of these monitors will cause EV to actuate. In this instance, the EV fans were in pull-to-lock so that they did not start. However, realignment and isolation of dampers in the system did occur, thus it was considered to be an ESF actuation by the licensee.

Events leading up to the actuation are as follows. On July 2, work was performed in the control room inside the "J" panel to replace embrittled wires associated with the neutron monitoring systems. On the morning of July 3, an Electrical Maintenance worker initiated a mark-up to deenergize circuit No. 4 to support work on a process radiation neutron monitor located in "F" panel. The Station Shift Supervisor (SSS) and Chief Shift Operator (CSO) who reviewed the mark-up focused on the words "neutron monitor" and associated this job with the work done the previous day in the "J" panel and incorrectly instructed that the fuses for circuit No. 4 in the "J" panel be removed.

When the electrician went to perform his work in the "F" panel, his voltage frisks indicated the circuit was still energized. He informed the CSO of the results of his checks and was subsequently shown that the fuses for circuit No.4 had been pulled. The electrician recognized the error and informed the CSO that those were the wrong circuit No. 4 fuses (i.e. "J" panel rather than "F" panel).

The CSO then instructed an auxiliary operator to accompany the electrician and pull the fuses for circuit No. 4 for the process radiation monitors in "F" panel. It was the pulling of these fuses that caused the deenergization of the process radiation monitors and actuation of the EV system. The SSS, CSO and the electrician did not properly determine plant impact of pulling the fuses and did not anticipate the ESF actuation or prevent its function.

The licensee identified the root causes for this event to be poor communications, inattentiveness to detail, complacency and habit intrusion. To address these causes, the licensee had: counseled the individuals involved; clarified the SSS and CSO markup responsibilities; and initiated a Lessons Learned Transmittal to all station personnel on this event. Additional corrective actions include the enhancement of process radiation monitor system drawings and the pursuit of a comprehensive component labeling program at Unit 1.

The inspector had no further questions; however, notes that this is another example where licensee efforts to improve performance, via the Restart Action Plan initiatives, has not been fully successful.

- g. On June 12, the licensee found the turbine building 261 foot level southwest door to the large equipment decontamination room unlocked and open rather than locked shut, as required by procedure. On June 14, the licensee found the radwaste collector filter room unlocked and opened. On June 21, the licensee found the turbine building 261 foot level north door to the large equipment decontamination room unlocked and open. The inspector has observed that the actions taken by the licensee to maintain these high radiation doors locked shut, as required, has been ineffective as demonstrated by the repeat occurrences. In the instances stated above, the licensee has found that the radiation levels in the rooms were less than 1000 mr/hr. In addition, in all cases of high radiation doors being found unlocked or unattended, no personnel excess radiation doses resulted. Inspector assessment of this problem is discussed further in Section 9.a of this report.

1.2 Unit 2

The unit operated at full power throughout this assessment period.

a. During a May 19, 1989, supervisory review of completed shift check logs, the licensee identified two discrepancies that resulted from several multiple coincident errors. One discrepancy involved a missed main steam line (MSL) area temperature reading which was supposed to be logged in procedure N2-OSP-LOG-S001, "Shift Checks Log." This occurred on April 7, and the

onshift review failed to identify this oversight. Additional discrepancies occurred on May 8 and May 9, when the operators recorded the Shutdown Liquid System (SLS) volume and failed to identify that the reading was out of specification per Technical Specification (TS) Figure 3.1.5-1. Onshift review failed to identify this error.

The inspector determined that the MSL area temperature readings before and after the missed reading were within TS limits. The SLS tank level was verified locally and produced an acceptable poison-to-weight percent per TS Figure 3.1.5-1. The inspector concluded that the safety significance of these two events was minimal. However, the inspector had two concerns. These personnel errors coupled with the violation of the minimum number of operable MSL radiation monitors documented in the last inspection report (50-410/89-05) clearly indicate that increased attention to detail is required by the Operations staff. Secondly, the timeliness of the independent review conducted by the Operations Superintendent does not appear to be appropriate for these surveillances. This particular review was performed about 40 days after the shift checks were taken.

The licensee has changed the second review from the Operations Superintendent to the onshift Station Shift Supervisor so that the data receives two independent reviews onshift. More detail of these two events are contained in LER 89-16 and LER 89-17, dated June 20, 1989. The discovery of these TS surveillance violations was the result of corrective actions for previously identified surveillance deficiencies. In accordance with the Enforcement Policy Guide of 10 CFR 2, Appendix C, section V.G, no NOV is being issued. NON-CITED VIOLATION (50-410/89-06-01)

b. On June 13, the licensee discovered that 2HVY*T1S33B temperature switch had a wiring error that would have prevented 2HVY*UC2B (Division II service water bay unit cooler) from automatically starting due to high temperature in the service water bay. The licensee found that the unit cooler was improperly returned to operation with maintenance still to be performed on the temperature switch. This error was caused by an operator who cleared the entire entry, that was in effect for the temperature switch, from the Equipment Status Log when a non-related maintenance item on the unit cooler was completed.

There are two unit coolers per division and each is capable of providing 100% cooling of the space. 2HVY*UC2B was mistakenly returned to service on June 1 and the error went undetected until June 13. During this time period the other division II unit cooler was in a standby condition with the control switch in pull-to-lock and service water valved out. This line up was established in accordance with the applicable operating procedure.

It appears that between June 1 and June 13, there was no operable unit cooler in the Division II service water pump bay, potentially in conflict with the requirements of TS 3.7.1.1. The licensee's investigation continues and will be detailed in LER 89-19. This item will remain unresolved pending further investigation by the licensee and review by the inspector of their investigation and safety assessment of this event. UNRESOLVED ITEM (50-410/89-06-02).

c. On June 30, the annunciator for Division I/II Redundant Reactivity Control System (RRCS) alarmed in the control room. The licensee responded and found the test fault trouble light for Division II was lit. The licensee followed the alarm response procedure and could not reset the test circuit trip. After further evaluation, the licensee determined that RRCS Division II was operable, even with the test circuit anomoly. This was based on discussions with the vender and the satisfactory completion of the quarterly functional surveillance test. At 8:50 a.m. on July 3, the same annunciator reflashed indicating another problem. Again, the licensee followed the alarm response procedure, noted the Division I test fault trouble light was lit and could not reset the test circuit trip. Instrumentation and Controls (I&C) technicians determined that Division I RRCS had the same problem as Division II.

