

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Report Nos.: 50-220/89-07  
50-410/89-07

Docket Nos.: 50-220  
50-410

License Nos.: DPR-63  
NPF-69

Licensee: Niagara Mohawk Power Corporation  
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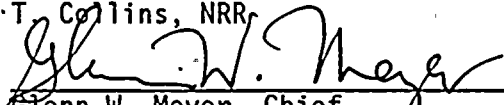
Facility: Nine Mile Point, Units 1 and 2

Location: Scriba, New York

Dates: July 7 through September 6, 1989

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10-11-89  
Date

Inspection Summary:

Areas Inspected: Routine inspection by the resident inspectors of station activities including Unit 1 outage work and Unit 2 power operations, licensee action on previously identified items, plant tours, safety system walkdowns, surveillance testing reviews, maintenance reviews, LER and special report reviews, and allegation followup.



Results: The inspectors did not identify any violations. Major activities which occurred this inspection period at Units 1 and 2 are discussed in Section 1. Tours of the radwaste buildings and high radiation areas on site are discussed in Section 3. Several examples of poor radiological work practices at Unit 1 are discussed in Section 3.1.b. Section 4.1 discusses a problem with in-service testing of the RBCLC system at Unit 1. Section 6.1 contains an unresolved item at Unit 1 resulting from a safety system walkdown of the Emergency Ventilation System. Final resolution of the Core Spray "spider-cracking" issue is discussed in Section 2.1.a. A personnel error made while establishing a markup at Unit 2 that resulted in a power reduction is discussed in Section 1.2.a. Four non-cited violations concerning Unit 2 are discussed in Sections 2.2 and 7.2. An allegation concerning drawing controls at Unit 2 is discussed in Section 9.



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## DETAILS

### 1. Review of Plant Events

#### 1.1 Unit 1

The reactor remained shutdown and defueled throughout the report period. The licensee continued to pursue efforts to support core reload in the near term. Projected reload and restart dates as determined by the licensee at the end of the period were September 15 and November 14, respectively.

Significant NRC activities during the report period were:

- a. A meeting was held on site July 26 and 27, of the NRC Restart Panel. Major topics of discussion were the licensee's final revision to their Restart Action Plan (RAP) and a preliminary look at the licensee's Power Ascension Test (PAT) program.
- b. On August 22, an Augmented Inspection Team (AIT) was dispatched to the site to investigate the licensee's use of a sub-basement in the old radwaste building for storage of a mixture of water and spilled radioactive resin beads and sludge. The team exited on the morning of August 28, and a press conference was held that afternoon to report the preliminary findings of the inspection. Finalized inspection findings will be reported in Inspection Report 50-220/89-24.
- c. A public meeting was held on August 23, at the Oswego Middle School. The purpose of the meeting was to receive comments on the licensee's RAP as to its scope and its effectiveness in addressing previous performance problems at the site.
- d. On August 28, Commissioner Curtis visited the site to meet with the resident inspectors, licensee personnel and to complete a tour of both units.

#### 1.2 Unit 2

The unit operated at power throughout this assessment period.

- a. On July 23, 1989, the licensee commenced lowering power in response to an apparent decreasing generator hydrogen pressure. Hydrogen is used as the cooling medium for the generator. The power reduction was terminated at 60 percent when the operations staff realized the low pressure was the result of a system mark-up that was being hung, which removed hydrogen pressure indication in the control room. Although indication was lost, hydrogen cooling was never lost to the main generator.





The mark-up being hung was technically correct with respect to the isolation required for work and personnel safety; however, the operations staff did not understand the plant impact of the mark-up. The licensee issued a lesson learned transmittal dated July 27, 1989. The inspector reviewed the lesson learned document and found it to be thorough and well written. Inadequate plant impact review of system mark-ups has been an infrequent, but continuing concern over the past year. Licensee actions, to date, have not been totally effective. The inspector will continue to closely monitor licensee actions to resolve this concern.

- b. During the weeks of July 17 and July 24, 1989, the NRC conducted a Unit 2 requalification program evaluation in accordance with Revision 5 to NUREG-1021. The licensee's requalification program was determined to be unsatisfactory, because 4 of 12 reactor operators and 5 of 12 senior reactor operators failed at least one portion of the examination. Two of six crews were found to be unsatisfactory, and the program exhibited numerous other weaknesses.

