U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket/Report Nos.:	50-220/97-02 50-410/97-02
License Nos.:	DPR-63 NPF-69
Licensee:	Niagara Mohawk Power Corporation P. O. Box 63 Lycoming, NY 13093
Facility:	Nine Mile Point, Units 1 and 2
Location:	Scriba, New York
Dates:	February 23 - April 5, 1997
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ATTACHMENT

EXECUTIVE SUMMARY

Nine Mile Point Units 1 and 2
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This integrated inspection report includes reviews of licensee activities in the functional areas of operations, engineering, maintenance, and plant support. The report covers a six week period of inspections and reviews by the resident staff, and regional specialists in the areas of radiation protection, non-destructive examination/inservice inspection, and emergency preparedness.

PLANT OPERATIONS

Unit 1 shutdown on March 3 to start their fourteenth refueling outage. During the outage, cracking was found on some vertical weld joints of the core shroud and problems were identified with the shroud tie-rods assemblies, causing delays in the outage. Unit 2 essentially maintained full power throughout the inspection period. Frequent inspector tours of both units identified that safety systems were properly aligned and usually in good physical condition. Unit 1 radiological waste operators were knowledgeable regarding system layout and operation.

The general housekeeping and material condition of the facility were very good. However, the inspectors noted that a cotton glove was used to minimize the water spray from a leak on a Unit 1 spent fuel pool cooling water pump, this was considered to be a poor work practice which had the potential to damage to a safety-related pump. In addition, the failure of the auxiliary operators to inform the shift supervision that the pump seal was leaking was a significant weakness in their oversight of plant operations.

Rigging and removal of the Unit 1 reactor vessel head was carefully conducted, licensee oversight was appropriate, and good foreign material exclusion area controls were implemented. The cleaning of the torus, downcomers, and sparger ring was well planned and executed.

A review of Unit 2 control room deficiencies, including defeated annunciators and operator work-arounds, identified that the problems were generally being corrected in a timely manner. Work-arounds greater than two years old appeared to have no adverse impact on safe plant operation. However, examples of procedural non-compliance were identified with respect to the implementation of the Unit 2 control room deficiency program, including the failure to perform required quarterly reviews. (VIO 97-02-01)

MAINTENANCE

The Unit 1 fuel off-load was well controlled. Communications between the operators on the refuel bridge, as well as between the refuel bridge and the control room, were very good. The inspectors identified an operator aid on the refuel bridge which was uncontrolled, resulting in a non-cited violation. (NCV)

NMPC's actions to address missed surveillance tests related to response-time-testing for the Unit 2 high pressure core spray system were appropriate; however, the failure to perform the surveillance tests is a violation of technical specification. (VIO 97-02-02) In addition, a 1993 DER identified the same concern, but was incorrectly dispositioned; indicating a poor understanding of the response-time-testing requirements and an inadequate management review.

The licensee provided an appropriate level of control over contractors during surveillance testing and calibration of the seismic monitoring instrumentation at both units. However, a weakness in the planning of the Unit 2 testing failed to identify and correct procedural deficiencies that resulted in the instrumentation being inoperable for an excessive time. The adequacy of the Unit 2 procedure to independently fulfill the 18-month TS surveillance requirement remains unresolved. (URI 97-02-03)

The non-destructive examination (NDE) procedures, and data, were found to be well organized, comprehensive documents. The program was well implemented, with regular involvement of the plant staff in the inspection activities. When necessary, the inspection sample was properly expanded per the American Society of Mechanical Engineers (ASME) Code. Although minor weaknesses were identified, NMPC was aggressively pursuing its NDE program. The inservice inspection (ISI) program was well documented, controlled, and implemented. The program manager was knowledgeable of ISI and ASME Code requirements. There was good communication between the program manager, engineering and plant management. Quality assurance oversight of the NDE/ISI program was adequate.

ENGINEERING

The Unit 1 core operating limits report (COLR), and supporting documentation, represented an accurate summary of the reload analysis performed by General Electric. Core symmetry and fuel bundle distribution were consistent with generic recommendations.

Following issuance of a General Electric Company (GE) Service Information Letter (SIL), the licensee's identification of a degraded condition related to the lack of temperature detectors in the Unit 1 auxiliary cleanup pump room was timely, and the immediate corrective actions were appropriate. However, the lack of temperature detectors in the auxiliary cleanup pump room was considered a non-cited violation of the Unit 1 design basis. (NCV)

NMPC noted that there was an excessive failure rate of Borg-Warner pressure switches, and informed the NRC via a 10 CFR Part 21 notification. The corrective action to address the concern appeared appropriate, including administrative controls to calibrate the switches every eighteen months.

PLANT SUPPORT

Implementation of radiological protection (RP) controls during the Unit 1 refueling outage was characterized by good application of planning and controls for work in radiologically controlled areas (RCAs). Facilities and equipment were well maintained and established to support outage activities. Some improvement was noted in RCA access controls. Contractor RP technicians were well qualified and experienced, and there was good supervisory oversight. Overall, the outage RP organization, including the augmented staff, was appropriately qualified and able to meet the outage workload.

Procedures and guidelines appear to satisfy the intent of 10 CFR 70.24 related to criticality monitors at Unit 1; however, criticality accidents were not specifically addressed in procedures or the Site Emergency Plan. The inspectors determined that the calibration procedure for the trip setpoint for the new-fuel vault area radiation monitor (ARM) used for criticality monitoring allowed a setpoint below that specified in 10 CFR 70. In addition, the inspectors identified the failure to have a local alarm for the new-fuel vault ARM, which was not in accordance with the Unit 1 UFSAR. (NCV)

A review of changes to the Nine Mile Emergency Plan and associated implementing procedures determined that they did not decrease the overall effectiveness of the program.

REPORT DETAILS

Nine Mile Point Units 1 and 2
50-220/97-02 & 50-410/97-02
February 23 - April 5, 1997

SUMMARY OF ACTIVITIES

Niagara Mohawk Power Corporation (NMPC) Activities

Unit 1

Nine Mile Point Unit 1 (Unit 1) started this inspection period at 94% power and coasting down as they neared the scheduled refueling outage. On March 3, Unit 1 shutdown and started the fourteenth refueling outage (RFO14); the scheduled outage duration was 35 days. During the outage, cracking was found on vertical weld joints of the core shroud (see Section E2.3 for details) and problems were identified with the installation of the shroud tie-rods (see Section E2.1 for details); these caused a delay in restart of the unit due to the extensive inspection effort required to determine the extent and significance of the issues. As of the end of the period, Unit 1 continued in the outage and estimated that they were fourteen days behind schedule.

Unit 2

Nine Mile Point Unit 2 (Unit 2) essentially maintained full power during the inspection period, with the following exceptions. On February 28, and again on March 22, power was reduced to 55% for a feedwater pump exchange and control rod scram-time-testing; both times, the unit was returned to full power the next day. On March 25, power was reduced to 80% for approximately nine hours to allow for restoration of a control rod following maintenance.

Nuclear Regulatory Commission (NRC) Staff Activities

Inspection Activities

The NRC conducted inspection activities during normal, backshift, and deep backshift hours. In addition to the inspection activities completed by the resident inspectors, regional specialist conducted reviews in the areas of radiological controls, emergency preparedness, and inservice inspection. The results are contained in the applicable sections of this inspection report.

Updated Final Safety Analysis Report (UFSAR) Reviews

A discovery of a licensee operating their facility in a manner contrary to the UFSAR description highlighted the need for additional verification that licensees were complying with UFSAR commitments. While performing the inspections discussed in this report, the inspectors reviewed the portions of the UFSAR related to the areas inspected. The inspectors verified that the UFSAR wording was consistent with the observed plant practices, procedures and/or parameters, with two exceptions. See Sections E2.2 and R2.3 for details.

I. OPERATIONS

O1 Conduct of Operations (71707, 90712, 92700) [1]

O1.1 General Comments

Using NRC Inspection Procedure 71707, the inspectors conducted reviews of ongoing plant operations. In general, the conduct of operations was professional and safety-conscious; specific events and noteworthy observations are detailed in the sections below.

The inspectors conducted frequent tours of both units, with the focus at Unit 1 on the equipment required for the shutdown condition of the plant. The tours included the control rooms, the reactor and turbine buildings, the service water areas, and the Unit 1 drywell. With one exception at Unit 1 (see Section O2.2), the systems were in good physical condition and were properly aligned. Overall, general housekeeping was acceptable. At Unit 1, the inspectors noted that some areas were not returned to the pre-outage cleanliness condition, after maintenance, as quickly as expected.

O1.2 Unit 1 Reactor Vessel Disassembly

a. Inspection Scope

The inspectors observed NMPC, assisted by General Electric (GE), disassemble portions of the Unit 1 reactor vessel. During the evolution, the inspectors evaluated foreign material exclusion (FME) controls, radiological control work practices, and heavy load movement. The inspectors discussed the evolution with the Unit 1 Operations Manager and reactor engineering staff.

b. Observations and Findings

The inspectors observed GE personnel rig and remove the reactor vessel head. The rigging of the reactor vessel head was performed very carefully, as evidenced by numerous adjustments to the slings to ensure equal load distribution. The actual movement to the designated storage area was well controlled. Copies of the current, approved procedures were on the refuel floor and were being used.

Licensee oversight of the evolution was very good, in that the Unit 1 Operations Manager, radiological protection (RP) supervision, and reactor engineering staff were present. RP technicians on the refuel floor at all times and monitored radiological worker practices and ALARA (as low as is reasonably achievable) controls; the inspectors identified no concerns with radiological work practices.

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[1] Topical headings such as O1, M8, etc., are used in accordance with the NRC standardized reactor inspection report outline. Individual reports are not expected to address all outline topics. The NRC inspection manual procedure or temporary instruction that was used as inspection guidance is listed for each applicable report section.

