U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket/Report Nos.:	50-220/99-09 50-410/99-09
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:	September 12, 1999 - October 30, 1999
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EXECUTIVE SUMMARY

Nine Mile Point Units 1 and 2
50-220/99-09 & 50-410/99-09
September 12, 1999 - October 30, 1999

This inspection report included aspects of licensee operations, engineering, maintenance, and plant support. The report covered a seven-week period of resident inspection. In addition, the results of inspections of the radiation protection program, the radiological environmental monitoring and meteorological monitoring programs, and the licensed operator requalification program were also included in this inspection report.

Operations

On October 4, operators promptly initiated alternate measures to monitor control rod position when a power supply failed resulting in all the indicating lights illuminating on the full core display, rod control drive push buttons, and 4-rod display. NMPC determined that the process computer was an acceptable alternate means to monitor control rod position while the power supply was being replaced. The use of the process computer as an alternate to the full core display to determine control rod position is an inspector follow-up item. (O1.2)

The Unit 1shutdown on October 8 was conducted in a careful, deliberate manner. The operators were well briefed concerning challenges that existed due to degraded material condition of a recirculation pump motor generator set and the turbine control characteristics. (O1.3)

On October 16, during a Unit 1 reactor plant startup, an unexpected reactor criticality was achieved during continuous withdrawal of the third rod in group 3. Initial operator response and the licensee's corrective actions were appropriate. The licensee identified a number of reactivity management performance weaknesses during this reactor startup. Unit 1 operations personnel did not use a conservative approach to reactivity management when a decision was reached to proceed with continuous control rod withdrawal instead of notch withdrawal when source range counts were near a predetermined value. In addition, reactor core physics data, including estimated critical position and 3D Monicore predictor data, was not used to aid in the conservative approach to criticality. Management and supervisor oversight was weak in that independent verification of critical tasks was not performed. (O1.4)

On October 18, the inspector identified that the control switch for the 115 kV supply to the reserve transformer, Line No. 6, was in the open position and not in pull-to-lock as required by the protective tag. NMPC has experienced several recent occurrences of either inadequate protective tagging or component positioning errors associated with tagging. Because of the increased occurrence of configuration control issues, NMPC initiated an operations department stand down to re-emphasize holdout requirements, including independent verification. Additional corrective actions included increased field observations and procedure changes to reduce the potential for configuration control errors. The failure to ensure that a protective tag was properly applied was a non-cited violation. (O1.5)

Executive Summary (cont'd)

The inspectors accompanied both Unit 1 and Unit 2 auxiliary operators on various plant rounds in the turbine and reactor buildings. Auxiliary operators performed watchstanding duties in an acceptable manner. (O4.1)

The Unit 2 licensed operator requalification training program met the regulatory requirements of 10 CFR 55.59 based on a sampling review. The inspectors identified a problem in the Senior Reactor Operator (SRO) written exam with sampling from the content areas described in 10 CFR 55.43. The licensee took immediate action to address the issue in future exams and in their program description. Operating and written exam content incorporated risk insights, and was consistent with the program requirements. Exam overlap was acceptable. (O5.1)

The licensee identified unsatisfactory crew and individual performances during the simulator exam. In the cases of unsatisfactory performance, the crew and individuals were remediated and retested satisfactorily before resuming license duties. The inspectors agreed with the evaluations and will review the results from the remainder of the annual exams to determine if any problem areas exist in training effectiveness. (O5.1)

The training feedback process was found to be effective in capturing operator concerns and providing timely resolution. The remedial training records were well organized and indicated that individual and crew remediation was appropriate. Training attendance records were also well organized and indicated that missed training was made-up in a timely manner. (O5.1)

Lessons learned from recent operating history and plant events were being appropriately addressed through the licensed operator requalification training program. The training program included lessons to improve human performance and configuration control. (O7.1)

Maintenance

At Unit 1, the No. 11 recirculation pump mechanical seal developed leakage possibly due to age hardening. The seal was replaced, but poor procedural controls contributed to the seal being improperly installed, which resulted in rubbing and leakage from the new seal. The licensee shutdown the unit to replace the seal again at the end of the inspection period. (M1.1)

Engineering

NMPC identified that a required Unit 1 nuclear instrumentation intermediate range monitor (IRM) surveillance test, validating IRM meter reading against rated thermal flux, was not being performed. Surveillance testing performed during the October 6, 1999, reactor shutdown resulted in the identification of needed gain adjustments on four of eight IRMs. The required gain adjustments and post-maintenance testing were successfully conducted and the IRMs performed well during the subsequent reactor startup. The failure to have performed the required testing was a non-cited violation. (E1.1)