The exit was held in the Region I office on July 31, 1989. The licensee provided a justification for continued operation of Unit 2 during remediation of the individuals who were failed by the NRC. These individuals will not be returned to licensed duties until they have been successfully re-examined by the NRC. The licensee issued a requalification program action plan which included nine specific issues and related corrective actions. An additional requalification examination was conducted during the week of July 31, 1989, for five other individuals. The crew was determined to be satisfactory with one failure on the written examination.

In response to the individual failures, the licensee changed from their normal six shift rotation to a modified four shift rotation consisting of 12 hour watches. The licensee committed to staffing one additional senior reactor operator (SRO) to the two required by Technical Specifications (TS) on each crew. The purpose of the third SRO is to assist in the emergency planning activities, thus permitting the Assistant Station Shift Supervisors more time to perform their Shift Technical Advisor oversight duties.

Inspection Report 50-410/89-12, issued on August 23, 1989, identified the specific concerns with the licensee's requalification training program.



- c. On August 16, the licensee was performing local leak rate testing of containment vent and purge line isolation valves. The leakage rate test results for 2CPS\*AOV105 were unsatisfactory, and the licensee took action to isolate its penetration in accordance with Technical Specification (TS) Limiting Condition for Operation (LCO), action statement 3.6.1.7.a, until the valve could be repaired and retested.

Because valve 2CPS\*AOV105 has a resilient seating surface, an additional TS action statement, TS 3.6.1.7.b, was applied by the licensee. TS action statement 3.6.1.7.b was considered to be overly restrictive by the licensee as it required a unit shutdown if the valve was not repaired within 24 hours. Accordingly, the licensee entered the LCO action statement and, in parallel, sought clarification from the NRC staff. NRC Headquarters specialists were contacted by the Region I staff, and the licensee's interpretation was concurred with (isolation of the penetration is sufficient until the failed isolation valve is repaired).

However, concurrent with seeking TS clarification, the valve was repaired, tested and returned to service. The valve was returned to service just outside the 24 hour time limit specified by TS 3.6.1.7.b. The inspector considers the licensee actions conservative and appropriate in attempting to resolve this TS concern.

Subsequent to the end of the inspection period, the NRC Headquarters staff reconsidered their August 16 interpretation of TS 3.6.1.7.a. and b. They concluded that action statement of 3.6.1.7.b. should be followed without consideration for compensatory action taken per action statement 3.6.1.7.a. Written clarification of this interpretation is expected to be provided to the NRC Regional staffs in the near future.

In preparation for potential future failures of resilient seat containment isolation valves, the licensee has increased their warehouse inventories of replacement parts and has staged the necessary repair/replacement equipment for more expedient repairs.

## 2. Followup on Previous Identified Items

### 2.1 Unit 1

- a. Inspection Reports 50-220/88-19 and 89-02 discussed the "spider cracking" (i.e., transgranular surface cracking caused by chloride contamination) issue in the core spray piping at Unit 1. Those reports stated that a subsequent inspection report would discuss final corrective actions and their results. The



inspector reviewed a Summary Report, "Reactor Core Spray System Chloride Crack Repairs," which documents the extensive measures taken to investigate the problem, the repair methodology to correct noted deficiencies and the final outcome of the repair work.

Inspector review of the report indicated the following:

- As part of their investigation, the licensee conducted extensive (i.e., exceeded the requirements of ASME Section XI) penetration test (PT) examinations to identify any indications.
- Results of these exams indicated that the core spray system has not been significantly contaminated with chlorides. The source of original chloride contamination at the integral attachment welds was attributed to the use of weld spatter tape or ink markers during original construction.
- None of the other three systems inspected (similar in design, construction, and environment to the core spray system) showed any signs of chloride contamination cracking.
- All repair work was successfully completed. No problems were encountered with the weld repairs or reinstallation of previously removed integral attachments.

Overall, the inspector's assessment of this issue was that it was properly handled in a competent and timely manner. The decision to look at other systems similar to core spray to determine if the same problem existed is an example of sound and conservative engineering judgement. Also noteworthy were the special precautions taken in the chloride removal, grinding and weld repair procedures instituted by the Nuclear Design group. The inspectors consider Niagara Mohawk's corrective actions acceptable for resolution of this issue.