On July 6, following additional troubleshooting by the I&C Department, the licensee determined that Division I RRCS was inoperable due to a bad transistor on a power supply circuit card. The licensee entered a 72 hour Limiting Condition For Operation (LCO) per TS 3.3.4.2.d, since the Division I end-of-cycle recirculation pump trip was rendered inoperable due to the RRCS fault. The licensee backfitted the start of the 72 hour LCO to July 3, which meant the unit had to be placed in STARTUP within the next six hours. The licensee commenced an orderly shutdown and in parallel replaced the bad circuit card. The shutdown was halted at 94% power and the unit was returned to full power once the RRCS Division I was retested satisfactorily and declared operable.

Although there was no TS LCO violation, the inspector was concerned that I&C personnel incorrectly diagnosed the RRCS Division I test fault annunciator caused by the power card failure. The licensee held a meeting with the I&C personnel involved to determine why the card fault was not properly identified on July 3. The licensee found the improper diagnosis was caused by the lack of an adequate troubleshooting procedure and poor communications between I&C Department personnel involved. As corrective action, the licensee is revising the alarm response procedure to include more detailed troubleshooting instructions and has counseled the technicians involved with respect to proper communications. The inspector had no further questions.

2. Followup on Previous Identified Items (92700, 93702)

2.1 Unit 1

a. (Open) Violation (50-220/88-15-01A and B): Failure to install adequate fire seals and failure to establish prompt corrective actions. This violation was identified during an inspection conducted in May 6-24, 1988. An enforcement conference was held with the licensee on July 11, 1988, to discuss the violation, the root causes and the corrective actions.

Part A of the violation described conditions of degraded fire barriers. The fire barriers were degraded because the fire seals in the wall penetrations were not fire rated. Part B of the violation identified the concern that the licensee's corrective actions to identified deficiencies were not prompt or adequate. The NRC emphasized this concern in the letter transmitting this violation. This letter stated that the failure to take prompt and effective corrective action for identified deficiencies is a continuing problem at Nine Mile Point Unit 1 and is an NRC concern.

During the Enforcement Conference and in response to Part A of the violation, the licensee stated that to assure that the installed fire barriers are operable (i.e. the fire seals conform to a tested configuration), they intend to do the following:

-- Revise the fire barrier surveillance procedure;

-- Walkdown 100% of all the fire barriers to identify deficiencies; and,

-- Destructively examine a number of penetration seals to statistically determine the adequacy of the fire barriers.

The destructive examinations were to be done because some of the installed seals were installed early in the plant's life. The concern is that these seals may not conform to the design details. Installation documentation was either inadequate or it did not exist. In response to Part B of the violation, the licensee stated that a Nuclear Engineering and Licensing (NEL) procedure would be issued to define and administratively control the Fire Protection Program to prevent further programmatic deficiencies.

The NRC performed an inspection (50-220/88-32) in this area during the period of October 31 to November 3, 1988. That inspection determined that although the licensee made progress toward resolution of the issues, a significant portion of the work was not yet complete. The specific issues that were incomplete and remained unresolved were:

-- The statistical method to demonstrate that the installed fire seals are adequate and will perform as required;

-- The development of an administrative procedure to address the Fire Protection Program management and implementation (NEL-46 Procedure); and,

-- The corrective actions to address the inadequate and untimely closeout of audit findings.

The licensee, to date, has completed the barrier walkdowns and revised the penetration surveillance procedure. A review of this procedure by the NRC did not identify any deficiencies. The licensee also completed destructive examination of the seals to statistically determine the adequacy of an entire fire barrier. The licensee's objective was to determine, with 95% confidence level, that less than 4% of the installed penetrations may be inadequately sealed.

The licensee's analysis made the following conclusions:

-- Out of 156 seals that were destructively examined, 41 seals did not conform to the design configuration.

-- For the seal design configurations not in accordance with the specified design configuration, only two (2) were considered to be degraded. The thirty-nine (39) remaining seals that did not meet the design configuration were dispositioned as follows:

--- Twenty-five (25) seals were evaluated and were found to be similar to those tested by Underwriters Laboratories (UL) for Nine Mile.

--- Three (3) seals were missing internal conduit seals. The need for internal conduit seals is currently under review by NRC.

--- Thirteen (13) seals were evaluated and all determined by the licensee to be adequate for the potential fire hazards in the area.

This item continues to be open pending completion of the following:

-- NRC review of the NEL procedure (NEL-46). This procedure is currently being developed and was not available for NRC review. This procedure will address the NRC concern regarding inadequate and untimely closeout of audit findings. The licensee's schedule for release of this procedure is July 1989.

-- NRC review of the UL tests performed for Nine Mile.

-- NRC evaluation of the licensee's analysis that installed seal configurations are adequate for the potential fire hazards involved; considering that only 156 seals were destructively examined and 13 of those required an evaluation.

This item remains open.

b. (Closed) Unresolved Item (50-220/88-18-01): Verification of core spray design basis - reference Safety System Functional Inspection Report 50-220/88-201 and multiple unresolved items in that report. The resolution of this open item will be documented in NRC Inspection Report 50-220/89-18 and any outstanding safety concerns will be addressed in that report. This item is closed.

c. (Closed) Violation (50-220/89-04-02): Failure to follow procedures and to obtain procedure changes in a timely manner. The licensee admitted to the violation and considered the infractions as evidence of a lack of personnel awareness of existing procedural compliance requirements. No safety concerns were generated by the incidents noted in this item. To address the apparent lack of personnel familiarity with existing procedural

requirements and to reinforce the need for proper procedure review, approval and compliance, a Station General Order (SGO) was issued. The SGO (89-03) stressed the fact that procedures must always be adhered to except where provided for in emergency situations that would necessitate deviating from procedures in order to protect the health and safety of plant personnel and the general public. Mandatory training on SGO 89-03 was conducted for all site personnel. Verification of the effectiveness of this training was documented in a letter from the licensee's Executive Vice President to the NRC Director of NRR on March 30, 1989.

The inspector considers this corrective action adequate; however, the resident inspectors will continue to closely monitor procedural adherence on the part of the plant employees.