Once the reactor head was rigged and ready for removal, the FME area was expanded from around the spent fuel pool (SFP) to include the reactor cavity and internals storage pit. FME controls appeared good; in that, material which ingressed or egressed the FME boundary was appropriately entered into the applicable Material Accountability Log, and equipment was properly secured while in the area.

c. Conclusions

Rigging and movement of the reactor vessel head was carefully performed and in accordance with approved procedures. Licensee oversight was appropriate, and no concerns were identified regarding radiological work practices or FME controls.

O2 Operational Status of Facilities and Equipment (71707)

O2.1 Unit 1 Drywell and Torus Inspections

a. Inspection Scope

In response to NRC Bulletin 95-02, "Unexpected Clogging of RHR [residual heat removal] Pump Strainer While Operating in Suppression Pool Cooling Mode," NMPC committed to cleaning the torus during the Spring 1997 outage. The inspectors reviewed the plan for the cleaning effort, viewed the pre- and post-cleaning videos, and toured the torus, downcomers, and sparger.

b. Observations and Findings

At Unit 1, each emergency core cooling system (ECCS) pump takes a suction from the torus. For pump protection, each pump suction is via a coarse mesh grating on the bottom of the torus. In addition, there is a strainer on the discharge of each pump to prevent material from clogging the spray header nozzles. The cleaning by NMPC confirmed that there was minimal material in the Unit 1 torus, none of which could have significantly clogged the ECCS pump gratings or strainers. The foreign material removed amounted to three rolls of tape, some pens and markers, and a few other small items, along with loose rust particles.

The inspectors toured the torus, downcomers and the sparger ring (including the "rams' heads" which allows the drywell to communicate with the torus). The cleaning evolution was well planned and executed. The inspectors viewed the pre- and post-cleaning videos, and noted that the as-left condition was consistent with the requirements of the Bulletin. The inspectors identified no adverse conditions.

c. Conclusion:

The cleaning of the Unit 1 torus was thorough and left the torus in a condition that meets the requirements of NRC Bulletin 95-02.

O2.2 Unit 1 Spent Fuel Pool Cooling Pump Packing Leakage

a. Inspection Scope

During a plant tour, the inspectors noted that one of the Unit 1 SFP cooling water pumps had significant seal leakage, and that a cotton glove was being used to minimize the water spray. The leakage was barely contained, as the pump drip tray was almost full; apparently due to a clogged drain line. The inspectors informed the control room and discussed the issue with operations management.

b. Observations and Findings

On March 20, the inspectors toured the Unit 1 SFP cooling heat exchanger and pump room and noted excessive seal leakage on the #12 pump. In addition, the inspectors noted that a white cotton glove had been placed over the leak. The inspectors informed the Shift Technical Advisor (STA) and Assistant Station Shift Supervisor (ASSS) of the problem. The STA determined that, in September 1996, a problem identification (PID) report had been written for seal leakage on the #12 pump. At that time, a "pencil-width" solid stream of water was noted and further packing adjustment could not be made. The PID referenced a work order (WO 96-03790) to complete pump repairs. The pump had been successfully repacked in early March and returned to service.

The STA informed the inspectors that the cotton glove was probably placed above the pump seal to redirect the water spray. The spray was significant enough that the STA replaced the glove to ensure the leakage remained contained within the pump drip tray. The following day, the STA informed the inspectors that the drip tray drain line had been cleared and that the leakage rate had been reduced by adjusting the packing; in addition, the packing would be periodically adjusted, as necessary, to further reduce the leakage.

Operations management informed the inspectors that it was impossible to determine when the glove was put on the pump or who placed it there. The ASSS stated that auxiliary operators toured the area shiftly; but, no one had made a log entry about the excessive packing leakage. In addition, shift supervision was unaware of the degraded condition. The inspectors consider the failure of the auxiliary operators to inform the shift supervision that the pump seal was again leaking, to be a significant weakness in their oversight of plant operations. Also, the use of the cotton glove to minimize leakage was a poor work practice, which had the potential to damage the pump if it had fallen onto the shaft. Although the packing leakage on #12 SFP cooling water pump was excessive, the inspectors noted that the pump was operable. The inspectors verified that the redundant train of SFP cooling had been available since the start of the refueling outage.

On March 30, the inspectors again toured the SFP heat exchanger and pump room. Both pumps exhibited some packing leakage, but the amount of leakage appeared controlled. The cotton glove was removed.

c. Conclusions

The use of a cotton glove to redirect water spray was a poor work practice which had the potential to damage to a safety-related pump. Also, the failure of the Unit 1 auxiliary operators to inform the shift supervision that the pump seal was again leaking, to be a significant weakness in the oversight of plant operations.

O2.3 Unit 2 Control Room Deficiency Review

a. Inspection Scope

The inspectors reviewed the processes for identification, tracking, and resolution of control room deficiencies at Unit 2, including defeated annunciators, and operator work-arounds. The inspectors reviewed the procedures and controls to validate the implementation of the programs, as defined by NMPC. The inspectors performed a visual inspection of the control room, and compared the identified concerns to those listed by the licensee. The inspectors discussed the programs, and identified concerns, with the manager and staff of the Unit 2 operations department.

b. Observations and Findings

Control Room Deficiencies

Control room deficiencies are identified, tracked, and resolved in accordance with NMPC Procedure N2-ODP-OPS-0001, "Conduct of Operations," Revision 4. In general, the procedure defines a control room deficiency as any meter, chart recorder, indicating light, significant computer point, annunciator, or other component within the control room that does not accurately represent the parameter it is intended to monitor. Also included are switches, controllers, and push-buttons that do not operate as intended. To ensure the operators are cognizant of the control room deficiencies, the components are marked with a green dot, and a copy of the associated WO/PID is maintained in the "Control Room Deficiency" binder. When generated, the WO/PID is to be coded to indicate that it pertains to a control room deficiency. Upon resolution of the deficiency, the green dot is supposed to be removed and the associated WO/PID is supposed to be removed from the binder. The procedure requires that quarterly reviews be performed to verify that the deficiencies are accurately reflected and identified.

The inspectors' review of the control room deficiency process determined that deficiencies were resolved in a timely manner. According to the Unit 2 Work Control department, as of March 21, 1997, there were 24 control room deficiencies. Of the 24 deficiencies, 14 were identified as being repairable during non-outage work, and only four were greater than six weeks old. The remaining ten components required a plant outage for repair.

However, the inspector determined that the requirements of N2-ODP-OPS-0001 had not been adequately implemented, as evidenced by the following examples of procedural non-compliance identified during the inspectors review:

- two control room deficiencies were not identified with a green dot,
- two control room deficiencies were still labelled with a green dot after the problem was corrected,
- one PID was not properly coded as a control room deficiency, and
- there was no indication that the quarterly reviews have been completed.

The failure to implement the control room deficiency program, as described in NMPC Procedure N2-ODP-OPS-0001, "Conduct of Operations," Revision 4, is a violation of the Unit 2 Technical Specifications (TS), Section 6.8.1, which requires written procedures to be established and implemented. **(VIO 50-410/97-02-01)**

Discussion with the Unit 2 Operations Manager, and members of his staff, indicated that, although the STAs may have periodically reviewed control room deficiencies, no documentation existed. Furthermore, whatever reviews the STAs may have performed lacked rigor, as evidenced by the number of discrepancies identified by the inspectors.

The Unit 2 work control department trends the number of non-outage control room deficiencies that are greater than six weeks old. According to the February 1997 report, there were four non-outage control room deficiencies open for greater than six weeks. Over the last year, the highest number of non-outage control room deficiencies open for greater than six weeks was twelve, in August 1996. However, after the refueling outage in October 1996, there were only two non-outage control room deficiencies older than six weeks.

The inspectors identified two short-comings with the information provided by the work control group regarding control room deficiencies. First, the trends considered non-outage deficiencies only. Second, five examples were identified where the control room deficiencies coding on the WO was changed during the generation of a sub-WO, or a change in priority of the WO. Once the coding was changed, it was no longer included in the trend reports. Although the inspectors found no indication that safety issues were not corrected in a timely manner, the inspectors considered the shortcomings associated Unit 2 trending of control room deficiencies allow the information to be misleading.

Defeated Annunciators

Defeated annunciators are controlled by NMPC Procedure GAP-DES-03, "Control of Temporary Modifications," Revision 6. The licensee defines a "defeated annunciator" as an annunciator (alarm) window with a temporarily altered circuit because of a design deficiency, malfunctioning component, or markup for pre-planned maintenance. A defeated annunciator could have one, or all, inputs altered. To ensure that the operators are cognizant of the annunciators that are defeated, the procedure requires that the annunciator window be marked with a yellow dot (if one input was altered), or a red dot (if more than one input was altered). Additionally, defeated annunciators are to be logged in the "Defeated Annunciator Log."

The inspectors verified that the defeated annunciators identified with a dot were consistent with those logged in the Unit 2 "Defeated Annunciator Log." During the time of the review, there were four defeated annunciators in the Unit 2 control room, all associated with the residual heat removal system. These annunciators were defeated due to design deficiencies pertaining to the remote shutdown capabilities (described in NRC Inspection Report (IR) 50-410/96-14). Modifications were to be approved in early April 1997, with implementation to follow. The inspectors verified that appropriate compensatory actions were taken to address the defeated annunciators, and that management attention to defeated annunciators resulted in timely resolution.

Operator Work-Arounds

The inspectors reviewed the Unit 2 operator "work-around" list, and the associated Operations Department Instruction (N2-ODI-5.70, "Work Arounds and Longstanding Tagouts," Revision 4). The term "work-around" refers to actions performed by the operating crew to compensate for equipment not functioning as-designed. As of February 28, 1997, twelve work-arounds were being tracked by management, only four of which appeared to directly impact the control room operators. The inspectors discussed the work-arounds with the SSS and concluded that the current work-arounds had no adverse impact on safe plant operation. Furthermore, the inspectors ascertained that Unit 2 Business Plan has established goals to minimize and reduce the operator work-arounds.