- b. (Closed) Unresolved Item (50-220/89-02-01): Licensee to perform an additional onsite audit of Special Nuclear Materials (SNM) and implement corrective actions to prevent a loss of SNM such as was reported to the NRC on February 11, 1989.



In response to the finding that five (5) fission chambers, containing a total of 8.4 milligrams of U-235, were lost, the licensee completed a physical inventory and segregated all SNM stored in the Filter Sludge Room. All of the detectors were accounted for (with exception of the previously mentioned five lost detectors which are presumed to have been inadvertently disposed of in a low level radioactive waste shipment). All used detectors have since been relocated to another designated storage location.

The licensee has undertaken a series of corrective actions to prevent a recurrence of this event. The inspector reviewed the list of these actions, which include Reactor Analyst and I&C Departments' procedure revisions, relocating the detectors to another room and improving markings on the items.

The loss of the five (5) detectors is a violation of 10 CFR 70.51 regarding SNM control and accountability. However, under the NRC enforcement policy embodied in 10 CFR Part 2, Appendix C, a Notice of Violation will not be issued because it was identified by the licensee, reported to the NRC under the requirements of 10 CFR 70.52, was of minor safety significance and was adequately addressed by the licensee with extensive corrective actions to prevent a recurrence. The loss of this small amount of SNM does not pose a threat to the public health and safety or national security, particularly since the material was, most probably, disposed of as low level radioactive waste at an NRC approved burial facility. NON-CITED VIOLATION (NCV) 50-220/89-07-01.

- c. (Closed) Unresolved Item (50-220/88-80-02): Licensee to address the items of concern raised by the NMPC maintenance self-assessment in 1987.

The inspector reviewed the Maintenance Department responses to Corrective Action Report 88.3114 which outlined the actions taken to resolve the concerns raised by the licensee's Maintenance Self-Assessment in 1987. The licensee has established a method and a schedule for addressing each of these concerns. The schedule, which has been extended due to a lack of licensee resources, appears to provide a reasonable timetable for resolving the concerns. Only two of the issues which remain open represent regulatory concerns. Those issues are being tracked by the Nuclear Commitment Tracking System (NCTS) and will be resolved prior to restart. This item is closed.





- d. (Closed) Violation (50-220/87-21-03): Failure to properly establish and implement an Inservice Inspection Program at Unit 1. A special announced team inspection was conducted in December 1988 to review the licensee's corrective actions to the Notice of Violation and civil penalty issued earlier in the year. Based upon the team's review of the correction actions, new ISI Program and support organization, and independent non-destructive examinations, they concluded that the actions taken by the licensee to address the deficiencies in this area were satisfactory and that there were no further ISI restart issues. This violation is closed.
- e. As a result of pipe support deficiencies identified during the licensee's recent efforts to upgrade their Inservice Inspection Program (ISI), as well as the reperformance of the dynamic and seismic analyses on various safety related and non-safety related plant piping systems, the licensee is in the process of modifying several large bore pipe supports. The work is being engineered by Impell Corporation and Stone & Webster Engineering Corp. (SWEC) and is being performed by CBI Services.

To understand the scope and nature of the pipe support deficiencies, the inspector discussed the ongoing work with a SWEC engineer directing a portion of the project. Overall, the project appeared adequately scoped and managed with sufficient administrative controls to ensure the proper completion of work activities. The inspector also visually examined the following pipe supports and the work packages governing their installation:

- 72-SC-60, Seismic constraint on a service water system line.
- 81-A1, Three directional rigid restraint on the containment spray raw water line to the Core Spray System Loop 12, located around valve 93-52.

The supports appeared to be constructed in accordance with their design. Independent measurement of several critical dimensions on support 72-SC-69 verified that the component was constructed as specified. No deficiencies were noted in any of the welds performed on the support.



In all, the project appears to be adequately controlled and the modifications reviewed were in accordance with the design and of quality construction. The full scope of this project and the reasons behind the existing support deficiencies will be reviewed during a subsequent specialist inspection.