2.2 Unit 2

a. (Closed) Unresolved Item (50-410/88-13-03): Review of licensee evaluation of reactor core flow calibration error impact on Startup Testing results. The inspector reviewed the licensee supplement to the Final Startup Report submitted in a letter to the NRC in a letter dated February 21, 1989. The supplement was submitted as required in corrective action item No. 3 of LER 88-45. As documented in LER 88-45, the core flow at Nine Mile Point Unit 2 was incorrectly calibrated during startup testing such that when indicated flow was 100% the actual core flow was determined to be 104.5%. The supplement evaluated the testing performed after the calibrations were incorrectly performed to identify any additional adverse impacts to the power testing program. Based upon the review of this document, the inspector concluded that the facility had systematically reviewed the startup test program test results and determined that the test results were bounded by the results of the Increased Core Flow Analysis performed at 106% core flow. The inspector has no additional questions at this time. This item is closed.

b. (Closed) Unresolved Item (50-410/87-20-02): Cleanliness plugs were found in high pressure core spray and reactor core isolation cooling differential pressure transmitters' low pressure ports in June of 1987. The inspector reviewed the corrective actions taken by the licensee and found them to be satisfactory. Training Modification Request #187-22 was written which incorporated cleanliness control into I&C technician training. In addition, this event was specifically discussed with all I&C

technicians. The Administrative Procedure for Repair (AP-5.2) describes specific requirements that must be adhered to for cleanliness control. A related material internal cleanliness problem in June of 1987, involving a Reactor Water Cleanup System transmitter sensing line plugged with tape, was deemed to be an isolated case. This item is closed.

c. (Closed) Violation (50-410/89-04-01): A violation was issued for three different examples where station personnel failed to follow procedural instructions. In their response, the licensee admitted to the violation and referenced recent training on procedural compliance as corrective action. The inspectors have noted a large number of procedure changes being issued which is indicative that the procedural compliance training was effective. The inspectors monitor procedural compliance routinely during maintenance and surveillance observations and have identified no significant concerns. This item is closed.

d. (Closed) Unresolved Item (50-410/89-01-01): On February 4, while preparing a computerized list for surveillance testing in response to a previous problem, the licensee identified several discrepancies concerning circulating water system (CWS) flooding penetrations. On June 5, licensee evaluation determined that a substantial safety hazard did exist as a result of the these penetration deficiencies. The licensee used a worst case scenario and determined that in the event of a pipe break, a loss of service water would result in a matter of minutes and the Emergency Core Cooling System pump cubicles would flood in about 1.5 hours. As a result of this scenario, normal and back-up water delivery systems to the reactor would be flooded and become inoperable.

The inspector monitored corrective actions taken by the licensee and found them to be satisfactory. All penetration discrepancies were corrected. To ensure no other similar deficiencies existed in the plant, the licensee reviewed the following pressure barriers:

-- A 25% sample of the penetrations located in safety related flood boundaries other than the CWS flood boundary;

-- A 25% sample of safety related flood boundary walls other than the CWS flood boundary; and,

-- A 8% sample of the high and low pressure airtight boundary seals.

The inspector concluded that the licensee failed to properly implement the requirements of 10 CFR 50, Appendix A, General Design Criterion 4, regarding internal flooding. Further details of this event are documented in LER 89-02, Supplement 1. The licensee identified these penetration deficiencies as part of corrective actions for missed snubber surveillance testing. The corrective actions taken were deemed to be thorough by the inspector. In accordance with the provisions of the Enforcement Policy Guidance of 10 CFR 2, Appendix C, Section V.G the violation is not being cited. NON-CITED VIOLATION (50-410/89-06-03)

On May 31, Engineering Department evaluation determined that a condition reportable per 10 CFR 21 existed and the licensee failed to make the appropriate 10 CFR Part 21 notifications to the NRC. The licensee failed to make a two day oral notification and issued the five day written notification 15 days late, after being prompted by the resident inspectors. The inspector found that the Licensing staff made a bad assumption that a supplement to LER 89-02 would be issued in time to meet the five day requirement. Although the safety significance of failing to comply with 10 CFR 21 time requirements is low, the inspector is concerned that the licensee's corrective actions from a similar violation (50-410/87-02-01) were not effective to preclude recurrence. Further inspector assessment of this issue is documented in Section 9.a of this report.

e. (Closed) Unresolved Item (50-410/86-16-01): During performance of the Integrated Leak Rate Test (ILRT), three of the six humidity sensors failed due to either high particulate level in the drywell or high humidity in the suppression chamber

In response to the problems observed with these dew cells, the licensee issued modification N2Y86MX041, dated February 2, 1987, to relocate the control units of the dew cells outside the primary containment. This modification is scheduled for installation during the first Unit 2 refueling outage (tentatively scheduled for the Spring of 1990). The inspector had no problems with this resolution of the problem. Satisfactory performance of the modified dew cells will be verified by the NRC during the conduct of the next ILRT or during the NRC review of the ILRT results. This item is closed.

f. (Closed) Inspector Followup Item (50-410/86-54-01): Licensee failed to update their emergency planning training record EPMP-3 in a timely manner. The inspector reviewed EPMP-3, Revision 3, dated November 2, 1987, and verified that the attached personnel training record is being updated and maintained on the interval required by the procedure. This item is closed.

g. (Closed) Unresolved Item (50-410/86-54-02): Licensee to evaluate weaknesses in dose assessment and implement corrective actions identified in the October 8, 1986 letter to the NRC. In response to deficiencies noted in chemistry technician training regarding radiological dose assessment, the licensee committed, in a letter to the NRC, dated October 8, 1986, to perform the following immediate corrective actions:

1) Beginning October 2, 1986, three chemistry supervisors, proficient in radiological dose assessment, were put on call to provide immediate assistance to back-shift chemistry technicians;

2) On October 4, 1986, Nine Mile Point Unit 1 backshift chemistry technicians successfully completed refresher training in offsite radiological dose assessment. This training included practical demonstrations of dose assessment and individual performance evaluations; and,

3) Four new Nine Mile Point Unit 1 chemistry technicians were provided similiar training and evaluations by October 10, 1986. These technicians were not used on the backshift until successfully completing individual evaluations of their performance.

As a long-term corrective action to this problem, the licensee committed to provide refresher training in off-site radiological dose assessment to the Nine Mile Point Unit 2 backshift chemistry technicians and to evaluate their abilities in this area. The inspector reviewed licensee internal correspondence File Codes NMP 20331, 21409, 22650 and 24082 and verified that the above commitments were met. This item is closed.

h. (Closed) Unresolved Item (50-410/87-16-01): Acceptability of the licensee's practice of allowing reactor operators to "test out" of various portions of the requalification process. The inspector reviewed NRC Inspection Report 50-410/88-03, dated May 26, 1988, which verified that the licensee no longer allows operators to "test out" of various portions of the requalification process. However, the inspector for report 50-410/88-03 did not administratively closeout this issue. This item is closed.