Executive Summary (cont'd)

At Unit 2, licensee identified inadequate leak rate testing of the automatic depressurization system nitrogen supply was a non-cited violation. NMPC properly corrected and documented this problem in LER 50-410/99-06. (E8.1)

Plant Support

The implementation of the radiological controls program was mixed. At Unit 2, a radiation protection technician failed to promptly leave a work area and report that his electronic dosimeter had exceeded an administrative alarm set-point during support of a spent resin disposal project. This was determined to be a non-cited violation. In contrast, radiological controls for the Unit 1 spent fuel pool re-rack job and a Unit 1 traverse in-core probe replacement were thoroughly planned and effectively implemented. (R1.1)

The licensee effectively maintained and implemented the Radiological Environmental Monitoring Program, including the monitoring, land use census, and inter-laboratory comparison programs, in accordance with regulatory requirements. The monitoring program was implemented using the appropriate procedures, the annual reports accurately reflected the analysis and quality assurance results, and the contractor laboratory continued to implement effective QA/QC programs for the REMP and continued to provide effective validation of analytical results. The environmental monitoring program was capable of ensuring independent verification validation of the integrity of the effluent release program. (R1.2)

The meteorological monitoring program was effectively implemented in accordance with regulatory requirements. Overall, the licensee effectively maintained system operability and properly performed channel calibrations and channel functional tests for the meteorological instrumentation. (R1.3)

Housekeeping conditions at Unit 1 and Unit 2 were effectively maintained as evidenced by clear aisles and walkways, labeled storage areas, and well illuminated work areas. Radiological boundaries were effectively maintained as evidenced by well delineated boundaries, and appropriately posted and barricaded high radiation areas. (R2.1)

The corrective action program was effectively used to identify, evaluate, and resolve radiological deficiencies as evidenced by corrective action associated with an August 25, 1999 event at Unit 2 where a radiation protection technician received a dose higher than anticipated during a spent resin transfer evolution. The documentation of the event provided an accurate assessment of root causes and corrective and preventive actions were comprehensive. (R7.1)

The licensee met the QA audit requirements. The audits were thorough and of sufficient depth to assess the radiological environmental monitoring program (REMP) and meteorological monitoring program (MMP). Performance of audits and assessments were appropriate in that specific REMP and MMP activities were directly observed, timely feedback regarding the activity observed was provided, and identified findings were appropriately categorized. (R7.2)

Executive Summary (cont'd)

On October 8, Unit 1declared an Unusual Event when the carbon dioxide suppression system was automatically discharged in the lower level of the administration building in response to an actual fire/smoke condition. The control room operators were slow to take action to verify the adequacy of the control room ventilation system line-up and to ensure that oxygen levels in the control room were properly maintained. (P1.1)

The emergency response organization demonstrated the ability to properly implement the Emergency Plan during an exercise on October 27, 1999. Overall, performance during the exercise was good. (P1.2)

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ATTACHMENTS

Report Details

Summary of Plant Status

Nine Mile Point Unit 1 (Unit 1) began this inspection report period at full power in four recirculation loop operation. The No. 11 recirculation pump had been removed from service and the loop isolated due to leakage from the recirculation pump's mechanical seal. On October 8, a planned shutdown was conducted to repair the Nos. 11 and 14 recirculation pump seals and to replace degraded intermediate range neutron monitors. On October 16, during the startup following the planned outage, an inadvertent reactor criticality occurred during a continuous rod withdrawal of a Group 3 rod. The control rod was re-inserted and, following immediate corrective actions, the reactor startup was continued. Unit 1 reached 100 percent power on October 20. On October 28, Unit 1 was again shutdown to repair the No. 11 recirculation pump seal which had begun to leak subsequent to the October 16 reactor startup. The unit was in cold shutdown at the end of the report period.

Nine Mile Point Unit 2 (Unit 2) began this report period at 100 percent power and remained there throughout the inspection period.

Several organizational and management changes were made this inspection period: effective October 4, 1999, M. Peckham was assigned as the Unit 2 Plant Manager and effective October 22, L. Hopkins was assigned as the Unit 1 Plant Manager; effective October 8, C. Terry was assigned as the Vice President - Quality Assurance, Nuclear; and effective September 24, 1999, the organization structure was changed such that the training and emergency planning departments reported to the VP, Nuclear Generation, and the licensing and security departments reported to the VP, Nuclear Engineering Manager.