## 2.2 Unit 2

- a. (Closed) Unresolved Item (50-410/89-06-02): An area unit cooler for the Division II, Service Water System was returned to service with a defect which would have prevented it from performing its automatic safety function. As discussed in LER 89-19, the root cause was that an operator failed to properly tag the unit cooler control switch to reflect system inoperability as required by Administrative Procedure 4.0. This failure to follow procedure is a violation of TS 6.8.1 which requires that written procedures specified per Regulatory Guide 1.33 shall be implemented. The safety significance of this event was minimal, because either unit cooler could have been manually initiated, if needed. During shift checks, operators are required to tour the service water bays and would have detected any abnormal temperatures. The inspector reviewed the licensee's corrective actions, which included revisions to the administrative controls, clarification of the responsibilities for clearing tag-outs and Equipment Status Log entries, and a Lessons Learned transmittal. These actions were satisfactory. In accordance with the Enforcement Policy Guidance of 10 CFR 2, Appendix C, Section G.1, a Notice of Violation is not being issued. NON-CITED VIOLATION (50-410/89-07-01).
- b. (Closed) Unresolved Item (50-410/89-05-02): High radiation door found unlocked; repeat problem. As discussed in section 9.a. of Inspection Report 50-220/89-06 and 50-410/89-06, this unresolved item was subsequently included in a Notice of Violation addressing several repeat problems citing a general lack of effective corrective action. The corrective actions taken by the licensee for this issue will be reviewed under item number 50-220/89-06-03. Accordingly, this item is closed.
- c. (Closed) Unresolved Item (50-410/89-13-01): Licensee to investigate IST method used to test EDG air start check valves. The inspector reviewed the licensee's investigation of this item as documented in Section 7.2.d of this report. No Notice of Violation was issued for this item. 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

A tour of the torus room was made to observe preparations underway for additional thickness measurements of the torus wall. Also, efforts to continue decontamination of the Reactor Building were noted within the areas around the control rod drive hydraulic control units and the reactor water cleanup system, now accessible in street clothes. A comprehensive tour of the Radwaste Buildings, RSSB, Off-Gas System rooms and radiological storage areas in the Turbine Building was also conducted by the resident inspectors. Results of the various tours are discussed below.

- a. In response to events which precipitated an AIT at Unit 1, the resident inspectors, with the assistance of the Radiation Protection Department, performed an extensive tour of rooms in the Old and New Radwaste Buildings, the RSSB, the Off-Gas system rooms and radiological areas in the Turbine Building. The inspectors determined that there are no other rooms in the areas inspected with conditions similar to those in the 225 foot elevation of the Old Radwaste Building.

Previous and ongoing efforts by the licensee to decontaminate areas of the radwaste buildings were noted by the inspectors and were evidenced by the low general area dose rates in the access ways and the low dose received during the inspection itself. The low dose received is also attributed to the assistance of the Radiation Protection Department personnel who greatly facilitated access to the toured areas and who monitored radiation levels throughout the tour to ensure exposures were minimized.

The inspectors noted one area of concern with respect to house-keeping practices. In some of the areas toured, the inspectors noted yellow storage barrels (55 gallon drums). Although the barrels had proper radiological controls in-place, many of the barrels were not labeled as to their contents. In one instance, the licensee was unable to initially state what was stored in a series of barrels in the basement of the Off-Gas Building. The inspectors discussed this concern with the licensee and obtained a commitment from them to identify the contents of the various storage barrels and to consolidate them in one storage area.



b. During other routine tours, the inspectors noted several instances of poor radiological work practices and one instance where a fire zone was not maintained free of combustible material. The specific instances are noted below:

- An operator exited from a contaminated area by means other than the step-off pad (SOP). On later questioning, the operator stated that he could not exit via the SOP as there was scaffolding in the way and he didn't want to climb over it as he was worried that he might get contaminated. The inspector concluded that the operator did not properly plan his entry to the work area because of his failure to identify that his exit path was blocked. The operator should have called for Radiation Protection (RP) assistance when he realized his problem, as an RP technician was in sight at the time.
- The inspector noted poor work practices while flushing of the 13 RBCLC heat exchanger was in progress. The heat exchanger is located in a roped-off contaminated area. The flushing resulted in water pooling on the floor and then flowing out of the contaminated area boundary. The individual performing the work appeared oblivious to the implications of this condition. The inspector contacted the RP office to address this situation. Upon initial discussions with the RP technician responding to the call, the inspector had further concerns that the RP technician did not immediately recognize the potential radiological risks. The RP technician made a statement to the effect that since the water was from the service water system (non-contaminated) that it was not much of a problem. The inspector pointed out that regardless of the cleanliness of the water being used, the fact remained that it was flowing from a contaminated area and, therefore, could potentially transport contamination outside the work area. The area was subsequently cleaned up, and no contamination was noted outside the work site boundary.
- The inspector toured the reactor building (RB) roof via a stairway access, which was open at the time. The RB roof was designated as a restricted area, and specific instructions stating that smoking was not permitted on the roof (as it is a restricted area) were posted at the exit to the roof. Despite the posted instructions, the inspector noted that people had been smoking on the roof as evidenced by the large number of cigarette butts in the vicinity of the exitway. The roof exit was subsequently secured to other than required access by Operations and Radiation Protection Department personnel.