The number of operator work-arounds has been trended on a monthly basis since Unit 2 established the program approximately two years ago. The inspectors noted a positive trend, with the number of work-arounds decreasing from 50 (January 1995) to the current number of twelve. However, the inspectors noted that eight of the twelve work-arounds were greater than two years old. The inspector discussed this concern with the Unit 2 Operations Manager, and was informed that efforts were being taken to correct old work-arounds, on a schedule corresponding to the significance of each issue. The inspectors considered this to be appropriate.

c. Conclusion

The inspectors found that control room deficiencies, defeated annunciators, and operator work-arounds were generally being corrected in a timely manner. Although eight of the current operator work-arounds were greater than two years old, there appeared to be no adverse impact on safe plant operation. Efforts were being taking to correct these issues, based on the significance of each; this was evidenced by the decreasing trend associated with active work-arounds at Unit 2.

However, several examples of procedural non-compliance were identified with respect to the implementation of the Unit 2 control room deficiency program, including the failure to perform required quarterly reviews. (VIO)

II. MAINTENANCE [2]

M1 Conduct of Maintenance (60710, 61726, 62707, 90712, 92700)

M1.1 General Comments

Using Inspection Procedures 61726 and 62707, the inspectors periodically observed plant maintenance activities and performance of various surveillance tests. In general, maintenance and surveillance activities were conducted professionally, with the work orders (WOs) and necessary procedures in use at the work site, and with the appropriate focus on safety. Specific activities and noteworthy observations are detailed in the inspection report. The inspectors reviewed procedures and observed all or portions of the following maintenance/surveillance activities:

- N1-EPM-GEN-126 Limitorque MOV Testing
- N1-IPM-209-006 Seismic Recording System Monthly Status Check
- N2-ISP-CSH-R201 ECCS Actuation Instrumentation Response Time HPCS Actuation, Drywell Pressure - High
- N2-ISP-CSH-R202 ECCS Actuation Instrumentation Response Time HPCS Reactor Water Level - Low/Low
- N2-ISP-RTT-@208 Sensor Response Time Test AMS [Analysis and Measurement Services]
- N2-ISP-ERS-SA103 Semiannual Functional/Calibration Test of the Triaxial Seismic Switch Instrument Channel
- N2-ISP-ERS-R101 Operating Cycle Calibration of Triaxial Seismic Monitoring Time History Accelerograph Instrument Channels
- N2-OSP-EGS-R005 Diesel Generator ECCS Start Division III
- N2-OSP-EGS-R008 Operating Cycle Diesel Generator Simulated Loss of Offsite Power with an ECCS Division III Initiation
- N2-OSP-CSH-R001 High Pressure Core Spray System Functional and Response Time Test

M1.2 Unit 1 Fuel Off-load Activities

a. Inspection Scope

The inspectors observed portions of the Unit 1 fuel off-load activities in accordance with the guidance provided in NRC Inspection Procedure 60710, "Refueling Activities."

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[2] Surveillance activities are included under "Maintenance." For example, a section involving surveillance observations might be included as a separate sub-topic under M1, "Conduct of Maintenance."

b. Observations and Findings

The inspectors observed Unit 1 fuel off-load activities from the control room and from the refueling bridge. The off-load was performed in accordance with approved procedures, and was well controlled. The inspectors verified that the operators involved in the fuel handling activities, both NMPC and GE, were currently qualified, in accordance with the licensee's program. The inspectors considered the communications between the operators on the refuel bridge, as well as between the refuel bridge and the control room, to be very good, and improved from previous Unit 1 outages. Contractor activities were observed to be well controlled by the licensee. The inspectors independently verified that a sample of the fuel moves were correct.

During a review of the operator aids on the refuel bridge, the inspectors identified that the engraved placard in the bridge operator's booth was not controlled by any procedure or drawing. The information on the placard is used by the bridge operator as guidance during fuel-move activities; it includes specific mast heights for various reactor cavity and SFP locations. In addition, the licensee was unable to verify the accuracy of the information on the placard. Subsequently, NMPC initiated a WO to determine if the information on the placard was accurate, and to establish the most appropriate means to control this information.

The failure to control the information provided to the operators on the refuel bridge is a violation of Title 10 of the Code of Federal Regulations, Part 50 (10 CFR 50), Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," Criterion V, "Instructions, Procedures and Drawings." This requires activities affecting quality to be prescribed by documented instructions, procedures or drawings, of a type appropriate to the circumstances. The use of an uncontrolled placard, which contains unverified information, constitutes a violation of minor significance and is being treated as a Non-Cited Violation (NCV), consistent with Section IV of the NRC Enforcement Policy.

c. Conclusion

The Unit 1 fuel off-load was well controlled. Communications between the operators on the refuel bridge, as well as between the refuel bridge and the control room were observed to be very good. The inspectors identified a NCV pertaining to an uncontrolled operator aid on the refuel bridge.

M1.3 Missed Unit 2 HPCS Actuation Instruments Technical Specification Surveillance Test

a. Inspection Scope

NMPC notified the NRC, in accordance with 10 CFR 50.72, upon discovering that existing surveillance test procedures failed to satisfy the TS requirement for response-time-testing of the high pressure core spray (HPCS) system actuation instrumentation. To assess NMPC performance associated with the event, the inspectors reviewed related deviation/event reports (DERs), TS, UFSAR, procedures,

and plant drawings. Discussions were held with various Unit 2 managers, the SSS, system and design engineers, and operational support staff personnel. Additional discussions were held with NRC management and technical staff members from the Region I Office and the Office of Nuclear Reactor Regulation (NRR).

b. Observations and Findings

On March 26, 1997, at 3:30 p.m., NMPC notified the NRC that existing surveillance test procedures failed to satisfy TS Surveillance Requirement 4.3.3.3, regarding ECCS response-time-testing. The TS definition of ECCS response-time-testing requires that the response time be tested from channel sensor through to the actuation device. During a review of an industry event at another facility, NMPC identified that portions of the HPCS circuit for both actuation signals (drywell pressure - high, and reactor water level - low/low) had not been response-time-tested for several years. However, existing tests proved functionality of the circuits.

Upon identification of the deficiency, the Unit 2 SSS initiated DER 2-97-0942 to address the concern. The SSS determined that both channels for the drywell pressure - high and reactor water level - low/low actuation functions were inoperable. Since this scenario was beyond the limiting condition for operations (LCO) covered by TS 3.3.3.b, Action 36 (only one channel per trip function inoperable), the SSS entered TS 3.0.3. TS 3.0.3 requires a plant shutdown to be initiated within one hour; however, the SSS also invoked TS 4.0.3, which allows 24 hours to complete the missed surveillance test before initiating the required actions.

NMPC evaluated the HPCS actuation circuit, and revised previously used procedures to test the untested portions of the circuit. By 2:00 p.m. on March 27, NMPC had successfully completed testing on the applicable portions of the drywell pressure - high actuation signal; however, adequate procedures were not yet developed to test the reactor water level - low/low actuation signal. Therefore, NMPC notified the NRC, and requested enforcement discretion to allow additional time to complete the required testing. At 3:50 p.m. (via telephone), the Region I Regional Administrator granted an additional 48 hours for NMPC to complete the testing. Subsequently, a written Notice of Enforcement Discretion (NOED) was issued on March 28, 1997.

The procedures to complete the testing on the reactor water level - low/low actuation signal were approved on March 28, and the testing was successfully completed at 12:09 p.m.. The SSS subsequently exited the applicable TSs at 2:38 p.m..

Upon completion of the licensee's testing, the inspectors discussed the details of the missed response-time-testing, and the testing methodology, with Unit 2 system engineers and operations support personnel. Through these discussions, the inspectors confirmed that the sensors and trip units for both drywell pressure - high and reactor water level - low/low had not been response-time-tested for several years. Based on NMPC's review, the last completed response-time-tests for these components were as follows:

•drywell pressure - high - channel 1	November 16, 1990
•drywell pressure - high - channel 2	April 19, 1992
•reactor water level - low/low - channel 1	September 28, 1990*
•reactor water level - low/low - channel 2	April 17, 1992*

*sensors were response-time-tested on June 13, 1993

Additionally, one relay (E22A-k11) downstream of the trip units for reactor water level - low/low had not been response-time-tested for an unknown period of time prior to June 21, 1993.

Further, on June 21, 1993, DER 2-93-1486 documented that all portions of the HPCS actuation circuit, particularly Relay E22A-k11, and associated contacts in the reactor water level - low/low circuit, were not included in the procedures for response-time-testing. NMPC dispositioned the DER based on a GE specification, that the HPCS response time did not need to include instrumentation response time. Therefore, NMPC's determination that the procedures, at that time, adequately satisfied the TS surveillance requirement was incorrect. As a result, NMPC discontinued the response-time-testing of other portions of the HPCS actuation instrumentation; particularly the drywell pressure - high, and reactor water level - low/low sensors and trip units. The licenses's handling of DER 2-93-1486 indicated a poor understanding of the ECCS response-time-testing TS, and an inadequate management review of the associated DER. The failure to complete the response-time-testing for all portions of the HPCS system is a violation of TS surveillance requirement 4.3.3. **(VIO 50-410/97-02-02)**

The inspectors verified other portions of the HPCS actuation circuitry were adequately response-time-tested by comparing the surveillance test procedures and the applicable plant drawings. The inspectors were informed that during the review of the procedures, NMPC identified an additional deficiency in the test methodology associated with the HPCS emergency diesel generator (EDG) portion of the circuit. Specifically, procedure N2-OSP-EGS-R008, "Operating Cycle Diesel Generator Simulated Loss of Offsite Power with an ECCS Division III Initiation," Revision 3, failed to ensure proper circuit overlap. However, NMPC reviewed other procedures and determined adequate circuit overlap could be provided from data obtained during procedure N2-OSP-EGS-R005, "Diesel Generator ECCS Start Division III," Revision 1. NMPC used the two tests to confirm acceptable response time. Although NMPC was able determine appropriate circuit overlap to ensure adequate response-time-testing, this may not have been considered in the past.