I. Operations

O1 Conduct of Operations [1]

O1.1 General Comments (71707)

Using NRC Inspection Procedure 71707, the resident inspectors conducted frequent reviews of ongoing plant operations. The reviews included tours of accessible areas of both units, verification of engineered safeguards features (ESF) system operability, verification of adequate control room and shift staffing, verification that the units were operated in conformance with Technical Specifications (TSs), and verification that logs and records accurately identified equipment status or deficiencies. In general, the conduct of operations was professional and safety-conscious.

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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.

O1.2 Loss of Full Core Display (Unit 2)

a. Inspection Scope (71707)

On October 4, a failed power supply caused all the lights to illuminate on the full core display, rod control drive push buttons, and 4-rod display. Concerns for potential system damage led the operators to de-energize the full core display. The inspector reviewed the operator's immediate actions, Technical Specifications, and corrective actions to address this event.

b. Observations and Findings

The technical specification for loss of control rod position indication is a one-hour action statement to determine control rod position, otherwise the unit must be in hot shutdown within 12 hours. The inspector observed the operations staff response to the event in the control room and discussed the Technical Specification action statement with the Station Shift Supervisor (SSS). The SSS, with NMPC management endorsement, utilized a previous operability determination from a 1996 Deviation Event Report (DER). In part, DER-2-1996-3414, concluded that the process computer was an acceptable alternate means to monitor control rod position. Thus, the rod position indication system (RPIS) was not declared inoperable and the Technical Specification action statement was not entered.

In addition to monitoring the graphical rod position display in the control room, NMPC stationed an operator to continuously walk down and monitor the hydraulic control units for accumulator alarms. Removing the power from the full core display also disabled the hydraulic accumulator low pressure alarm. In addition, the operators monitored core thermal power, turbine gross electrical output, and a rod position printout every 15 minutes. Due to the failed power supply, operators could not manually move control rods (other than scram insertion). Power adjustments could only be made by changing recirculation flow.

Preliminary follow-up by the inspector determined that a similar issue was raised in the past with regard to utilizing the process computer in lieu of the full core display. NRC Inspection Report 50-410/94-15 documented an unresolved item (URI 50-410/94-15-01) concerning the acceptability of the process computer's rod position display as an alternative to the RPIS. In December 1996, NRC Inspection Report 50-410/96-11, documented that the use of the plant process computer as a backup to the RPIS was not acceptable. The URI was closed based on the fact that the repairs were completed before the allowed outage time expired for the RPIS being inoperable. In this recent event, because of the time required to replace the power supply, the full core control rod display was out-of-service for a period of time greater than the TS allowed outage time. The use of the process computer to determine control rod position will be examined further in a subsequent inspection period and is an inspector follow-up item. **(IFI 50-410/99-09-01)**

c. Conclusions

On October 4, operators promptly initiated alternate measures to monitor control rod position when a power supply failed resulting in all the indicating lights illuminating on the full core display, rod control drive push buttons, and 4-rod display. NMPC determined that the process computer was an acceptable alternate means to monitor control rod position while the power supply was being replaced. The use of the process computer as an alternate to the full core display to determine control rod position is an inspector follow-up item.

O1.3 Conduct of Planned Shutdown for Recirculation Pump Seal Replacement (Unit 1)

a. Inspection Scope (71707)

Unit 1 entered a planned maintenance outage on October 8, to replace the mechanical seals on the number 11 and 14 reactor recirculation pumps. During the planned outage, degraded intermediate range monitor (IRM) detectors were also replaced.

The inspectors observed portions of the reactor shutdown, including reactivity maneuvers and equipment lineup changes, reviewed operating procedures, and monitored work in progress during the shutdown.

b. Observations and Findings

The pre-job briefing in the control room for the power reduction was detailed and provided appropriate guidance for the operators. The number 14 reactor recirculation pump had been operated in manual control due to elevated temperatures until the shutdown began. During the shutdown, the operators were required to coordinate the recirculation flows of the pumps in order to maneuver the plant. The brush rigging of the recirculation pump motor generator set was replaced during the planned outage to remedy the high temperature condition.

An operator workaround existed due to the current turbine control system characteristics that required the smooth reduction of reactor recirculation flow through a zone of reactor pressure power oscillations that existed between 82 and 88 percent of turbine control valve position. The operators were challenged during this power reduction by the necessity to place the number 14 reactor recirculation pump back in automatic control prior to the recirculation flow reduction to avoid coordination of automatic and manual controllers.

c. Conclusions

The Unit 1shutdown on October 8 was conducted in a careful, deliberate manner. The operators were well briefed concerning challenges that existed due to degraded material condition of a recirculation pump motor generator set and the turbine control characteristics.