- Contractor painters in the RB Southeast corner room were observed walking on top of the core spray topping pumps and piping to gain access to elevated areas rather than using ladders or scaffolding. Additionally, they were in conflict with licensee policy which requires RP notification and approval for any work in the restricted area performed in the overhead at heights of six feet or greater. The involved workers were counseled by their supervisor, and a station memo discussing proper work practices in overhead areas was redistributed and discussed at morning shop meetings.
- Placement of a collection bag for anti-contamination clothing was observed inside a fire break zone.

The above items were discussed with the Unit 1 Superintendent and RP Department supervision. Several of the inspectors' concerns were addressed in a three page memorandum to the Unit 1 Superintendent from the RP supervisor, which stated action that will be taken to prevent similar recurrences.

Collective review of the above incidents raises questions as to the effectiveness of General Employee Training (GET) and of the ability of station employees to recall and/or apply the information set forth in those courses. The inspectors will continue to monitor these particular areas for evidence of effective corrective action and improvement.

### 3.2 Unit 2

The inspectors conducted a special tour of high radiation areas in the reactor building and the radwaste building on September 5. During this tour the inspectors were accompanied by radiation protection and radwaste personnel. Approximately 20 high radiation areas were entered by the inspectors, and no unsatisfactory conditions were identified. In an effort to conserve exposure, the four high radiation areas located in the turbine building will be examined during the two week outage which commences on September 8.

The inspectors identified two areas that needed some minor house-keeping improvements. The reactor water cleanup heat exchanger room in the reactor building contained four bags of radioactive material that were being temporarily stored. The spent fuel cooling phase separator pump room in the radwaste building had some loose material laying on the floor. The licensee agreed to cleanup these minor discrepancies.



Overall, the inspectors found the material condition and housekeeping practices to be very good. Particularly noteworthy was the good material condition and cleanliness of the radwaste building spaces.

#### 4. Surveillance Review

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 the following surveillances and special tests performed during the report period. No concerns were identified.

- N1-RTP-24, "Routine Calibration of Reactor Building Closed Loop Cooling (RBCLC) Monitor".
- N1-88-6.12, "Core Spray (CS) Pump Recirculation Line Operability Test".

The inspector observed testing of loop 11 of the CS system. Additionally, during this report period, the licensee has been performing many tests on various systems as required by their revised Inservice Testing (IST) Program. Many of these tests are being performed for the first time and are producing what appear to be unsatisfactory test results. One of the major systems tested with unsatisfactory results was RBCLC. The pump performance curves generated by the test on the system resulted in values which were below those of the pump performance curves supplied with the pumps when purchased twenty years ago. These test results were turned over to the Engineering Department for resolution and were undergoing evaluation.

Preliminary evaluation by the licensee has identified several possible causes for the unsatisfactory values. The pump curves originally supplied could be in error; the flow instrumentation used could be inaccurate; or the pumps could actually have undergone degradation in their performance. In addressing the latter, the licensee dismantled RBCLC pump 11, the pump that test data indicated had the most wear, and discovered that while wear to the pump was minimal, the wear rings themselves were quite worn (45 to 48 mils). The observations tend to support pump wear as a reason for the unsatisfactory data. The rings were replaced and examination of the other two RBCLC pumps was planned.