The inspectors' discussions with the licensee also indicated that a preliminary review of the other ECCS systems was completed and no similar response-time-testing concerns were identified.

c. Conclusion

The inspectors considered NMPC's actions to address the missed TS surveillance tests to be appropriate. However, the failure to complete required ECCS response-time-testing for the HPCS system is a violation of TS. (VIO) In addition, in June 1993, a DER identified the inadequate response-time-testing, but was incorrectly dispositioned and resulted in the elimination of additional portions of the HPCS circuitry from response-time-testing. This indicated a poor understanding of the ECCS response-time-testing requirements and an inadequate management review of the associated DER.

M1.4 Seismic Monitoring Surveillance Testing

a. Inspection Scope

The inspectors assessed the surveillance testing and calibration of the seismic monitoring equipment installed in both units. The assessment included a review of completed test procedures and WOs, as well as applicable sections of the UFSAR and TS for both units. During this assessment, the inspectors also evaluated NMPC's control of contractor activities. Additionally, the inspectors observed the surveillance test at Unit 2, and discussed the testing process with members of the Instrumentation and Controls (I&C) staff for both units and the contractors performing the activities.

b. Observations and Findings

Unit 1

Although there are no TS or UFSAR requirements for testing the seismic monitoring instrumentation at Unit 1, NMPC performs a monthly functional check and has the vendor calibrate the equipment each refueling outage. The inspectors reviewed completed procedure N1-IPM-209-006, "Seismic Recording System Monthly Status Check," Revision 1, and the vendor calibration procedure "Channel Calibration for Strong Motion Time-History Acceleration Recorder Kinemetrics, Inc., Model SMA-3/SMP-1." No concerns were identified. Also, the inspectors verified that the vendor's procedure was controlled by the licensee's process, as described in procedures NIP-PRO-01, "Use of Procedures," Revision 3, and GAP-PSH-01, "Work Control," Revision 16.

Unit 2

Surveillance tests are required for Unit 2 seismic monitoring instrumentation by TS surveillance requirement 4.3.7.2.1, and include monthly channel checks, semi-annual channel functional test, and an 18-month channel calibration. During this inspection period, the licensee completed the semi-annual and the 18-month surveillance test, concurrent with testing and instrument calibration completed by the vendor.

The inspectors reviewed completed procedure N2-ISP-ERS-SA103, " Semiannual Functional/Calibration Test of the Triaxial Seismic Switch Instrument Channel," Revision 3. Additionally, the inspectors reviewed the vendor's completed procedure "Channel Calibration of Seismic Switch Model SP-1/TS-3," Revision E. There were no concerns identified during this review.

The inspectors observed the portions of the surveillance testing completed under WO 97-03713-00, which included the completion of procedure N2-ISP-ERS-R101, "Operating Cycle Calibration of Triaxial Seismic Monitoring Time History Accelerograph Instrument Channels," Revision 3, and the vendor's procedure "Channel Calibration of Strong Motion Time-History Acceleration Recorder Kinematics, Inc., Model SMA-3/SMP-1," Revision Original. The WO was used to document maintenance activities performed by the vendor, under their procedure, that differed from that contained in the licensee's procedure. Although the activities were controlled by an NMPC process, the implementation was cumbersome and caused a delay in completing the testing. The inspectors considered the failure to identify and correct the procedural deficiencies, prior to declaring the equipment inoperable, a weakness in the job planning process. DER 2-97-0858 was initiated to document the excessive job delay due to procedural deficiencies.

Through discussions with the vendor, and a review of the NMPC procedure, the inspectors ascertained that the NMPC procedure, by itself, was inadequate to fulfill the needed testing and calibration of the instrumentation. This was discussed with the I&C manager and job supervisor; although they did not state that the NMPC procedure was adequate to meet the TS surveillance requirement, they confirmed that Unit 2 has always completed their procedure concurrently with the vendors's procedure. The inspectors could identify no controls-in-place to ensure the NMPC surveillance test was completed concurrently with the vendor's procedure. The inspectors reviewed the same Surveillance test completed in August 1995; at that time, the only portions of the procedure completed were those associated with acceptance criteria, the other steps were considered complete by the performance of the vendor's procedure. The adequacy of the licensee's procedure to meet the TS surveillance requirement, and the use of the vendor's procedure in-lieu of the licensee's procedure during the August 1995 TS required surveillance test, remains unresolved pending additional evaluation by the licensee and subsequent NRC review. **(URI 50-410/97-02-03)**

Contractor Control

The licensee's control of the contractors during the work at Unit 2, and during the pre-job briefing prior to the work at Unit 1, indicated an appropriate level of control. The vendor technicians were qualified to work on the instrumentation models installed at both units.

c. Conclusion

The licensee provided an appropriate level of control over the contractors performing testing on the seismic monitoring instrumentation at both units. However, a weakness in the planning of the Unit 2 testing failed to identify and correct procedural deficiencies that resulted in excessive time for the seismic monitoring instrumentation being inoperable. Additionally, the adequacy of the licensee's procedure alone to fulfill the 18-month TS surveillance requirement, and the use of the vendor's procedure in-lieu of licensee's surveillance testing, remains unresolved.

M1.5 Non-Destructive Examination Data Review

a. Inspection Scope

During this outage, the inspectors observed non-destructive examination (NDE) work in progress in the core shroud, stub tubes and other welds in systems covered by the American Society of Mechanical Engineers (ASME) Code, Section XI. Also included in the review were the inservice inspection (ISI) NDE procedures for ultrasonic testing (UT), liquid penetrant testing (PT), magnetic particle testing (MT) and radiographic testing (RT).

b. Observations and Findings

General NDE Activities

The inspectors observed PT exams performed on recirculation system welds (32-WD-049, 32-WD-050). The exams were performed to the station procedures; however, the inspectors noted a clamp that limited the exam surface coverage was present on the long seam weld (32-WD-49-u). The NMPC NDE examiner was not aware that the clamp had not been removed prior to arriving at the job site. The inspectors expressed concern that the examiners were not sufficiently prepared prior to entering the radiation area. On another occasion, the inspectors observed the UT and MT examination of the 31-WD-055 (feedwater system) weld and the UT of the 38-WD-093 (shutdown cooling system) weld. The UT examination performed on 38-WD-093 was thorough and clearly adhered to station procedures; however, upon arrival at the job site for the 31-WD-055 weld, it was discovered that the insulation had not yet been removed. The inspector brought this to the attention of the NMPC NDE Level III and station management. The inspector looked for evidence of poor practice in other areas, but determined that these incidents were isolated; overall, the licensee had aggressively pursued pre-job staging.

The inspector also reviewed the UT data package for the 32-WD-079 weld in the recirculation system. The Level II UT examiner initially identified what appeared to be intergranular stress cracking corrosion (IGSCC) cracking with this weld. The NMPC Level III performed an independent manual UT exam on this weld and also detected crack-like indications. Due to the high degree of uncertainty in the indications, and the high level of radiation present at this weld, the GE automated

scanner was used to interrogate the weld. The GE SMART 2000 system was utilized to perform a supplemental examination for additional information. The GE automated examination report (Number R-001) stated that no indications associated with IGSCC were recorded by the automated scan, only non-relevant indications of root and inside surface geometry were found. The inspector found the technical approach to this issue, and the resolution, to be acceptable.

Core Shroud Inservice Inspection

The NRC Generic Letter (GL).94-03 required inspection of boiling water reactor (BWR) core shrouds to determine the extent of core shroud service induced cracking. The BWR Vessel and Internals Project (BWRVIP) developed an inspection strategy based on an the EPRI document TR-105747, "Guidelines for Reinspection of BWR Core Shrouds" (BWRVIP07).

During the 1995 refueling outage, four core shroud tie rod stabilizers were installed in the Unit 1 plant to compensate for possible cracking in the shroud horizontal welds, while inspection was deferred until the 1997 refueling outage. Visual inspection in 1997 by enhanced visual testing (EVT) identified cracking originating at portions of the outside shroud surface near two vertical welds. UT of these welds was conducted to establish the originating location, and the extent in length and depth of the cracks. The UT included sampling of welds that had not been visually inspected, and identified cracking originating from both the inside and outside surfaces of some horizontal and vertical shroud welds.

The NRC reviewed the EVT and UT results and confirmed that proper testing methods were employed, using experienced and qualified personnel. Testing in progress and the analysis of test data were observed. For UT, a computer-based system was used to fully characterize the cracks and provide sufficient information to size the cracks, with multiple sets of UT data for confirmation. Procedures UT-NMP-503V5, Rev. 0, "Automated UT of Shroud Assembly Welds," and UT-NMP-207V0, Rev. 0, "Automated (UT) Planer Flaw Sizing," were applicable to the core shroud crack detection and sizing.

The experience and qualification records of those performing UT analysis and other nondestructive examinations were sampled for review. The certification records were found to be extensive and complete for the work being performed. No items of concern were identified with the performance of testing work observed or the related procedures and documentation.

Stub Tube UT Inspection

The inspectors' review identified no concerns related to the acquisition and analysis of computer-based UT data from the examination of the control rod drive stub tubes in the rolled and "J" weld areas.

c. Conclusions

The NDE data and procedures were found to be well organized, comprehensive documents. The NDE Program was well implemented, with adequate control through regular involvement of plant staff in the inspection activities. Where inservice degradation was identified, the inspection sample was properly expanded per the ASME Code and the commitments to the NRC staff. Steps to determine the operating significance of the findings were initiated. Although some minor weaknesses were identified, the inspectors determined that they were isolated incidents and that overall, NMPC is aggressively pursuing its NDE program.