O1.4 Reactivity Management During Reactor Startup (Unit 1)

a. Inspection Scope (71707)

Unit 1 started up from a planned maintenance outage on October 16. The inspectors observed portions of control room operations during the startup evolution, interviewed operations department personnel and reviewed operations procedures used during startup. Additionally, the inspectors observed special operator training that was conducted, and discussed the evolution with NMPC senior management.

b. Observations and Findings

An unexpected reactor criticality was achieved during continuous withdrawal of the third rod in group 3 during the reactor startup. The operators recognized that the reactor was critical and appropriately reinserted the control rod to bring the reactor subcritical. Reactor startup was put on hold until the circumstances surrounding the event were more clearly understood. NMPC senior management reported to the site and an initial investigation team was formed. The initial licensee investigation identified that the control rod being withdrawn at the time of reactor criticality was of particularly high rod worth. The 3D Monicore system was used to analyze the rod configuration and identified that the rod had sufficient rod worth to make the reactor critical. The initial investigation team determined that the reactor had responded as expected and the licensee determined that startup could be resumed. During the subsequent approach to criticality, the control rod withdrawal sequence was changed to place the high rod worth rod at the end of the sequence. Also, additional management oversight was provided. The subsequent approach to criticality proceeded without incident.

NMPC viewed the event as significant, and as such, formed an event investigation team to probe deeper into the early criticality. The licensee's event investigation team identified several organizational deficiencies related to reactivity management and that the SRM meter face was incorrectly marked at 450 counts per minute (CPM) instead of the calculated 320 CPM value.

During the approach to criticality, the licensee procedure required the calculation of source range monitor (SRM) counts which would indicate that criticality was imminent. When criticality is imminent, a reduction in reactivity addition rate allows the approach to criticality to be better controlled. Calculation of SRM values provided the point at which rod withdrawals were changed from continuous rod motion to single notch pulls, thereby reducing the reactivity addition rate. The reactor analyst technician calculated the value and marked it with a grease pencil on the face of the SRM meters. The mark was placed at 450 counts per minute (CPM) on the meter face. The operating crew, utilizing continuous rod withdrawals, had pulled the first two rods in group 3. The operators then checked SRM counts which were 440 CPM. The crew concluded that, although the indicated counts were very close, that the calculated value had not been reached. The crew continued with continuous rod withdrawal according to the approved sequence. Criticality was reached during the subsequent rod pull.

The licensee concluded that the meter face marking error caused the operators to proceed with continuous rod withdrawals past the point where single notch withdrawals should have commenced. The licensee's root cause evaluation also identified that the reactor startup procedure did not require independent verification of the calculated SRM value or verification that the marks on the SRM meter faces were correctly placed. The investigation team noted that another opportunity to have identified that the SRM meter was improperly marked was during the shift change and oncoming crew turnover/panel walkdowns. The licensee team also noted that management and supervisor oversight was weak in that independent verification of critical tasks was not performed. The licensee concluded that control room operators did not make a conservative decision when proceeding with continuous rod withdrawals when they were near the calculated (three times doubling) SRM value. In response to this judgement error, licensee management directed that single notch rod pulls would be performed for all subsequent start-up rod withdrawals of group 3.

The inspectors determined that the licensee did not calculate (not a regulatory requirement) an estimated critical position (ECP) prior to reactor startup. NMPC's philosophy was that operators should expect reactor criticality at any time during rod motion. As such, a calculated ECP was viewed as a barrier to a cautious approach to criticality; whereas the use of the calculated SRM value was to promote attentiveness and proper control of the reactivity addition rate. The inspectors and licensee investigation team also noted that the Unit 1 reactor 3D Monicore system has a rod worth prediction function which was not used in planning the approach to criticality. Licensee procedures do not require the use of the 3D Monicore system to analyze the planned rod withdrawal sequence and to identify high reactivity worth control rods.

Several corrective actions were developed as a result of the licensee's evaluation. Reactivity management procedures were revised to provide additional requirements for reactivity briefs. Applicable procedures were revised to incorporate additional procedural guidance for reactivity control. Additional operator training, including simulator training on the approach to criticality, was provided and additional management oversight of control room activities was initiated.

c. Conclusions

On October 16, during a Unit 1 reactor plant startup, an unexpected reactor criticality was achieved during continuous withdrawal of the third rod in group 3. Initial operator response and the licensee's corrective actions were appropriate. The licensee identified a number of reactivity management performance weaknesses during this reactor startup. Unit 1 operations personnel did not use a conservative approach to reactivity management when a decision was reached to proceed with continuous control rod withdrawal instead of notch withdrawal when source range counts were near a predetermined value. In addition, reactor core physics data, including estimated critical position and 3D Monicore predictor data, was not used to aid in the conservative approach to criticality. Management and supervisor oversight was weak in that independent verification of critical tasks was not performed.