i. (Closed) Violation (50-410/88-08-01): Pertaining to unqualified Raychem splices identified during the NRC inspection of April 1988. During the May 1988 shutdown, the licensee conducted a walkdown of representative samples of Raychem splices inside containment. No nonconformances were identified. A 100% walkdown of 10 CFR 50.49 EQ transmitter splices was also conducted during which time the licensee identified 24 transmitters as having Raychem splices that did not conform with the qualified seal length specified in the installation procedure E-061A. Qualification for seal lengths less then one inch were subsequently established and documented in Wyle Test Report No. 17655-QSPL-1.0 and -1.1. This item is closed.

j. (Closed) Unresolved Item (50-410/88-08-02): Pertaining to Limitorque operators containing plastic protective caps on the grease relief valves. Three of six Limitorque operators on motor operated valves (MOVs) examined during the NRC inspection were found with plastic caps on the grease relief valves. An inspection conducted by the licensee of all EQ Limitorque operators inside containment and the steam tunnel identified six additional MOVs with the plastic cap on the grease relief valve. The licensee removed all plastic caps and revised the maintenance procedures, N2-EPM-GEN-520 and N2-EPM-GEN-521, to incorporate an additional step (7.5.16 and 7.5.17, respectively) requiring the removal of the plastic cap. This item is closed.

3. Plant Inspection Tours (71707, 71710)

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

During tours of the control room and various portions of the turbine building and reactor building, the inspector did not identify any plant safety or radiological concerns. Housekeeping efforts continue to be adequate.

3.2 Unit 2

During a routine control room tour the inspector questioned a control room operator response to the service water bay flooding annunciator that alarmed. The inspector noted that the operator neither referred to the applicable annunciator response procedure nor took any compensatory actions. The operator stated that the float switch was not

working properly and a work request was issued many months ago. The inspector was concerned that the response to the annunciator was unsatisfactory and discussed this with the SSS for resolution.

The licensee has implemented two enhancements to the control room to create a better environment for the operators. The location of the markup desk has been changed in an effort to limit traffic in the control room. Alarm response procedures have been located on the front of the control panels and are more easily accessible to the operators. The inspector considers these enhancements as good initiatives to help improve overall operator performance.

Housekeeping was noted to be good during this inspection period.

4. Surveillance Review (61726)

The inspectors observed portions of the surveillance testing 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 1

- The inspector observed a chemistry technician obtaining primary samples from the reactor coolant system. No concerns were identified.

4.2 Unit 2

a. On June 6, the inspector observed the performance of electrical maintenance surveillance test N2-ESP-BYS-W65 on the Division 1 batteries. The electricians involved discovered a minor procedural error during a prework review and properly obtained a change. The inspector witnessed checking of electrolytic specific gravity in the pilot cell, electrolytic level in each battery, voltage readings and a check for corrosion on the battery terminals. The electricians used good procedural compliance and were very thorough while performing this work. The inspector identified no concerns.

b. On June 13, the inspector observed the performance of Instrumentation and Controls (I&C) surveillance test N2-ISP-ISC-M005, Monthly Functional Test of the Reactor Vessel Water Level 2 and 1. This procedure was recently reformatted to eliminate the checklist in the back. This ensures that the procedure is directed from the body of the text and eliminates flipping back and forth between the body and the checklist. The inspector

noted two technicians, a foreman and a QC inspector were involved in the performance and oversight of the procedure. The inspector noted excellent verbatim compliance with the procedure. The identification of several minor procedural errors was remedied by the issuance of two temporary change notices. The inspector identified no concerns.

5. Maintenance Review (62703)

The inspector observed portions of various safety related maintenance activities to determine that redundant components were operable, that these activities did not violate the limiting conditions for operation, that required administrative approvals and tagouts were obtained prior to initiating the work, that approved procedures were used or the activity was within the "skills of the trade", that appropriate radiological controls were implemented, that ignition/fire prevention controls were properly implemented, and that equipment was properly tested prior to returning it to service.

5.1 Unit 1

The inspector observed maintenance performed on feedwater heater No. 315, which is part of the high pressure reactor feedwater system. The inspector observed the ongoing work to plug 80 tubes in the heat exchanger per Work Request (WR) 138717. The inspector noted that the WR and related repair procedures were at the job site and being frequently referred to. The worker performing the job was knowledgeable of the job requirements. Proper radiological controls were in effect. The inspector identified no concerns.

5.2 Unit 2

On June 12, the inspector observed corrective maintenance being performed on valve 2SWP*MOV1A per procedure N2-MMP-GEN-238. The mechanical maintenance personnel were preparing to remove the valve bonnet to support replacing the packing and the underside stem seal. The inspector identified some minor procedural compliance concerns. Some preliminary steps in the procedure were not signed off as required by Station General Order 89-03. When questioned by the inspector, the mechanic properly made the applicable signoffs. The inspector determined that the mechanic possessed a good working knowledge of the work instructions. The inspector identified no other concerns.

6. Review of Licensee Event Reports (LERs) (92701)

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 10 CFR 50.72 were applicable, and whether the requirements of 10 CFR 50.73 had been properly met. (Note: the dates indicated are the event dates)

6.1 Unit 1

LER 89-05, Missed Fire Patrol Results in Technical Specification Violation Due to Inadequate Administrative Control. (This LER is discussed in Section 1.1)

LER 89-03, Procedural Deficiency Resulting in Technical Specification Violation. (This LER is discussed in Section 1.1)

LER 89-06, Missed Fire Patrol Resulting in Technical Specification Violation Due to Cognitive Personnel Error. (This LER is discussed in Section 1.1)

- LER 89-07, Failure to Perform a Surveillance Test in Accordance with Technical Specifications Due to a Procedural Deficiency.

6.2 Unit 2

LER 88-57, October 13, 1988, Licensed core power exceeded due to a thermal power calculation error which was caused by a design deficiency.

LER 88-56, October 11, 1988, Reactor Building Ventilation System isolation occurred due to a high radiation signal due to test equipment malfunction.

LER 88-55, October 11, 1988, Primary containment integrity was in a degraded condition due to a design deficiency.

LER 88-52, September 26, 1988, Service water pumps declared inoperable due to non-category 1E relays being used in category 1E circuit.

LER 88-48, September 16, 1988, Reactor water cleanup isolation caused by a high differential flow signal due to a design deficiency.

LER 88-61, October 30, 1988, Engineered safety feature was actuated due to equipment malfunction caused by an undetermined cause.

LER 88-62, December 26, 1988, Actuation of several engineered safety features caused by a loss of offsite power resulting from equipment failure.

LER 88-63, November 3 ,1988, Main steam isolation valve isolation signal occurred during the performance of surveillance testing due to a procedural inadequacy.

LER 88-64, November 4, 1988, Technical Specification violation concerning primary containment penetration conductor overcurrent protective devices caused by installation deficiency by contractor personnel.