M3 Maintenance Procedures and Documentation (73753, 73755)

M3.1 ISI Program Review

a. Inspection Scope

The inspectors assessed the NMPC ISI program for Units 1 and 2. The ISI Program Plan was sampled, including the scope of ISI work, the control of ISI contractors performing work, and documentation of examinations performed. The program was reviewed for its compliance with the requirements of the 1983 Edition including addenda through summer 1983 of Section XI of the ASME Boiler & Pressure Vessel Code, NRC regulations and plant technical specifications. NMPC's first inspection period in the second interval was extended due to an extended refuel outage of 30 months at Unit 1. Currently, NMP Unit 1 is in the first outage of the third period in the second 10-year interval.

b. Observations and Findings

The administrative procedure for the Nine Mile Point Unit 1 ISI program (NIP-IIT-01, Rev 2) was reviewed and found to be clearly written, and detailed in the assignment of responsibilities for program completion and the ISI inspection requirements. The inspector reviewed six completed ISI examination packages for work performed during the 1995 Unit 1 refueling outage, and determined the packages were thorough and met the requirements of the ASME Code.

Several ISI Level II and III NDE qualification packages were reviewed. The certification package training requirements and physical examination records were complete and prepared in accordance with the ASME Code, Section XI, IWA-2300.

The inspectors verified the oversight by the Authorized Nuclear Inservice Inspector (ANII) of ISI activities, as required by the ASME Code Section XI, IWA-2000. In conjunction with this review, the inspectors reviewed several DERs written against both units for failing to involve the ANII in certain ASME-related repairs or replacements. The licensee performed a root cause analysis on this issue and developed corrective actions to preclude ANII exclusion in the future. The inspector discussed the corrective actions with the ANII, who was satisfied with the corrective actions; however, verification of the effectiveness of the corrective action

procedures will not be validated until such time that the licensee has a sample of work packages performed to the new procedures.

c. Conclusions

The ISI program was well documented, controlled and implemented. The program manager was knowledgeable of ISI and ASME Code requirements. There was good communication between the ISI manager, engineering and plant management. The documentation supporting the examinations was accurate and readily available for review by the inspectors.

M7 Quality Assurance in Maintenance Activities

M7.1 Quality Assurance in ISI Activities

a. Inspection Scope

Quality assurance (QA) with regard to NDE/ISI activities was reviewed. Specifically, two QA audits (95-007 & 96-013), one Independent Safety Engineering Group (ISEG) report (March 1996), and two QA surveillance reports (96-0297-2 & 96-0286-2) were reviewed to determine the scope of the audits, the findings reported, and the corrective actions recommended for the ISI program.

b. Observations and Findings

The QA audit and ISEG reports did not provide much oversight for the ISI program or the nondestructive examinations performed to implement the program. However, QA surveillance report 96-0286-2 (Unit 2) did identify several instances where NMPC did not meet its commitment to perform the augmented IGSCC examination requested by Generic Letter 88-01. This surveillance was done at the request of the NMPC Unit 1 Technical Support Manager as a result of deviations discovered at Unit 1. Also, the inspectors noted that the QA organization no longer makes recommendations. Instead, the reports outline findings, observations and conclusions. The ISEG report reviewed aspects of the ISI program at Unit 2 and made recommendations. The Unit 1 QA staff plans to perform an indepth ISI assessment after RFO-14 and was in the process of gathering field data while the inspectors were onsite.

c. Conclusions

The QA oversight program was adequate; however, the inspectors noted that no guidance document existed that described the QA NDE oversight activities. Also, the inspector noted that not having the QA organization make formal recommendations will tend to weaken the overall effectiveness of the audits.

M8 Miscellaneous Engineering Issues (92902)

M8.1 (Closed) LER 50-220/96-02: Core Shroud Repair Stabilizer Assembly Different Than 10 CFR 50.55a Design Description due to Installation/Inspection/Engineering Personnel Error

NMPC submitted this Licensee Event Report (LER) to describe an anomaly identified subsequent to the installation of core shroud tie-rod assemblies during the Unit 1 1995 refueling outage. The four core shroud stabilizer assemblies consist of tie-rods, brackets, springs, and other parts. By letters dated March 23, 1995, and April 30, 1996, the post-installation inspection of the shroud revealed conditions that differed from the intended design. The licensee then submitted letters dated May 30, 1996, and August 14, 1996, describing plans for modifications to the stabilizers during the March 1997 outage. By letter dated March 3, 1997, the staff discussed its review of the proposed modifications and determined that they adequately restore the stabilizer assemblies to the intended function. However, based on additional problems associated with the tie-rod assemblies (see Section E2.1 of this report), the NRC's Office of NRR is re-reviewing the submittal and will document their review in a Safety Evaluation Report to be issued prior to the startup of the unit.

III. ENGINEERING

E1 Conduct of Engineering (37551)

E1.1 General Comments

Using NRC Inspection Procedure 37551, the inspectors frequently reviewed design and system engineering activities and the support by the engineering organizations to plant activities.

E1.2 Evaluation of Unit 1 Reactor Reload Analysis

a. Inspection Scope

The inspectors reviewed the reload analysis for the next cycle of Unit 1 operations. The analysis was summarized in the Core Operating Limits Report (COLR), which must be submitted to the NRC prior to startup from each refueling outage. The COLR was based on several design documents provided by the vendor (General Electric Nuclear Energy (GENE)), and the Unit 1 TS. The inspectors reviewed the basis documents, the COLR, and the associated safety evaluation.

b. Observations and Findings

As required by the Unit 1 TS, Section 6.9.1.f, NMPC submitted the Unit 1 COLR for the upcoming cycle. The COLR is the plant specific document that provides core operating limits for the current reload cycle. Those limits, discussed in the Unit 1

TS, Section 3.1.7, are (1) average planar linear heat generation rate (APLHGR), (2) linear heat generation rate (LHGR), (3) minimum critical power ratio (MCPR), (4) power-to-flow relationship, and (5) considerations when operating with less than five recirculation loops in service. The inspectors verified that the information in the basis documents provided by GENE, listed below, was accurately translated into the COLR.

"Supplemental Reload Licensing Report for Nine Mile Point Nuclear Station Unit 1, Reload 14, Cycle 13," J11-02962SRLR, Revision 0, Class I, dated January 1997

"Lattice Dependent MAPLHRG Report for Nine Mile Point Nuclear Station Unit 1, Reload 14, Cycle 13," J11-02962MAP, Revision 0, Class III, dated January 1997

The inspectors independently confirmed that the reload plan, as detailed in the COLR, maintained both quadrant and octant symmetry; which is a basis for the placement and redundancy of the installed in-core nuclear instrumentation. In addition, the inspectors reviewed the distribution of new fuel and previously irradiated fuel, and determined that the core design was consistent with GENE generic recommendations.

The inspectors also reviewed the Safety Evaluation (SE 97-005, Revision 0) and the associated Applicability Review (AR 08094). The SE was consistent with the GENE reference documents, and adequately addressed the reload design and related changes in the safety and thermal limits. The SE identified that 27 control rods needed to be replaced due to boron depletion. The SE also included a discussion of the affected accident analysis sections of the UFSAR and determined that no accidents were adversely changed. No unreviewed safety questions were identified during the Unit 1 Station Operations Review Committee (SORC) review.

Overall, the inspectors considered the Unit 1 COLR and supporting documentation to be acceptable and met the requirements of the Unit 1 TS.

c. Conclusion

The inspectors reviewed the Unit 1 COLR, and supporting documentation, and verified that the COLR represented an accurate summary of the reload analysis as performed by GENE. The core reload symmetry and fuel bundle distribution were consistent with GENE generic recommendations. Overall, the inspectors considered the Unit 1 COLR and supporting documentation to be acceptable and met the requirements of the Unit 1 TS.

E2 Engineering Support of Facilities and Equipment (37551)

E2.1 Unit 1 Core Shroud Tie-Rod Lower Wedge Not in Contact with Reactor Vessel Wall

Background

During the 1995 Unit 1 outage, GE designed and installed a core shroud modification, consisting of four tie-rod assemblies, between the shroud support cone and the shroud head support ring. The tie-rod assemblies were symmetrically located around the shroud, in the reactor pressure vessel in the annulus region. The tie-rods were designed to provide an alternative vertical loading path from the upper flange through the shroud support cone, and to provide horizontal restraint of the shroud through the use of linear springs and limit stops. This modification was performed in response to NRC GL 94-03, "IGSCC of Core Shrouds in Boiling Water Reactors."

a. Inspection Scope

NMPC notified the NRC of a degraded condition relative to the Unit 1 reactor core shroud tie-rod assemblies. At the time, Unit 1 was shutdown and approximately two weeks into a refueling outage. The inspectors reviewed the event notification and discussed the issue with the Unit 1 Plant Manager, Engineering Manager, and engineering staff.

b. Observations and Findings

On January 18, 1997, during in-vessel inspections and preparations for replacement of the 270-degree (270°) tie-rod assembly during Unit 1 refueling outage, GE identified that the core shroud 90° tie-rod lower wedge support had shifted and was not in contact with the reactor vessel wall. Also, the spring latch device had apparently failed (fractured). Further inspections noted degradation of the spring latch devices at the 270° and 350° tie-rods, and that all four tie-rod assemblies had lost vertical pre-load. A preliminary engineering evaluation concluded that the lack of contact may have affected the performance of the core shroud lower support wedge, specifically during a postulated seismic event.

The licensee determined that further inspection was required to determine the root cause. The apparent root cause was unacceptable movement of the tie-rod assemblies during plant operation, caused by a failure to recognize the impact of clearances between the toggle bolts and the holes, and an incorrect design assumption regarding sliding at the vessel to wedge interface. The NRC's Office of NRR is reviewing the concerns and will document their review in a Safety Evaluation Report, to be issued prior to the startup of the unit.