O1.5 Holdout Error Associated with Electrical System Maintenance (Unit 2)

a. Inspection Scope (71707)

The inspector reviewed control room panel indications during routine observations. The configuration control program requirements and procedures were reviewed and discussions were held with licensee personnel.

b. Observations and Findings

On October 18, the inspector identified that the control switch for the 115 kV supply to the reserve transformer, line 6, was in the open position and not in pull-to-lock as required by the holdout (protective tag). The holdout was hung to maintain configuration control and personnel safety while conducting Line No. 6 electrical maintenance. The holdout had been hung earlier in the day and the maintenance had not yet commenced. Operators initiated a DER and the switch was placed into the correct position.

NMPC has experienced several recent occurrences of either inadequate holdouts or component/switch positioning errors associated with holdouts. Because of the increased occurrence of configuration control issues, NMPC initiated an operations department stand down to re-emphasize holdout requirements, including independent verification. Additional corrective actions include increased field observations and procedure changes to reduce the potential for configuration control errors.

GAP-OPS-02, Control of Hazardous Energy and Configuration Tagging, in part, establishes administrative controls for equipment holdouts, thus providing protection for personnel or plant equipment during maintenance activities. The procedure requires that holdouts be properly applied. This Severity Level IV Violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy **(NCV 50-410/99-09-02)**. This violation was included in the licensee's corrective action program as DER 2-99-3468.

c. Conclusions

On October 18, the inspector identified that the control switch for the 115 kV supply to the reserve transformer, Line No. 6, was in the open position and not in pull-to-lock as required by the holdout. NMPC has experienced several occurrences of either inadequate holdouts or component position errors associated with holdouts. Because of the increased occurrence of configuration control issues, NMPC initiated an operations department stand down to re-emphasize holdout requirements, including independent verification. Additional corrective actions included increased field observations and procedure changes to reduce the potential for configuration control errors. The failure to ensure that a holdout was properly applied was a non-cited violation.

O4 Operator Knowledge and Performance

O4.1 Observations of Operator Rounds

d. Inspection Scope (71707)

During this period, inspectors accompanied both Unit 1 and 2 auxiliary operators on various plant rounds in the turbine and reactor buildings. The inspectors compared the operators' performance to applicable NMPC procedures and observed their watchstanding proficiency.

e. Observations and Findings

Auxiliary operators demonstrated good watchstanding proficiency. The operators demonstrated an appropriate awareness of plant conditions. Also, the operators demonstrated a good questioning attitude as evidenced by their identifying, and logging of deficiencies, or verifying that the deficiencies were previously identified.

f. Conclusions

The inspectors accompanied both Unit 1 and Unit 2 auxiliary operators on various plant rounds in the turbine and reactor buildings. Auxiliary operators performed watchstanding duties in an acceptable manner.

O5 Operator Training and Qualification

O5.1 Licensed Operator Requalification Training (LORT) Program Evaluation (Unit 2)

a. Inspection Scope (71001)

The inspectors evaluated the LORT program content; written and operating test content; operating test administration, evaluation, and remediation; simulator fidelity; training feedback program effectiveness including the use of risk insights; and conformance with license conditions.

b. Observations and Findings

LORT Program Content

The inspectors reviewed the topics covered in the 1998 to 1999 LORT cycles, including a sample of training on modifications, licensee event reports(LERs), and recent plant events. Senior reactor operators (SROs) and reactor operators (ROs) were also interviewed to determine if training met their job needs.

The inspectors found that the licensee was incorporating required topics, risk insights, and recent plant events, as stated in their LORT program. The operator interviews indicated that the program content was appropriate to meet their job needs.

Exam Content

The inspectors reviewed the written exams that were given during the 1998 and 1999 LORT cycles and the operating tests for the first two weeks of the 1999 annual requalification exam.

The inspectors identified that questions developed from the content areas described in 10 CFR 55.43 for the SRO written examinations were minimally different from the RO examinations. In addition, the 32 question exam contained only two questions from the content areas listed in 10 CFR 55.43. The inspectors also reviewed SRO exams given during the previous two-year cycle and noted similar findings. The licensee took immediate corrective actions to address the issue in future exams and in their program description.