LER 88-65 Revision 1, November 23, 1988, Division I and II emergency diesel generators were declared inoperable due to a non-safety related component being installed in a safety related application.

LER 88-66, December 1, 1988, Alternate rod insertion actuation during surveillance testing due to a design deficiency.

LER 88-67, December 2, 1988, Secondary containment isolation and Standby Gas Treatment System initiation when a breaker was opened due to a personnel error.

- LER 88-68 Revision 1, December 3, 1988, Technical Specification violation concerning the Automatic Depressurization System operability requirements caused by a wiring deficiency.

No discrepancies were noted.

7. Allegation Followup (71707)

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

Unit 2

a. Allegation RI-88-A-0082A: Regrading of an individual's training examination was inconsistent and improper. A non-licensed auxiliary operator alleged that one of his examination regrades was improper and inconsistent with respect to other auxiliary operator regrades and resulted in a passing grade being changed to a failing grade. The licensee was requested to investigate this concern.

Following the licensee's investigation, the inspector determined that a review of this individual's training record and completed examinations indicated that the Cycle 9, Week 5, 1987 exam was regraded and the subject individual's exam grade dropped from a passing grade to a failing grade (81% to 61.9%). A grade of 80% correct is the minimum passing grade. The inspector reviewed this exam and other non-licensed operator's exams for Cycle 9, Week 5 and found that the regrading was generally consistent for all operators. The subject individual's exam was discussed with the Training Department instructor who administered the exam. The inspector determined that, although additional partial credit (one additional point) may be given for question No. 3 of the service water portion of the exam based upon an acceptable, but less precise response, the overall exam regrade would still be a failing percentage (71.4%).

It did not appear to the inspector that any inconsistencies in the grading or regrading were conducted for the Cycle 9, Week 5 examination based upon a review of all operator exam responses and respective grading. The allegation was not substantiated. This allegation is closed.

b. Allegation RI-88-A-0082B: Upgrading of non-licensed auxiliary operators from B to C operators was inconsistently and improperly conducted. Information was provided to the NRC staff alleging that during the 1987 time period auxiliary operators were being upgraded without a formal written policy defining the process. In addition, and allegedly as a result of this lack of policy, one individual who supposedly had more experience, knowledge and time in grade was not upgraded while others who were allegedly less qualified were being upgraded. The licensee was requested to review and investigate this allegation. Some additional specific information was provided to the licensee by the inspectors.

The licensee determined via an internal audit of the non-licensed operator on-the-job-training (OJT) program that no formal policy statement existed covering the "grandfathering" or exempting process for those non-licensed operators involved in the training program prior to the INPO Accreditation Program being implemented in April 1987. It was determined by the auditor that an internal memorandum and attached system qualification sheet, made part of each of the "grandfathered" non-licensed operator's training file, provided the only formalized method by which the OJT system signoffs were documented. Operator knowledge of systems, as demonstrated by a verbal examination and as documented per the forms noted above, provides a basis for an operator's upgrade from B to C operator. All of the "grandfathered" operators had these forms in their training files, but supporting systems training records from 1986 and 1987 were, in several instances, found to be insufficient.

Inspector discussions with Operations and Training Department personnel confirmed that no formal written policy was in place documenting the non-licensed operator "grandfathering" process. The inspector determined that the one operator who allegedly was prevented from being upgraded because of this lack of a written policy was, in effect, provided special dispensation so that he may be assessed for upgrade. However, his systems knowledge level was determined to be unsatisfactory for upgrade to C operator.

The inspector discussed the licensee's internal audit findings with licensee representatives and determined that appropriate corrective actions were taken or were planned to resolve the non-licensed operator training deficiencies. The inspector will review final corrective actions in a subsequent inspection period.

The inspector substantiated this allegation with respect to the lack of a formal written policy on "grandfathering" non-licensed operator systems training. The licensee plans to document the "grandfathering" process for historical purposes. The INPO Accreditation non-licensed operator training program is currently in effect. The inspector could not substantiate that, as a result of the lack of a written policy, the individual operator in question or other non-licensed operators were inappropriately upgraded per the "grandfathering" process in effect. On the contrary, the subject individual was determined to have been afforded unique treatment including additional remedial training and management staff assistance to help achieve an upgrade.

As noted above, the inspector will review outstanding corrective actions in a future inspection period. This allegation is closed.

c. Allegation RI-88-A-0082C: Licensed operator on shift while allegedly under the influence of alcohol. Information was provided to the NRC staff alleging that several months ago a Unit 2 licensed operator reported for shift work while under the influence of alcohol. Specifics of the allegation were provided to station management for followup. An investigation by the licensee determined that an incident did occur in late October 1988 involving some alcoholic beverage consumption.

Licensee investigation revealed that after a verbal exchange between a few of the operators in the shift crew's break area prior to shift turnover, the accused individual discussed his situation and the break area confrontation with the Station Shift Supervisor (SSS). The SSS observed the individual's behavior and satisfied himself that the individual was not under the influence or impaired by alcohol.

The individual admitted to consuming alcoholic beverage with dinner several hours prior to reporting for work. However, to be conservative, the SSS kept the offgoing watchstander on duty and the accused individual remained on shift assisting with routine control room activities.

The inspector finds the licensee's actions to have been appropriate and in accordance with their fitness for duty policy in effect at the time. The licensee's policy states, in part, that no employee will report to work under the influence of alcohol and shall not consume alcohol on or offsite during the work day. The allegation was not substantiated. The inspector had no further questions. This allegation is closed.

8. Unit 1 Technical Specification Matrix Program (61726)

In this report, as well as previous reports (50-220/89-04 and 05), several non-cited violations have been issued for the failure of certain surveillance test procedures to satisfy minimum Technical Specifications (TS) requirements. These surveillance deficiencies have all been identified by the licensee as a result of their commitment in the Restart Action Plan (RAP), Restart Corrective Action 1.2.3, to perform the following:

-- Develop a controlled and consolidated matrix showing implementing procedures and assigned responsibilities for all TS test requirements; and

- Develop and implement procedures that are determined to be missing.

As a result of this commitment, the licensee is in the process of developing a TS Matrix Program. This program, when complete, will ensure that all TS required surveillance tests are covered by applicable procedure, and that the procedures have all been reviewed for technical accuracy with respect to the TS test requirements. Additionally, the TS Matrix provides a method for tracking the required periodicity of the surveillance tests and should preclude missed surveillance tests in the future.