The licensee also has a basis for believing that the unsatisfactory data might be due to error in the flow instrumentation used. A pitot tube is used to measure flow in the system for this test. However, the instrumentation is really designed for monitoring flow under two pump operation. When used for monitoring flow in one pump, as the IST does, this results in flow readings at the low end of the scale. To validate flow measurements from the pitot tube, a strap-on ultrasonic flow meter was placed on the system. However, due to system configuration, inconclusive data was obtained.

One additional effort by the Engineering group is to perform a design basis reconstitution. Based on actual system configuration and heat loads, this effort will generate actual system performance curves for future inservice testing. The current pump curves used for IST have no tolerances in them to account for flow degradation or other factors.

Inspector assessment of licensee activities, to date, indicated that they were adequate for addressing the known system performance concerns. Inspectors will continue to monitor efforts in this area, as well as resolution to other systems with unsatisfactory IST results, to ensure that the systems are satisfactorily determined operable prior to restart.

#### 4.2 Unit 2

- a. The inspector observed a portion of surveillance procedure N2-OSP-RHS-Q001, "RHR Loop A, Valve Operability Test." Overall, the procedure was adequately performed. However, the operator performing the surveillance misread the digital stopwatch he was using to check valve stroke times. The operator contacted ISI personnel concerning the out-of-specification stroke times and was instructed on how to properly read the digital stopwatch. The operator reperformed the surveillance and determined the previously tested valves had satisfactory stroke times. The inspector was concerned that this operator was not familiar with the use of test equipment (digital stopwatch), but this incident appears to be isolated.
- b. On August 30, the inspector observed the performance of a portion of Surveillance Procedure N2-ISP-NMS-W007 which performs channel functional testing of Average Power Range Monitors. The inspector identified no concerns and noted the I&C technicians used good procedural compliance and formal communications.
- c. On August 31, the inspector observed a portion of the Division II suppression pool water temperature instrumentation functional test. The test procedure was followed, the operator appeared knowledgeable about the procedure, and the operator took care in reading indicated values. No concerns were noted.



## 5. Maintenance Review

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

Maintenance activities with respect to the Emergency Diesel Generators and the RBCLC system were observed. No discrepancies were noted except for a radiological concern with the RBCLC maintenance discussed earlier in this report (see Section 3.1.b.).

### 5.2 Unit 2

The inspector reviewed Procedure N2-MSP-EGS-R002, Diesel Generator Inspection - Division 3. This work is scheduled to be performed during the two week maintenance outage commencing on September 8. No concerns were identified by the inspector. The inspector verified that the procedure met the requirements of TS 4.8.1. The inspector noted that the procedure is constructed in the old format which consists of the body and then a checklist attachment containing verification of performed steps. The licensee stated that this procedure will be updated during its scheduled two year review to reflect the revised format.

## 6. Safety System Operability Verification

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

### 6.1 Unit 1

The inspector performed walkdowns of the Emergency Ventilation (EV) system and identified several concerns as a result of the inspection. The major items of concern are listed below:





- Apparent improper setpoints for the thermostats associated with the 1 KW heaters in each of the EV trains (two trains). The P&ID indicates that thermostat TIC-202-72B should be set at 165 degrees F, but field verification showed it set at 150 degrees F. The other thermostat, TIC-202-73B has no specified setpoint on the P&ID, but was found to be set at 165 degrees F. Additionally, the inspector was unable to locate any procedures which specify the setting and/or calibration of the thermostat units.
- Flow element 201.2-367A was found to be supported by several blocks of untreated wood.
- Numerous solenoid valves are not labeled even though they have unique identifiers on the P&ID. Additionally, numerous capped connections, sample points and flow elements are not labeled. In instances where they are labeled, it is through informal means (i.e., operator aids).
- Valve 202-34 had a damaged EQ cover for a junction box for the output of its associated limit switches. This was subsequently repaired under Work Request 142441.
- Excessive vibration of the air regulator for valve 202-35. The licensee subsequently issued a Modification Request to address the situation.
- Heater 202-76 is designated as a 10 KW heater on the P&ID and its nameplate indicates that it is rated at 10 KW; however, the FSAR and electrical schematic C-19409-C indicate it as being a 9 KW heater.

These concerns, as well as several other minor discrepancies, were discussed with the licensee. Pending the receipt of additional information from the licensee regarding the above observations and further inspector review, these concerns remain unresolved. UNRESOLVED ITEM (50-220/89-07-02).