The inspectors found that the licensee followed the guidance in their LORT program plan and NUREG 1021. The exams incorporated risk insights and operating experience. Exam overlap from week-to-week and throughout the cycle was found to be acceptable.

Exam Administration and Evaluation

Two simulator scenarios and 10 job performance measures (JPMs) were observed being administered to one operating crew (2 SROs and 4 ROs). The licensee evaluation of individual JPM performance identified no significant problem. However, the simulator performance of the operating crew and two individuals were found to be unsatisfactory. The licensee identified unsatisfactory and weak areas included:

1. Unsatisfactory command and control by the SRO resulted in delays in event mitigation.

2. Lack of event oversight by the SRO ultimately resulted in inadequate emergency operating procedure (EOP) usage and mitigation strategy.

The inspectors found the licensee's evaluations to be objective and thorough. The results from the remainder of the annual exams will reviewed in a subsequent inspection period to determine if any problem areas exist in training effectiveness. **(IFI 50-410/99-09-03)**

Remediation and Training Attendance

The inspectors reviewed a sample of remediation records for individuals and crews who had failed various portions of the licensed operator requalification program. The inspectors determined that the records were well organized which indicated that individual and crew remediation was appropriate for the areas where performance did not meet the LORT requirements. The remediation was preplanned and implemented in accordance with the licensee procedural controls.

The inspectors reviewed a sample of licensed operator training attendance records. The inspectors determined the records were well organized and indicated that missed training was completed in a timely manner. The inspectors noted that all licensed operators were required to be current in all training requirements prior to the annual examinations.

Simulator Fidelity

The inspectors noted that the licensee's effort to keep the simulator current with the plant configuration was good. A review of simulator records showed that simulator fidelity issues were acted upon in a timely manner.

Training Feedback

The training feedback process was found to be effective in capturing operator concerns and providing timely resolution of problems. This finding was based upon operator interviews as well as review of training records associated with operator feedback.

Compliance with License Conditions

A review of records and discussions with licensee personnel found that the licensee was meeting the requirements of 10 CFR 55.53 for conditions of operator licenses, 10 CFR 55.21 for medical examinations of operators, and 10 CFR 55.49 for licensed operator exam integrity.

Miscellaneous Issues

Three days following completion of this inspection, the licensee requested that an initial licensed operator exam, which was scheduled for December 1999, be postponed. The reason was that the initial operator training program was not completed due to recent changes in the job task analysis. The potential impact on the licensed operator requalification training program is unknown at this time. This issue will remain an open item until more information is received from the licensee and evaluated by the inspectors for impact on both initial and requalification training programs. **(IFI 50-410/99-09-04)**

c. Conclusions

The Unit 2 licensed operator requalification training program met the regulatory requirements of 10 CFR 55.59 based on a sampling review. The inspectors identified a problem in the Senior Reactor Operator (SRO) written exam with sampling from the content areas described in 10 CFR 55.43. The licensee took immediate action to address the issue in future exams and in their program description. Operating and written exam content incorporated risk insights, and was consistent with the program requirements. Exam overlap was acceptable.

The licensee identified unsatisfactory crew and individual performances during the simulator exam. In the cases of unsatisfactory performance, the crew and individuals

were remediated and retested satisfactorily before resuming license duties. The inspectors agreed with the evaluations and will review the results from the remainder of the annual exams to determine if any problem areas exist in training effectiveness.

The training feedback process was found to be effective in capturing operator concerns and providing timely resolution. The remedial training records were well organized and indicated that individual and crew remediation was appropriate. Training attendance records were also well organized and indicated that missed training was made-up in a timely manner.

O7 Quality Assurance in Operations

07.1 Operator Training Associated with Recent Operating History

a. Inspection Scope (71001)

The inspector reviewed recent plant operating history to determine if operator performance deficiencies have been addressed through the requalification training program, and to determine if plant events are factored into the program. The review included issues identified in the Plant Issue Matrix (PIM), Licensee Event Reports (LERs), industry events, and NMPC audits of training and operations.

b. Observations and Findings

On June 24, 1999, Unit 2 automatically scrammed from 100% power. The immediate cause of the scram was a failure of the feedwater system master controller. NMPC reviewed the operator actions associated with the event. The inspector reviewed the root cause analysis, deviation event report, and the training records to determine if NMPC operator training had adequately covered the performance issues associated with the event. DER 2-1999-2379 documented the corrective actions associated with the event and was incorporated into a lesson plan for training. Topics reviewed in the lesson plan included reactor cooldown, reactor core isolation cooling (RCIC) system operation, and reactor vessel water level control. The topical discussions included management expectations, procedure enhancements, identification of training items, and simulator fidelity issues.