As stated earlier, the licensee is in the midst of a comprehensive program to develop the TS Matrix and to review existing surveillance procedures. The program is being managed by NMPC site personnel with extensive use of contractors to review the unit's surveillance procedures for technical accuracy. The results of these reviews, to date, have identified several procedures which were deficient, as documented in LERs 89-01, 03, 04 and 07. It is probable that other deficiencies will be identified as the TS Matrix Program proceeds.

As a result of this program, the licensee also identified the need to address problems identified with channel functional testing and instrument calibrations at Unit 1. To address this problem area, the licensee developed their Channel Functional Test Procedure Improvement Action Plan. The plan lists actions and reviews for effected procedures to be performed prior to reload and restart and also lists actions after restart.

The inspectors have reviewed and discussed these programs with the licensee. Both programs appear comprehensive in nature and appear to address past deficiencies. The program managers are technically competent and are receiving the necessary support and resources to properly develop and implement their plans. The fact that deficiencies in surveillance tests are being identified and corrected indicates that that portion of the program is working. However, complete evaluation of the effectiveness of these programs cannot be determined until they have been fully implemented for a period of time. The inspectors will continue to monitor progress in this area.

9. Assurance of Quality (30703, 40500)

a. During this inspection period, three areas were identified where licensee corrective actions were either inadequate, improperly implemented, untimely, or not effectively enforced resulting in the recurrence of the same problems.

One area involves three Technical Specification (TS) violations of the Unit 1 Fire Protection Program on April 30, May 17 and June 6, 1989. These events are evidence that your corrective actions in response to previous similar events were inadequate. Specifically, Inspection Report 50/220-88-08 issued a violation against 10 CFR 50, Appendix B, Criterion XVI as a result of a TS violation on April 27, 1988, involving failure to establish a fire watch patrol. This violation referenced a previous violation of the Fire Protection Program at Unit 1 on October 27, 1987.

A review of these two events revealed that they were caused by either personnel error due to miscommunication between the CSO and Fire Chief or as a result of cognitive errors on the part of individuals performing fire watch patrols. Review of LERs 87-20 and 88-02 and licensee response to violation 50-220/88-08-01, (referenced above), indicates that the corrective actions to address these root causes were ineffective. As documented earlier in Sections 1.1.b, c and e, the causes for these violations were the same.

A second area where the licensee's corrective actions were inadequate involves the frequent inability to maintain locked high radiation area gates locked shut. Since August of 1988, the licensee has found ten locked high radiation area gates open at either Unit 1 or 2. Technical Specification violations resulted in three of these cases, in that the radiation levels were subsequently determined to be greater than 1000 mr/hr. The inspectors acknowledge that recent corrective action to require double verification of the doors being left locked appears effective. However, based upon the untimely resolution and repetitiveness of the problem, the inspectors conclude that your performance was less than adequate. (Reference Section 1.1.g)

The third area where the licensee's corrective actions were inadequate concerns a repeat instance to comply with the reporting requirements of 10 CFR Part 21. This problem was the subject of a previous violation (50-410/87-02-01). The inspectors are concerned that a contributing factor to this problem is the poor communications between both the Licensing staff and station personnel and the Licensing staff and the inspectors. (Reference Section 2.2.d)

Although each of these examples are of relatively low safety significance and were all, but one identified by the licensee, the inspectors are concerned that collectively they indicate that the licensee's root cause analyses and corrective action processes are still not totally effective. It appears that in these incidences the corrective actions were too narrowly focused. In that the examples stated above are indicative of ineffective and untimely corrective actions resulting in repeat violations; collectively, they represent a failure of the licensee to comply with 10 CFR Part 50, Appendix B, Criterion XVI and the licensee's Quality Assurance Program, QATR-1. VIOLATION (50-220/89-06-03).

b. The inspectors note an improving trend in performance for routine operations of Unit 2. This is based on your current Unit 2 record run for continuous operation and no recent inadvertent engineered safeguard features actuations. However, closer attention to detail is required to prevent errors such as missed shift check data and to meet component operability requirements. (Reference Section 1.2.b.)

10. OTPAC Meeting Review (71707)

On June 15, 1989, the inspector attended the Operators Training Program Advisory Committee (OTPAC) meeting on site. This was the nineteenth meeting of the committee and was well attended by both Training and Operations Department staff. The inspector observed good participation by all personnel in attendance. The discussions of old and new business, as well as, comments and criticisms appeared to be uninhibited and actively pursued to appropriate resolution. The inspector found the meeting to be a constructive medium for resolution of inter-departmental concerns.

11. Exit Meetings (30703)

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.

ATTACHMENT 1 TO
CIR.50-220/89-06 AND
50-410/89-06

PRESENTATION
TO
NRC RESTART PANEL

NIAGARA MOHAWK's
SELF ASSESSMENT PROCESS

JUNE 21, 1989

AGENDA

10:00

INTRODUCTION L. BURKHARDT

10:10

NMPC's SELF ASSESSMENT E. HOFFMAN

Staff Director (VP–Eng)

PEOPLE (Panel / Assessors)

PROCESS

INTERIM RESULTS

10:55

SUMMARY L. BURKHARDT

ASSESSMENT APPROACH

RESTART REVIEW PANEL
SUPPORT STAFF

RESTART REVIEW PANEL

Name	Position or Company
Larry Burkhardt III	Executive VP Nuclear Operations
Jim Perry	VP Quality Assurance
Joseph T. Ash	VP Consumer Services
Donald P. Hall	Illinois Power Company (VP - Nuclear)
Joseph Hendrie	Consultant
Roger Kober	RG&E (President)