## 6.2 Unit 2

The inspector directly examined portions of the High Pressure Core Spray system to verify that the system was properly aligned. No discrepancies were noted.



The inspector performed a walkdown of the Low Pressure Core Spray system (LPCS). No discrepancies were noted between the as built configuration and the system drawings. Valve and power lineups were consistent with the standby status specified in procedure N2-OP-32. Instrumentation indicated as expected. No structural concerns were noted. Housekeeping was excellent in all LPCS component areas. One occupational hazard was noted, however. The floor of the pipe tunnel for the low pressure core spray suction piping ends as a ledge overlooking the LPCS pump room. The drop from the pipe tunnel to the floor of the pump room is about 12 feet. There are no warnings posted and no railing or other protection provided at the ledge. The licensee promptly installed a hand rail in the tunnel area.

## 7. 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 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)

### 7.1 Unit 1

LER 89-11, "Automatic Initiation of Reactor Building Emergency Ventilation Due to Poor Work Practices." This event was discussed in IR 50-220/89-06.

LER 89-08, "Missed Fire Patrol Resulting in Technical Specification Violation Due to Procedure Inadequacy and Miscommunications." This event was discussed in IR 50-220/89-06 and was incorporated in VIOLATION 50-220/89-06-01.

LER 89-10, "Design Deficiency Resulting in Possible Failure of Safety System to Perform Its Intended Function." The licensee discovered on June 30, 1989, during surveillance testing of the Service Water Effluent Radiation Monitor that certain equipment failures would not result in a downscale reading, and subsequent annunciation in the control room would fail to occur. This particular condition was noted when an equipment failure annunciator in the CR failed to alarm when the monitor's microcomputer power switch was turned off. The condition was determined to be a design deficiency, as an equivalent circuit failure, such as a blown fuse, could lead to an undetected inoperable monitor.



The licensee determined the root cause of the event to be an inadequate design review when the monitor was replaced in 1986, and to inadequate review of vendor information. Compensatory surveillance testing to verify operability has been established until a modification to correct the deficiency is performed. Additionally, other radiation monitoring systems at Unit 1 have been reviewed for similar problems. Under the provisions of the Enforcement Policy Guidelines of 10 CFR 2, Appendix C, Section G.1 a Notice of Violation is not being issued. NON-CITED VIOLATION (50-220/89-07-03).

## 7.2. Unit 2

LER 89-01, 1/22/89, An inadvertent group 5 isolation occurred during surveillance testing as a result of inadequate procedure review.

LER 89-02 Revision 1, 1/25/89, Unit 2 was placed in an unanalyzed condition due to design and installation deficiencies concerning internal water penetration deficiencies.

LER 89-03, 2/16/89, Unit 2 was placed in an unanalyzed condition concerning the service water system not meeting single failure criteria.

LER 89-04, 2/28/89, Low pressure coolant injection to the reactor vessel caused by personnel error and procedural deficiency.

LER 89-05, 2/21/89, Engineered safety feature actuation caused by an operator failing to follow the procedure.

LER 89-06, 2/19/89, Initiation of high pressure core spray as a result of a personnel error.

LER 89-08, 3/2/89, An electrical circuit for suppression chamber 120 VAC receptacles was incorrectly identified in the TS which resulted in an incomplete surveillance. As a result of the TS error, primary containment penetration Z60E was not protected from electrical faults in a manner consistent with the TS. The circuit was protected by primary and backup circuit overcurrent interrupting devices. The inspector found the licensee's corrective actions to be satisfactory. The inspector concluded that the safety significance of this deficiency was minimal and the deficiency was self-identified by the licensee. In accordance with the provisions of the Enforcement Policy Guidance of 10CFR2, Appendix C, Section G.1, a Notice of Violation is not being issued. NON-CITED VIOLATION (50-410/89-07-02)



LER 89-09, 4/22/89, Reactor scram was caused when an operator keyed a radio within the vicinity of the Electro Hydraulic Control cabinets. This event was reviewed and documented in Inspection Report 50-410/89-05.

LER 89-10, 3/21/89, Spurious actuation of Division II, emergency diesel generator, load shedding and secondary containment isolation followed by the initiation of the standby gas treatment system.