A sample of LERs from both units were reviewed to determine if corrective actions and lessons learned were incorporated into the operator requalification process. The inspector determined that the corrective actions had been incorporated by utilizing a briefing format, lesson plan revision, or revising simulator scenarios.

The inspector reviewed corrective actions associated with configuration control deficiencies. Specifically, DERs 2-1998-2451 and 2-98-3993, which identified a continuing adverse trend in configuration control events, were reviewed. In January 1999, operators received training in the area of human performance with the objective of establishing a framework of thinking that results in desired behavior to prevent plant events caused by human error. More recent examples of training included the use of a

dynamic learning activity training session utilizing a system mock-up for simulating the process for hanging equipment mark-ups and lesson material which included industry information, case studies, and information notices. The inspector concluded that NMPC was conducting adequate training in the area of human performance and configuration control.

c. Conclusions

Lessons learned from recent operating history and plant events were being appropriately addressed through the licensed operator requalification training program. The training program included lessons to improve human performance and configuration control.

O8 Miscellaneous Operations Issues

O8.1 (Closed) VIO 50-220/98-11-01and VIO 50-220/98-11-02: Failure to follow procedure and failure to maintain primary containment integrity. On April 7, 1998, while operating at full power, the Unit 1 reactor operator responsible for restoring the containment spray (CS) system to the standby condition failed to close the remote manual test return valve. This adverse condition was not recognized for 3.5 days by three different operating shift crews. In addition, NMPC determined that the requirements for containment integrity were not being met while the valve was open. Corrective actions included the development of a shift mentoring program and operations manual, and revisions to the containment spray operating procedure involving a more extensive valve line-up checklist. The inspector reviewed the operations manual and discussed the mentoring program with the operations staff. The procedure changes and valve lineup check sheet were reviewed for completeness and found to be adequate. The inspector determined that the corrective actions were reasonable. These violations are closed.

II. Maintenance

M1 Conduct of Maintenance

M1.1 Reactor Recirculation Pump Seal Replacement (Unit 1)

a. Inspection Scope (61726)

Unit 1 entered a planned maintenance outage on October 8 to replace the No. 11 reactor recirculation pump mechanical seals which were leaking. The inspectors performed a drywell entry to inspect the work area and reviewed the licensee's summary report of findings concerning the leaking seal.

b. Observations and Findings

The No. 11 reactor recirculation pump (RRP) seal leakage degraded to the point that in early August 1999, operators were directed to secure the pump and isolate the recirculation loop. On October 8, Unit 1 was shutdown to replace the seal. During the shutdown, the No. 14 RRP seal was also replaced as a precaution because the seal had

been installed for approximately nine years. Typically, the RRP seals are replaced every ten years. On October 16 the reactor was restarted. With the reactor at approximately 500 psig pressure, seal leakage was again noted from the No. 11 RRP. The pump was secured and the recirculation loop was isolated. The licensee determined that it was necessary to shut down the reactor to again replace the seal, and on October 28, the reactor was shutdown.

The licensee's investigation of the original No. 11 seal failure revealed that the seal appeared to have age hardened, and the resulting high friction from the seal caused high wear on the seal stator. Vertical movement of the pump shaft during plant startup in early August caused the hardened seal to start leaking.

The licensee's investigation of the failed replacement seal revealed that the one-week old seal had experienced some amount of unusual rubbing and had a pinched o-ring seal in the lower cartridge. The as-found position of the seal indicated that the seal had been installed approximately one-eighth inch too high, which contributed to the unusual rubbing and leakage. NMPC determined that the installation procedure did not provide adequate guidance for the mechanical maintenance technicians to properly sequence the seal re-assembly.

c. Conclusions

At Unit 1, the No. 11 recirculation pump mechanical seal developed leakage possibly due to age hardening. The seal was replaced, but poor procedural controls contributed to the seal being improperly installed, which resulted in rubbing and leakage from the new seal. The licensee shutdown the unit to replace the seal again at the end of the inspection period.

III. Engineering

E1 Conduct of Engineering

E1.1 Intermediate Range Monitors (Unit 1)

a. Inspection Scope (61726, 37551)

The nuclear instrumentation Intermediate Range Monitors (IRMs) in Unit 1 experienced spiking problems associated with both the detectors and the instrument drawers. Multiple IRMs were declared inoperable due to unreliability. The inspectors reviewed technical specifications and deficiency reports associated with the IRMs and observed IRM calibration activities.

b. Observations and Findings

During this inspection period, the licensee identified that a Unit 1 UFSAR requirement to validate the IRM meter readings against rated thermal flux was not being performed. The NMPC engineering staff promptly provided a position paper that stated that as long

as gain adjustments were not performed on the IRMs, the overlaps observed during reactor shutdown fulfilled this periodic calibration requirement. Based upon a licensee review, the No. 16 IRM was declared inoperable because a gain adjustment had been performed in April 1999, which had not been validated by a subsequent comparison to rated neutron flux.