ASSESSORS

- INDEPENDENT OF TASK
- KNOW SUBJECT
- AVAILABLE TIME
- NMPC + NON-COMPANY RESOURCES

ASSESSORS

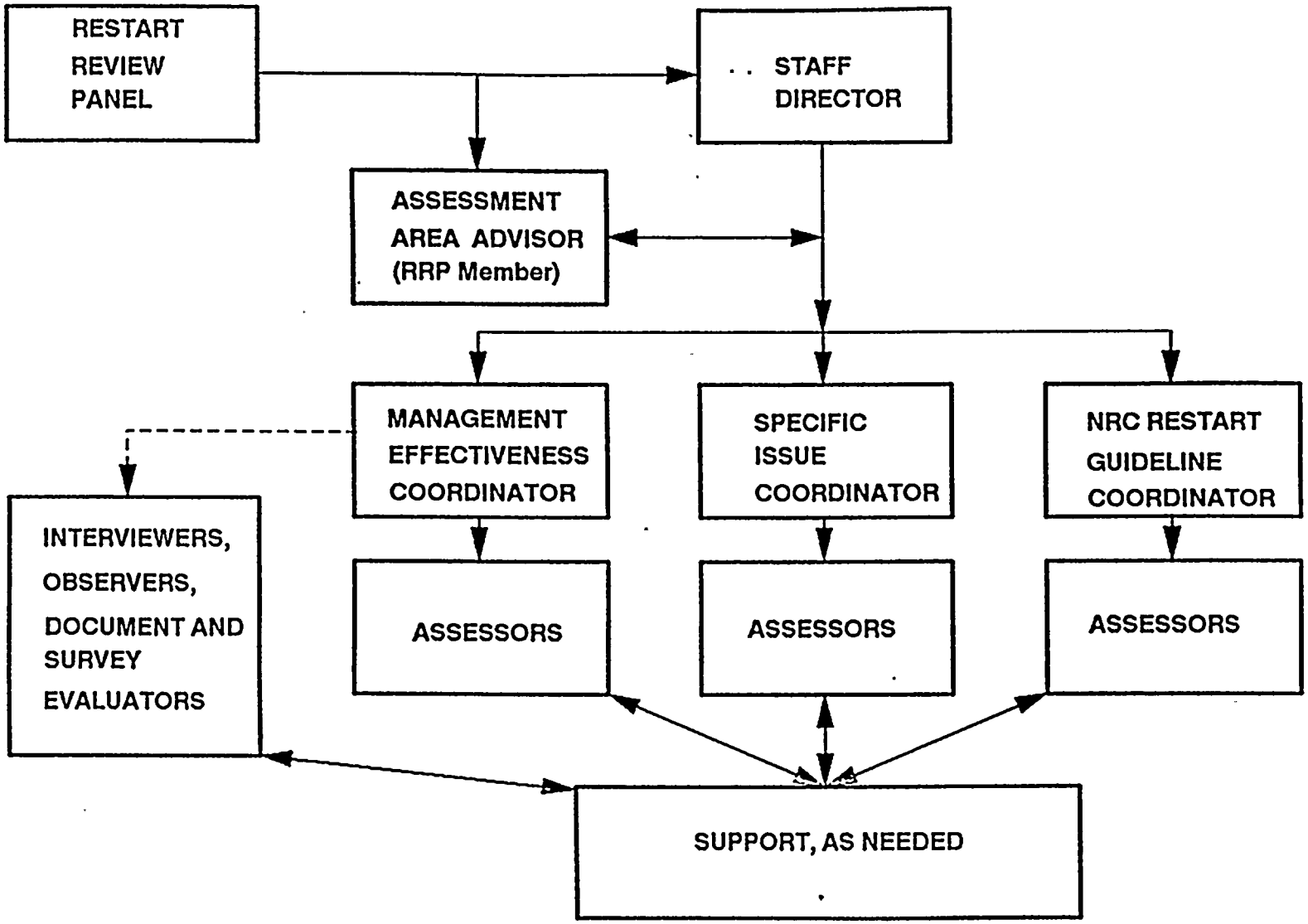
Name	Area	Position or Company
Angela Bernat	U5	Manager - Information & Client Svcs
Robert Cushman	SI-8	Sr. Engineering Specialist
William D'Angelo	SI-12	Manager - Nuclear Consulting Svcs
Dick Daleke	U3	Management Analysis Company
Ronald Halsey	SI-12,18	Manager - System Protection Eng
Larry Kammerzell	C-SI	Integrated Management Solutions
Frederick Lange	U1	Manager - Business Planning
Joseph Larizza	SI-2	Rochester Gas & Electric
Joseph Leone	U4	Manager - Corporate Performance Svcs
Charles V. Mangan	SI-1,6,14	Sr. Vice President - Nuclear
Joseph Martore	C-NRC	Tenera
Glenn Niblock	SI-5,7,10,11,16	Tenera
Dan O'Hara	SI-13	Nuc. Security Compliance Director
Dave Palmer	SI-17	Manager Non Nuc.-QA Operations
Bruce Rogers	N2,3	Tenera
Thomas Roman	SI-9	Ass't. to V.P. Nuclear Eng. & Lic.
Hans Schierling	N4	Tenera
Joseph Schwab	SI-15	Structural Engineer
Anthony Tome	SI-3,4	Tenera
A. J. Tudury	C-U	Management Analysis Company
Richard Vollmer	U2	Tenera
Linda-Zimmerman	U4	Director - Corp. Performance Svcs

INTERVIEWERS

Name	Position or Company
Jacqueline Beijen-Lukens	Procedure Development Coordinator
Daniel Cifonelli	Mod. Engineering
Lucia Edmonds	Management Analysis Company
Dorothy Gasparro	Management Analysis Company
Michael Goldych	Supervisor - HPES
Jerry Hans	Analyst - Corporate Perf. Svcs.
Libby Keating	Management Analysis Company
John Laffrey	Nuclear Compliance & Verification
Court Lilly	Employee Communications
David Pendergast	Management Analysis Company
Charles Pillar	Consulting
Anthony Zallnick	RRP Staff

0624Y

ASSESSMENT ORGANIZATION



ASSESSMENT MATRIX

REV #1 May 3, 1989

TOPIC	TASK MANAG-ER/ SPONSER		PRIMARY ASSESSOR		PRIMARY PANEL ADVI-SOR					COORDINATOR		
					JA	DH	JH	RK	JP	AJT	LK	JM
U1 Planning/Goals	Stuart		Lange			P				X		
U2 Problem Solving	Terry		Vollmer			P				X		
U3 Culture	Willis		Daleke		P					X		
U4 Self-Assessment	Peifer		Leone/ Zimmerman			P				X		
U5 Teamwork	Dahlberg		Bernat		P					X		
S1 Outage Management	Tessier		Mangan					P			X	
S2 Operator License	Randall		Larizza					P			X	
S3 EOP	Randall		Larizza					P			X	
S4 ISI	Yaeger		Tome				P				X	
S5 Commercial Grade	Pace		Niblock						P		X	
S6 Fire Barrier	Finnerty		Mangan				P				X	
S7 Torus Wall	Francisco		Niblock						P		X	
S8 Scram Discharge	Francisco		Cushman						P		X	
S9 APP. J	Francisco		Roman		P						X	
S10 Reactor Vessel Press/Temp Curves	Francisco		Niblock						P		X	
S11 Erosion/Corrosion	Marshall		Niblock						P		X	
S12 MG Battery	Skow		Halsey/ D'Angelo						P		X	
S13 Tech Allegations	Perry		OHara				P				X	
S14 SSFI	Klosowski		Mangan				P				X	
S15 Cracks in Walls	George		Schwab						P		X	
S16 Feedwater Nozzles	Yaeger		Tome						P		X	
S17 IST	Pasternak		Palmer				P				X	
S18 125 VDC	Jakubowski		Halsey		P						X	
M1 Root Causes	Terry		Martore		P							X
M2 Mgmt Org.	Stuart		Rogers			P						X
M3 Plant & Support Staff	Willis		Rogers					P				X
M4 Plant Readiness	Dahlberg		Roman/ Schierling					P				X
M5 Reg Requirements	Wilczek		Martore				P					X