The licensee concluded that the tie-rod degradations had no impact on reactor plant safety during the last operating cycle. The proposed corrective actions were to (1) reduce the clearance between the lower support toggle bolts and the shroud side of

the cone holes, (2) retorque the tie-rods to original design installation torque, and (3) install new modified lower wedge support latches.

c. Conclusions

The licensee's root cause evaluation and proposed corrective actions appeared in-depth and are being evaluated by the Office of NRR. A Safety Evaluation Report will be issued prior to Unit 1 restart.

E2.2 Unit 1 Auxiliary Cleanup Pump Room Lack of Leak Detection

Background

The reactor water cleanup (RWCU) system is designed to maintain high reactor water purity by ion exchange and filtration. During power operation, the RWCU system takes a suction from a reactor recirculation loop and discharges to the feedwater header; portions of the system are subjected to high temperature and pressure. The auxiliary cleanup system interfaces with the RWCU system: to (1) provide additional suction pressure to the RWCU pumps during low pressure operations, and (2) provide the driving head during low pressure operations (i.e. during outages). The auxiliary cleanup system is housed in a separate room from the RWCU system. The RWCU system room contains temperature detectors which, on a high temperature (indicative of a system leak), initiate system isolation.

a. Inspection Scope

On April 6, 1997, NMPC notified the NRC of a degraded condition relative to the Unit 1 RWCU and auxiliary cleanup systems. Specifically, the auxiliary cleanup pump room lacked temperature detectors for identifying a line break for RWCU system isolation. The inspectors reviewed the event notification and discussed the issue with the Unit 1 Engineering Manager and I&C Supervisor.

b. Observations and Findings

During a review of GE SIL [Services Information Letter] 604, "Reactor Water Cleanup System Break Detection," an NMPC engineer identified that the auxiliary cleanup pump room contained piping with high energy fluid, but did not have the required leak detection as in the RWCU heat exchanger and pump rooms. At the time, Unit 1 was shutdown; thus the licensee was able to maintain the cleanup system operable since plant conditions were not conducive to a high energy line break (HELB).

NMPC notification of the degraded condition to the NRC was timely and accurate. Licensee planned corrective actions included relocating two of the existing RWCU temperature detectors into the auxiliary cleanup pump room. The modification was completed during the refueling outage. The inspectors considered the corrective actions for this specific issue to be appropriate. The root cause was determined to

be a failure to design and install thermal sensors in the appropriate locations during initial construction.

The Unit 1 UFSAR, Chapter X, Section B.3.0, states that "The cleanup system is also automatically shut down and isolated ... by area temperature detectors, installed at appropriate locations, which detect line breaks." The failure to have installed temperature detectors in the auxiliary cleanup pump room was not in accordance with the design basis in the UFSAR and is a violation of 10 CFR 50.59. This licensee-identified violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy.

c. Conclusions

Following issuance of the GE SIL, the licensee's identification of a degraded condition related to the lack of temperature detectors in the Unit 1 auxiliary cleanup pump room was timely and accurate. The immediate corrective actions were appropriate. The lack of temperature detectors in the auxiliary cleanup pump room was a violation of the design basis, stated in the Unit 1 UFSAR. (NCV)

E8 Miscellaneous Engineering Issues (92903)

E8.1 (Closed) LERs 50-220/96-13-01, 50-410/96-16-01 and 96-16-02: Potential Overpressurization of Containment Penetrations due to Thermal Expansion

NMPC issued the LER supplements to identify additional penetrations susceptible to overpressurization due to thermal expansion. The inspectors described the technical details in NRC IR 50-220 & 410/97-01. The inspectors considered the LER supplements to be timely and to accurately described the event and the root cause. Also, the immediate corrective actions appeared adequate. The long-term corrective actions for the issues described in these LERs are to be addressed in accordance with the licensee's response to NRC GL 96-06, "Assurance of Equipment Operability and Containment Integrity during Design-Basis Accident Conditions."

E8.2 (Closed) LER 50-220/97-01: Pipe Supports Outside Design Basis Because of Design Deficiency

On February 6, 1997, NMPC determined that sixteen reactor building closed loop cooling (RBCLC) system pipe supports inside the drywell did not meet the design criteria for seismic loading, as described in the UFSAR. The technical details associated with this LER were discussed in NRC IR 50-220/97-01. This deficiency was identified by the licensee as a result of a design analysis being performed as part of the corrective actions to LER 50-220/96-09, concerning the potential for overstressing RBCLC system pipe supports as a result of thermal stresses during a loss-of-coolant accident (LOCA).

The inspectors considered the LER to be timely and to accurately describe the event. The root cause of the event and the immediate corrective actions appeared adequate. The long-term corrective actions appeared appropriate. NMPC

completed the RBCLC support modification during the current refueling outage. The inspectors noted the completed modification and U-bolt installation during drywell tours.

E8.3 (Closed) 10 CFR Part 21: Unit 2 Excessive Failure Rate of Borg-Warner Pressure Switches

a. Inspection Scope

NMPC notified the NRC in accordance with 10 CFR 21 (Part 21) regarding the excessive failure rate of Borg-Warner pressure switches. The inspectors reviewed the Part 21 notification, the applicable DER, and engineering supporting analysis. Additionally, the inspectors discussed the issue with the responsible design engineer.

b. Observations and Findings

On February 20, 1997, NMPC notified the NRC, in accordance with Part 21, of an excessive failure rate of Borg-Warner pressure switches. Several pressure switches had failed during operation and initial calibration. NMPC determined that the switches were unable to consistently hold the correct reset point. According to the manufacturer, the subject switches did not have an accurately adjustable reset value; in particular, the relationship between the setpoint and the reset was not linear nor consistent between different switches of the same model.

NMPC has 40 questionable pressure switches installed at Unit 2, in hydraulic valve operators for three safety-related systems -- two valves in the service water system, four valves in the control building chilled water system, and eight valves in the standby gas treatment system. Each valve operator contains two or three pressure switches, depending on the specific design. The failure associated with each switch is dependent on the application, but could cause a valve to fail open without the ability to close, to fail closed without the ability to open, or to fail "as-is."

NMPC evaluated the continued operation with the installed switches, as documented in the engineering supporting analysis associated with the DER. They determined that switches that passed initial calibration were operable with a calibration periodicity of 18 months. This was based on a review of calibration trends for installed switches. Administrative controls were established to calibrate the switches every 18 months. The inspectors reviewed the engineering supporting analysis and the corrective actions and found them adequate.

c. Conclusions

NMPC appropriately notified the NRC of excessive failure rate of Borg-Warner pressure switches, and took adequate corrective actions to address the concern.

IV. PLANT SUPPORT

Using Inspection Procedure 71750, the resident inspectors routinely monitor the performance of activities related to the areas of radiological controls, chemistry, emergency preparedness, security, and fire protection. Minor deficiencies were discussed with the appropriate management, significant observations are detailed below. Specialist inspectors in the same areas use other procedures during their reviews of plant support activities; these inspection procedures are listed, as applicable, for the respective sections of the inspection report.

R1 Radiation Protection and Chemistry Controls (RP&C) (71750, 83750, 90712)

R1.1 Refueling Outage Radiation Protection at Unit 1

a. Inspection Scope

The inspector reviewed radiological controls implemented during the Unit 1 refueling outage. The inspector reviewed portions of work on the reactor recirculation pump (RRP), the refueling floor, the torus cleanup, and other activities. The inspector made frequent tours of the radiologically controlled areas (RCAs), and conversed with RP supervision and several RP technicians (RPTs).

b. Observations and Findings

At the time of the inspection, work was progressing well from the standpoint that worker exposures were being kept as low-as-is-reasonably-achievable (ALARA). Work was generally being conducted in accordance with established ALARA plans. The licensee was effectively managing this through pre-planning, briefings, shielding, RP supervision oversight, remote observation, and remote radiation monitoring equipment.

One example of mixed performance regarding ALARA review implementation was noted. Early in the outage, drywell scaffold activities were not well coordinated. End-users of the scaffolds had not provided sufficient guidance to the scaffold team by overseeing their work. This led to the need for rebuilding several scaffolds within the drywell. One of the expected actions in ALARA Review 97-01 was that supervision was expected to oversee scaffold work activities; therefore, this provision of the ALARA review had not been consistently implemented. The positive aspect of this was that the situation was noted by the Unit 1 ALARA supervisor, and corrective actions were applied by station management in a timely manner.

Contamination controls were determined to be appropriate. Notable changes implemented by the licensee included the use of "scrubs" (operating room type clothing) for low contamination areas, and the establishment of part of the turbine deck as a clean area to be used for breaks. Food and drinks brought to the site were collected at the start of each shift, and brought to the clean area by RP staff. The facilities are discussed further in Section R2.1 of this report.

The inspector made the following general observations during the course of the inspection:

- No weaknesses were noted in any of the ALARA reviews or Radiation Work Permits (RWPs) that were reviewed,
- External exposure controls for RRP and torus work were excellent,
- There were no hot particle contamination or distributed contamination events of safety consequence,
- Postings and labels were generally established in accordance with the established program,
- Individuals were wearing the required dosimeters,
- When challenged by the inspector, workers were aware of the dose rates in their work locations, and
- Overall, radiological housekeeping was good.

c. Conclusions

Implementation of radiological controls in the Unit 1 refueling outage was characterized by good application of planning and controls for work in radiologically controlled areas.

R2 Status of RP&C Facilities and Equipment (71750, 83750)

R2.1 Review of Unit 1 Control of Radiation Areas and Personnel

a. Inspection Scope

The inspector interviewed RP personnel, used the RCA access control system during the course of the inspection, and observed the flow of personnel through the Unit 1 RCA RP control point. The inspector toured portions of the Unit 1 turbine building and reviewed high radiation area (HRA) access controls.

b. Observations and Findings

A portion of the turbine building was dedicated as a clean area, intended only for personnel working on the turbine. The licensee had reviewed and taken into account the presence of monitoring hard-to-detect radionuclides. As such, the inspector concluded that the instrumentation used for this task was appropriate.