LER 89-11, 5/4/89, Miscalibration of main steam line radiation monitors causes violation of TS. The licensee declared the monitors inoperable because their setpoints were not set equal to or less than 3.6 times full power background. This was due to an apparent change in full power background. The root cause was attributed to procedural deficiencies in the calibration procedure. The inspector reviewed the accident analyses and determined that none of them take credit for the main steam isolation valve isolation or reactor scram caused by main steam line monitor high radiation. The inspector reviewed the licensee's corrective actions and found them to be satisfactory. In accordance with the provisions of the Enforcement Policy Guidance of 10CFR2, Appendix C, Section G.1, a Notice of Violation is not being issued. NON-CITED VIOLATION (50-410/89-07-03)

LER 89-12, 4/4/89, Engineered Safety Feature actuation caused by a power loss to the Gaseous Radiation Monitor as a result of an equipment failure.

LER 89-13, 4/6/89, Both divisional main steam line radiation monitors were inoperable and their respective trip system was not tripped due to a personnel error made during the shift check process. This was reviewed by the inspector and a violation was issued in Inspection Report 50-410/89-05.

LER 89-14, 4/13/89, Reactor scram due to turbine trip caused by loose wire connections. This event was previously reviewed and documented in Inspection Report 50-410/89-05.

LER 89-15, 5/10/89, Operational surveillance procedure deficiency due to inadequate technical review. While performing Test Procedure N2-OSP-EGA-Q001, operators discovered that the test methodology was not adequate to test six check valves in the Emergency Diesel Generator Air Start System. This testing is required by the Inservice Test Program. The licensee determined that the check valves were performing their required function based on air receiver tank pressure instrumentation and alarms. The inspector concluded that the safety significance of this event was minimal. The inspector commends the questioning attitude of the operations personnel who identified the test anomaly. The licensee's corrective actions were found to be satisfactory. In accordance with the Enforcement Policy Guidance of 10 CFR 2, Appendix C, Section G.1, a Notice of Violation is not being issued. NON-CITED VIOLATION (50-410/89-07-04)





LER 89-16, 5/8/89, Inaccurate surveillance activity due to personnel error resulting in a TS violation concerning standby liquid control system availability. This event was reviewed and documented in Inspection Report 50-410/89-06.

LER 89-17, 4/7/89, Missed main steam line tunnel area temperature missed during shift checks. This event was reviewed and documented in Inspection Report 50-410/89-06.

The inspector found the above LERs to be well written and properly document the events and corrective actions taken.

#### 8. Review of Special Reports

The following Special Reports were reviewed by the inspectors:

##### Unit 1

- Special Report dated May 25, 1989; NMP 49074
- Special Report dated June 5, 1989; NMP 49097
- Special Report dated July 12, 1989; NMP 52381

The inspector determined that the reports were issued within 30 days and that proper compensatory measures were initiated as required by the plant's Technical Specifications. Each of the reports contain events which required issuance of an Occurrence Report and subsequent inclusion in the Special Report. Event breakdown is as follows:

- 3 events related to non-functional fire barriers reported per TS 3.6.10.1.d.
- 1 event related to inoperable detection equipment reported per TS 3.6.6.a.2.

No concerns were identified by the inspector.

#### 9. Allegation Followup

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

Allegation No. RI-89-A-0011: On January 13, 1989, the Regional Duty Officer received an anonymous allegation by telephone, alleging deficiencies in design document control at Nine Mile Point Unit 2 involving the timeliness of drawing updates. The alleged deficiency was communicated by the resident inspectors to the licensee's Quality First Program (Q1P) for investigation.

The inspector reviewed records provided by the licensee in response to the alleged deficiencies. These records included two Corrective Action Requests (CAR) which the licensee had issued prior to the allegation, on December 27, 1988. CAR 88.3120 was initiated as a result of an October 25, 1988, report which identified over 600 documents that had not been updated as required by procedures. In addition, CAR 88.3130 was issued because discrepancies were found between P&IDs and other design documents. The records further indicated that additional staffing and funding had been obtained to address these problems. By April 1989, an FSAR validation of all P&IDs had been completed. As of August 31, 1989 the backlog of drawings needing updating had been reduced to 53 and is scheduled to be eliminated by November 1989.

The inspector concluded that the allegation was substantiated. It was further concluded that the licensee is taking the actions necessary to correct the identified deficiencies. This allegation is closed.

## 10. 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.