P - Indicates Primary Panel Contact
X - Indicates Assessment Coordinator

Panel Members
L. Burkhardt
J. T. Ash
D. P. Hall
J. Hendrie
R. Kober
J. A. Perry

Coordinators
A. J. Tudury
L. Kammerzell
J. Martore

STAFF DIRECTOR
E. Hoffman

OVERALL PROCESS

ASSURE MEETING RAP COMMITMENTS

COMPLETE CORRECTIVE ACTIONS

VERIFICATION

MANAGEMENT REVIEW – SORC/SRAB

RESTART REVIEW PANEL

EXECUTIVE REVIEW

RESTART REVIEW PANEL
SELF-ASSESSMENT

EFFECTIVE SOLUTIONS

PRIMARY FOCUS:

RAP: COMPLETE

NIP: BRIDGE

SECONDARY FOCUS:

INPO/NRC REPORTS

WHEN READY?

BASES

DESCRIPTIONS OF DESIRED STATES

TARGETS

GUIDES TO JUDGE IF STATE ACHIEVED

(Targets Set Higher Than Minimum For Restart)

BASES / TARGETS

(EVOLUTION)

STAFF DIRECTOR & COORDINATORS

ASSESSORS

LINE MANAGEMENT

RESTART REVIEW PANEL

ASSESSOR WORK PLANS

OBSERVATIONS

INTERVIEWS

DOCUMENTATION REVIEW

CALCULATION REVIEW

ADDITIONAL EXPERTISE

RESOLUTION OF QUESTIONS

REPORT TO PANEL

ASSESSMENT ACTIVITIES

ASSESSMENT PLANS—MID APRIL
INITIAL FINDINGS — FEEDBACK
INTERIM REPORTS — LATE MAY
RESOLUTION OF CONCERNS
ADDITIONAL ASSESSMENTS — MID JUNE
ASSESSMENTS CONTINUE UNTIL TARGETS ACHIEVED

PANEL MEMBER ACTIVITIES

ASSESSMENT PLAN REVIEW/COMMENT
LINE MANAGEMENT FEEDBACK
PLANT TOURS – FOCUS ON ADVISOR AREAS
OBSERVATIONS – TRAINING / MEETINGS

PANEL MEETINGS

APRIL 13: INTRODUCTION — BASES/TARGETS

APRIL 25, 26, 27: TASK MANAGERS — STATUS
ASSESSORS — PLANS

MAY 19: BOARD NUCLEAR OVERSIGHT COMMITTEE

JUNE 5, 6: COORDINATOR — STATUS OF SI's
ASSESSORS/SENIOR STAFF — STATUS OF URC's

INTERIM RESULTS

SPECIFIC ISSUES
INTERIM ASSESSMENT
(AS OF 6/5/89)

ASSESSOR CONCERNS
ASSESSOR QUESTIONS
GAPS: RAP CA's — TARGETS

RESOLUTION: TASK MGRS — ASSESSORS

SPECIFIC ISSUE ASSESSMENT
STATUS REPORT TO RESTART PANEL (6/5/89)
CORRECTIVE ACTION STATUS

	SPECIFIC ISSUE	TOTAL # CORRECTIVE ACTIONS	# OF C/A CLOSED WAITING VERIFICATION	# OF C/A CLOSED & VERIFIED	# OF C/A SORC ACCEPTED
	S1 Outage Management	5	0	0	0
*	S2 Operator License	17	9	4	4
*	S3 EOP	19	8	6	0
	S4 ISI	16	5	4	0
*	S5 Commercial Grade	3	0	0	3
	S6 Fire Barrier	18	0	0	0
	S7 Torus Wall	4	0	0	4
	S8 Scram Discharge	3	3	0	0
*	S9 APP. J	2	1	0	0
	S10 Reactor Vessel Press/Temp Curves	2	0	0	2
	S11 Erosion/Corrosion	3	0	3	0
	S12 MG Battery	6	2	0	0
	S13 I&C Tech Allegations	4	1	0	0
	S14 SSFI	27	0	0	0
*	S15 Cracks in Walls	4	0	2	0
*	S16 Feedwater Nozzles	3	0	0	3
	S17 IST	5	0	0	0
	S18 125 VDC	3	0	0	0
	TOTAL AT STATUS POINT	144	29	19	16
	TOTAL AT OR BEYOND POINT		64	35	16
	% AT OR BEYOND STATUS POINT		44%	24%	11%

* *SPECIFIC ISSUES AT STATUS SUPPORTING READINESS FOR RESTART*

UNDERLYING ROOT CAUSES
(MANAGEMENT EFFECTIVENESS)

PLANNING — ACCEPTABLE
CONTINUE WORK ON PRIORITY SYSTEM
PROBLEM SOLVING — MARGINALLY ACCEPTABLE
CONTINUED EMPHASIS ON CLOSURE
CULTURE — NOT YET ACCEPTABLE
DEMONSTRATE PEOPLE SKILLS
STDS OF PERF / SELF ASSESS — NOT YET ACCEPTABLE
ESTABLISH IAG + DEPT's SELF ASSESSMENTS
TEAMWORK — NOT YET ACCEPTABLE
WORK TO REMOVE SPECIFIC BARRIERS

OVERALL IMPROVEMENT + POSITIVE MOMENTUM
ACCEPTABILITY WITHIN REACH

NRC Guidelines

Interim Assessment

#1 Root Causes Identified and Corrected

*Targets: 1.a - X 1.b - Y 1.c - Z

#2 Management Organization

Targets: 2.a - Y 2.b - Z 2.c - X

#3 Plant and Support Staff

Targets: 3.a - Z 3.b - Z 3.c - Z

#4 Physical State of Readiness of the Plant

Targets: 4.a - Y 4.b - Y 4.c - Y

4.d - Y 4.e - X

#5 Regulatory Requirements

Targets: 5.a - Y 5.b - Y 5.c - Y

*Refer to targets on final page of the Bases and Targets Matrix

Rating

X = Process/plan not completely in place to achieve restart target

Y = Process/plan in place to achieve restart target

Z = Restart target achieved