The inspector noted that the Unit 1 RCA control point had been separated by establishing more discrete ingress and egress pathways. Satellite RP control points were established at other areas of the station, such as the refueling floor and the drywell. The inspector noted that it was easy for RP staff to monitor and assist workers as they entered or left the Unit 1 RCA. A sufficient number of portal monitors were stationed at the Unit 1 RCA control point to minimize congestion in this area. This control point was continuously manned.

All individuals entering the RCA were provided with an electronic dosimeter and signed onto a computer-based radiation work permit (RWP). Workers were able to monitor their accumulated exposure and area dose rate. Workers could change to a different radiation work permit or task in the field without returning to the RCA RP control point. Junior RPTs were stationed at the Unit 1 RCA control point to ensure that workers made proper entries and that the electronic dosimeters had been properly reset. Station management, including the Plant Manager and Vice President, Nuclear, at various times during the outage also performed the RCA control point monitoring duty to emphasize the importance of making proper RCA entries. No breakdown in RCA access controls was noted during periods of high personnel flow through the RCA RP control point, such as the initial shift entries and lunch breaks.

Personnel access through the Unit 1 drywell personnel hatch was well-controlled during control rod drive (CRD) exchanges through the personnel hatch. Personnel were redirected to the equipment hatch during CRD exchanges. A pathway from the drywell under-vessel area to outside the personnel hatch was cordoned off for HRA controls.

The licensee's camera capabilities were very good. The cameras provided an effective means of remote oversight of high exposure activities such as CRD exchanges.

c. Conclusions

RP-related facilities and equipment were well maintained and established to support outage activities. Some improvement was noted in RCA access controls. No degradation of the RP program was noted as a result of any facilities or equipment changes.

R2.2 Tour of Unit 1 Radiological Waste Facility

a. Inspection Scope

The inspectors toured the Unit 1 radiological waste (radwaste) facility. Noted concerns were discussed with facility operators and supervision.

b. Observations and Findings

The inspectors toured the Unit 1 radwaste facility with a radwaste operator. The inspectors discussed facility operations and walked down the control room panel for comparison with current facility configuration. No system configuration discrepancies were noted. The operator was knowledgeable regarding system layout and operation.

General housekeeping and material storage within the radwaste facility were very good. Flammable liquids stored within the facility, awaiting chemical processing, had been appropriately evaluated in accordance with the licensee's fire protection

program. The inspectors noted what appeared to be an excessive amount of flammable material in one designated storage area; however, the material had been appropriately analyzed by the Fire Protection department. Both the operator and Radwaste Supervisor acknowledged that this amount of material was more than normal, but was an exception, and a direct result of the ongoing refueling outage. The supervisor informed the inspectors that most of the flammable material required chemical sampling prior to disposal, and that the volume of material would be significantly reduced prior to completion of the current refueling outage.

The inspectors noted that the Thermex modular waste water treatment equipment, for processing liquid radwaste streams and reduce waste volume, was a long-standing temporary modification (94-0022). The Thermex system consists of various filtration and separation devices, connected via plastic piping/hoses and fittings, and supported at many locations with plastic tie-wraps. Discussions with the facility supervisor and system engineer indicated that completion of the permanent modification had originally been scheduled for the end of 1996. However, due to an extensive safety evaluation (SE 95-109, Draft D) review and the refueling outage, the current projection for permanent installation is June 1997. The inspectors considered three years to be an excessive time for incorporation of a temporary modification.

c. Conclusions

Unit 1 radwaste operators were knowledgeable regarding system layout and operation. The general housekeeping and material condition of the facility were very good. An large amount of flammable material was noted in a designated storage area, but was a result of the refueling outage, and had been properly analyzed by the Fire Protection Department.

R2.3 Unit 1 Compliance with 10 CFR 70.24, Criticality Accident Requirements

a. Inspection Scope

The inspectors reviewed NMPC Unit 1 compliance with 10 CFR 70.24. Specifically, the inspectors focused on licensee conformance to 10 CFR 70.24(a)(3), requiring the need to have emergency procedures in place for evacuation and performance of evacuation drills. The inspectors also reviewed Unit 1 TS and UFSAR with regard to criticality monitoring, and discussed any concerns with the RP Manager and Plant Manager.

b. Observations and Findings

The only criticality accident monitoring system addressed in the Unit 1 UFSAR is located in the new-fuel vault. This criticality monitor function is performed by an area radiation monitor (ARM) which measures local gamma radiation flux and provides a remote alarm in the Unit 1 control room.

The RP manager informed the inspectors that NMPC had no specific emergency procedures in place for responding to an inadvertent criticality, nor were drills conducted focusing on a criticality accident. However, NMPC maintains procedures for responding to radiation alarms, including ARMs, by station personnel, and for RP monitoring and investigation. Station personnel response to radiation alarms is included in General Employee Training (GET) and procedure EPIP-EPP-21, "Radiation Emergencies", provides guidance on evacuation of local areas upon receipt of a valid ARM alarm. Emergency preparedness drills were periodically conducted to demonstrate station personnel response and familiarization with the plant evacuation and assembly process. The RP manager informed the inspectors that drill scenarios frequently incorporated ARM actuations. Although criticality accidents were not specifically addressed in either procedures or the Site Emergency Plan, the inspectors concluded that those procedures and guidelines presently in place appeared to meet the intent of 10 CFR 70.24(a)(3).

The inspectors observed instrument and control (I&C) technicians perform a semi-annual calibration of the new-fuel vault ARM, in accordance with Unit 1 procedure N1-RTP-31, "Calibration of General Electric Area Radiation Monitors," Revision 07. The technicians informed the inspectors that the alarm setpoint acceptance range was 5.0 ± 10% millirem per hour (mrem/hr), 10CFR70.24 requires a setpoint of not less than 5 mrem/hr. The inspectors reviewed the last five new-fuel vault ARM calibration results, both the as-found and as-left trip setpoints were 5.0 mrem/hr. Although the ARM trip setpoint had not been less than the required 5.0 mrem/hr, the inspectors concluded that a weakness existed in that the calibration procedure which could allow the trip setpoint to be less than 5.0 mrem/hr.

The inspectors discussed the requirements of 10 CFR 70.24(a)(2) with the RP Manager, and questioned whether N1-RTP-31 adequately reflected the requirements for criticality monitoring devices to have an alarm setpoint of not less than 5 mrem/hr. The RP Manager discussed this issue with the system engineer, who initiated a DER (1-97-0904) to address the potential non-compliance. The DER noted that a previous DER (1-96-2051) had been written to address the same issue, and that design engineering determined the tolerance to be acceptable. NMPC subsequently concluded that the approach was non-conservative and recommended changing the current calibration procedure. Subsequent to the inspection period, the licensee revised N1-RTP-31 to adjust the alarm setpoint to 10.0 ± 10% mrem/hr.

Also, the inspectors noted the Unit 1 UFSAR, Chapter XII, Section 2.1.1.3, requires ARMs in areas where radiation levels are subject to sudden changes to alarm both in the control room and locally. The new-fuel vault ARM does not provide a local alarm. By definition, a criticality monitor is subject to sudden changes in radiation levels; but because of the design of the new-fuel vault, a criticality is not possible. In response to this issue, NMPC has changed the UFSAR to clarify that the ARM in the new-fuel vault is not subject to sudden changes in radiation levels and, therefore, a local alarm is not needed. The inspectors considered this to be acceptable. However, the plant configuration was not in accordance with the design basis, as stated in the UFSAR. This NRC-identified violation is of minor

design basis, as stated in the UFSAR. This NRC-identified violation is of minor significance and is being treated as a Non-Cited Violation, consistent with Section IV of the NRC Enforcement Policy.

c. Conclusions

Although criticality accidents were not specifically addressed in either NMPC procedures or the Site Emergency Plan, other procedures and guidelines appeared to satisfy the intent of 10 CFR 70.24. A weakness was identified in the calibration procedure for the trip setpoint for the new-fuel vault ARM (used as a criticality monitor), in that the procedure allowed a trip setpoint below that specified in 10 CFR 70.24. Also, the lack of a local alarm associated with the new-fuel vault ARM was not in accordance with the Unit 1 UFSAR. (NCV)

R5 Staff Training and Qualification in RP&C (71750, 83750)

R5.1 Contractor RP Qualification

The inspectors reviewed contractor RPT resumes, and observed on-going work to determine the breadth and appropriateness of contractor RPT qualifications for the tasks for which they had been assigned. The inspectors noted that the contractor RP staff was well qualified, experienced, supervised, and in many cases assigned to provide coverage to tasks which they had covered during other refueling outages or were assigned to tasks commensurate with their experience. The inspector concluded that the outage RP organization was augmented with appropriately qualified staff.

R6 RP&C Organization and Administration (71750, 83750)

R6.1 Adequacy of RP Outage Organization

a. Inspection Scope

The inspector reviewed the RP outage organization to determine whether staffing was sufficient to maintain occupational radiation protection safety during outage conditions. The inspector interviewed station personnel and observed work activities.

b. Observations and Findings

The RP organization was augmented by 55 senior RPTs, 4 ALARA specialists, and one site coordinator for outage contractor support. There were 32 junior RPTs assigned to duties such as access control, control point assistants, and laundry. RP field operations supervision was augmented by personnel from the Ginna Station, NMPC training and emergency preparedness, and the Unit 2 General Supervisor, ALARA. Additionally, 32 utility mechanics were assigned duties such as decontamination, used protective clothing collection, and protective clothing dressout facility housekeeping.

The inspector observed that RP supervision spent considerable time in the field. RP functions such as dosimeter issuance, control points, and whole body counting were generally staffed for continuous outage support. RP field operation technicians were assigned to areas of Unit 1 to provide dedicated coverage. The inspector assessed that there were no areas of the Unit 1 RCAs where RPTs were overly burdened.

c. Conclusions

The outage RP organization was well staffed to meet the outage workload.

R8 Miscellaneous RP&C Issues (71750, 83750, 92904)

R8.1 Worker Feedback Mechanisms

a. Inspection Scope

The inspector reviewed the worker feedback mechanisms for RP-related issues to determine whether the licensee had established an adequate means for ensuring that worker concerns or suggestions would be evaluated and addressed, as warranted. The inspector selected several RP concerns/suggestions and reviewed how the licensee had addressed these concerns/suggestions.

b. Observations and Findings

The Quality First Program (Q1P) appeared effective in evaluating and providing feedback to RP-related concerns. Workers are made aware of this system through the outage guidebook and GET training. Workers were also given the opportunity to provide their concerns/suggestions upon leaving the station. The post-outage ALARA review process was also effective in capturing worker feedback. For every job that is evaluated under the ALARA review process, a post-outage review is completed by gathering feedback from involved individuals. Recently, the ALARA supervisor has established an ALARA suggestion hotline. This system has not been used to date. The process was not established in time to be mentioned in the outage guidebook.

Those concerns/suggestions reviewed by the inspector appeared to have been objectively resolved by the licensee and, in some cases, programmatic changes were implemented to address the concerns/suggestions.

c. Conclusions

The inspector concluded that NMPC had established adequate means to address RP-related worker concerns/suggestions.

R8.2 (Closed) URI 50-220 & 50-410/96-07-11: No Survey for Incoming Radioactive Material Shipment

The inspector reviewed licensee actions regarding one box and one drum containing radioactive material that had been shipped from the FitzPatrick station to the Nine Mile Point station. Radwaste personnel were not informed that the shipment had arrived and, as a result, a radiation survey was not initiated within the time limit(s) contained in licensee procedure GAP-RPP-01. Corrective actions included a strengthening of administrative controls for incoming radioactive materials shipments, and personnel (both NMPC and contractor) were briefed on shipping/receiving requirements. This licensee-identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy.

R8.3 (Closed) NOV 50-220/96-14-03: Unlocked HRA Access Gate

The inspector reviewed licensee actions regarding a locked HRA door which had been found unlocked by the NRC on two occasions. Corrective actions included counseling of the involved individuals, a change to the control room key control log to emphasize the key-holder's responsibility, and distribution of a memorandum site-wide which contained an article on radiation worker requirements for HRA key holders. The inspector considered these corrective actions to be reasonable.

R8.4 (Closed) NOV 50-220 & 50-410/96-06-05: RWP Noncompliances

The inspector reviewed licensee actions regarding several RWP non-compliances. Corrective actions included changes to RCA control points, stand-downs to emphasize the need to follow RP procedures, increased oversight in the area of worker conformance with RP controls, counseling of involved individuals, and a hardware change to the electronic dosimeter readers to alarm if the dosimeter is not removed from the reader in a timely manner after RCA access has been granted. The licensee also dedicated individuals for oversight of the RCA access control point. The inspector considered these corrective actions to be reasonable.

P3 EP Procedures and Documentation

P3.1 Review of EP Program and Procedure Changes

Based on the NMPC determination that changes made to the Nine Mile Emergency Plan and associated implementing procedures do not decrease the overall effectiveness of the program, and after a limited review of the changes, the inspectors concurred that NRC approval of the changes was not required prior to implementation, in accordance with 10 CFR 50.54(q). Implementation of these changes will be subject to inspection in the future to confirm that the changes have not decreased the overall effectiveness of the emergency plan. A list of the specific revisions examined during an in-office review of licensee procedure changes is listed below.

Procedure Number/Title		Revision Number
---	Site Emergency Plan	35
EPIP-EPP-03	Search and Rescue	1
EPIP-EPP-06	Inplant Emergency Surveys	2
EPIP-EPP-07	Downwind Radiological Monitoring	3
EPIP-EPP-10	Security Contingency Event	2
EPIP-EPP-12	Re-Entry Procedure	2
EPIP-EPP-13	Emergency Response Facilities Activation and Operation	6
EPIP-EPP-14	Emergency Access Control	1
EPIP-EPP-16	Environmental Monitoring	4
EPIP-EPP-17	Emergency Communications Procedure	2
EPIP-EPP-18	Activation and Direction of the Emergency Plans	4
EPIP-EPP-19	Site Evacuation Procedure	2,3
EPIP-EPP-23	Emergency Personnel Action Procedures	6

V. MANAGEMENT MEETINGS

X1 Exit Meeting Summary

At periodic intervals, and at the conclusion of the inspection period, meetings were held with senior station management to discuss the scope and findings of this inspection. The final exit meeting occurred on April 25, 1997. NMPC did not dispute any of the inspectors findings or conclusions. Based on the NRC Region I review of this report, and discussions with NMPC representatives, it was determined that this report does not contain safeguards or proprietary information.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Niagara Mohawk Power Corporation

R. Abbott, Vice President & General Manager, Nuclear Generation
J. Aldrich, Manager Maintenance, Unit 1
M. Balduzzi, Manager Operations, Unit 1
D. Barcomb, Manager Radiation Protection, Unit 2
C. Beckham, Manager, Quality Assurance
J. Conway, Plant Manager, Unit 2
G. Correll, Manager Chemistry, Unit 1
R. Dean, Manager Engineering, Unit 2
A. DeGracia, Manager Work Control/Outage Planning, Unit 1
G. Helker, Manager Work Control/Outage Planning, Unit 2
M. McCormick, Vice President, Nuclear Engineering
L. Pisano, Manager Maintenance, Unit 2
N. Rademacher, Plant Manager, Unit 1
P. Smalley, Manager Radiation Protection, Unit 1
R. Smith, Manager Operations, Unit 2
K. Sweet, Manager Technical Support, Unit 1
C. Terry, Vice President, Nuclear Safety Assessment & Support
K. Ward, Manager Technical Support, Unit 2
C. Ware, Manager Chemistry, Unit 2
W. Yaeger, Manager Engineering, Unit 1

INSPECTION PROCEDURES USED

IP 37551:	On-Site Engineering
IP 61726:	Surveillance Observations
IP 62707:	Maintenance Observation
IP 71707:	Plant Operations
IP 71750:	Plant Support
IP 73753:	Inservice Inspection
IP 73755:	Inservice Inspection - Data Review and Evaluation
IP 83750:	Occupational Radiation Exposure Control
IP 90712:	In-Office Review of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92700:	Onsite Followup of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92901:	Followup - Operations
IP 92902:	Followup - Engineering
IP 92903:	Followup - Maintenance
IP 92904:	Followup - Plant Support

ITEMS OPENED, CLOSED, AND UPDATED

OPENED

50-410/97-02-01	VIO	Failure to Implement the Procedure Requirements Associated with Unit 2 Control Room Deficiencies
50-410/97-02-02	VIO	Failure to Complete TS Required Response Time Testing of the HPCS System
50-410/97-02-03	URI	Adequacy of Procedure for Surveillance of Seismic Monitoring Equipment

CLOSED

50-220/ & 50-410/96-06-05	VIO	RWP Noncompliances
50-220/ & 50-410/96-07-11	URI	No Survey for Incoming Radioactive Material Shipment
50-220/ & 50-410/96-14-03	VIO	Unlocked HRA Access Gates
50-220/96-02	LER	Core Shroud Repair Stabilizer Assembly Different than 10CFR50.55(a) Design Description due to Installation/ Inspection/Engineering Personnel Error
50-220/96-13-01	LER	Potential Overpressurization of Containment Penetrations due to Thermal Expansion
50-410/96-16-01	LER	Potential Overpressurization of Containment Penetrations due to Thermal Expansion
50-410/96-16-02	LER	Potential Overpressurization of Containment Penetrations due to Thermal Expansion
50-220/97-01	LER	Pipe Supports Outside Design Basis Because of Design Deficiency
----	10CFR21	Unit 2 Excessive Failure Rate of Borg-Warner Pressure Switches

UPDATED

none

LIST OF ACRONYMS USED

ALARA	As Low As is Reasonably Achievable
ANII	Authorized Nuclear Inservice Inspector
ARM	Area Radiation Monitor
ASME	American Society of Mechanical Engineers
ASSS	Assistant Station Shift Supervisor
BWR	Boiling Water Reactor
CFR	Code of Federal Regulations
COLR	Core Operating Limits Report
CRD	Control Rod Drive
DER	Deviation/Event Report
ECCS	Emergency Core Cooling System
EVT	Enhanced Visual Testing
FME	Foreign Material Exclusion
GE	General Electric
GL	Generic Letter
HELB	High Energy Line Break
HPCS	High Pressure Core Spray
HRA	High Radiation Area
I&C	Instrument and Controls
IGSCC	Intergranular Stress Cracking Corrosion
IR	Inspection Report
ISEG	Independent Safety Engineering Group
ISI	Inservice Inspection
LCO	Limiting Condition for Operations
LER	Licensee Event Report
MOV	Motor Operated Valve
mrem/hr	millirem/hour
MT	Magnetic Particle Testing
NCV	Non-Cited Violation
NDE	Non-Destructive Examination
PID	Problem Identification
PT	Liquid Penetrant Testing
Q1P	Quality First Program
QA	Quality Assurance
RBCLC	Reactor Building Closed Loop Cooling
RCA	Radiologically Controlled Area
RFO	Refueling Outage
RP	Radiation Protection
RP&C	Radiation Protection and Chemistry Controls
RPT	Radiation Protection Technician
RRP	Reactor Recirculation Pump
RT	Radiographic Testing
RWP	Radiation Work Permit
RWCU	Reactor Water Clean-Up
SFP	Spent Fuel Pool
SORC	Station Operations Review Committee

SSS	Station Shift Supervisor
STA	Shift Technical Advisor
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
UT	Ultrasonic Testing
VIO	Violation
WO	Work Order