On October 6, 1999, special test procedure N1-STP-064, IRM Gain Adjustment Calibration, was performed to meet the UFSAR calibration requirement. The results of the calibration showed that four of eight IRMs required gain adjustments. When attempting to adjust the gains, three IRMs did not have sufficient amplifier range to make the needed adjustments. Consequently, work orders were initiated to either replace the detectors, modify amplifier circuits, and/or install instrument chassis grounds on the affected IRMs. During the subsequent reactor startup, special test procedure N1-STP-065 was satisfactorily performed and verified proper correlation between all of the IRMs' output and reactor flux. The failure to perform the required IRM surveillance test to validate the IRM meter reading against rated thermal flux is a violation of regulatory requirements. This licensee identified severity level IV violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy **(NCV 50-220/99-09-05)**. This violation is in the licensee's corrective action program as DER 1-99-3211.

c. Conclusions

NMPC identified that a required Unit 1 nuclear instrumentation intermediate range monitor (IRM) surveillance test, validating IRM meter reading against rated thermal flux, was not being performed. Surveillance testing performed during the October 6, 1999, reactor shutdown resulted in the identification of needed gain adjustments on four of eight IRMs. The required gain adjustments and post-maintenance testing were successfully conducted and the IRMs performed well during the subsequent reactor startup. The failure to have performed the required testing was a non-cited violation.

E8 Miscellaneous Engineering Issues

E8.1 (Closed) Licensee Event Report (LER) 50-410/99-06: Inadequate Surveillance of Automatic Depressurization Nitrogen Supply System Isolation Valves (Unit 2)

a. Inspection Scope (37551, 92700))

On April 29, 1999, NMPC identified that the automatic depressurization system (ADS) nitrogen supply was not being leak rate tested as required by technical specification 4.5.1.e.2.e. The inspectors reviewed the technical issues associated with this LER and conducted an on-site follow-up of the LER. The review included verification of completed short-term corrective actions and the determination of the status of long-term corrective actions.

b. Observations and Findings

The ADS nitrogen supply provides actuating gas pressure to the ADS receivers and accumulators. Technical specifications require that the system be tested for leakage once every 18 months. While reviewing the post-maintenance testing requirements for valve packing leakage, NMPC determined that previous surveillance testing did not adequately monitor system test boundaries for leakage. NMPC determined that, because adjacent non-safety related piping was isolated during the leak testing, the potential existed for leaking test boundary valves to be masked by the adjacent piping system. NMPC determined that the normally isolated adjacent systems should have been vented to perform an adequate surveillance test.

Corrective actions included declaring the system inoperable, changing the test procedure, and retesting the system. The inspector reviewed the procedure changes and performed a partial walkdown of the system. In addition, the inspector reviewed NMPC's Unit 2 Technical Specification Improvement Project charter and discussed that status of the project with the technical support engineering staff. The project includes training, enhancing existing procedure development tools, and detailed reviews of surveillance procedures. The inspector determined that the corrective actions were adequate and that the project implementation schedule was reasonable. Due to the inadequate leak test, TS surveillance 4.5.1.e.2.e was not satisfied. This severity level IV violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. **(NCV 50-220/99-09-06)** This violation is in the licensee's corrective action program as LER 50-410/99-06. The inspectors verified that the LER was prepared and submitted in accordance with the requirements of 10CFR50.73. Specifically, the description and analysis of the event, as contained in the LER, were consistent with the inspector's understanding of the event. The root cause and corrective and preventive actions, as described in the LER, were reasonable. This LER is closed.

c. Conclusions

At Unit 2, licensee identified inadequate leak rate testing of the automatic depressurization system nitrogen supply was a non-cited violation. NMPC properly corrected and documented this problem in LER 50-410/99-06.

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 External Exposure Controls

a. Inspection Scope (83750)

A review was performed of external exposure controls implemented for high dose rate work. Information was gathered by a review of radiological controls implemented for a Unit 1 spent fuel pool re-rack project, a Unit 1 traverse in-core probe (TIP) replacement,

and spent resin transfers to radwaste containers. Information was also obtained through tours of the facility and direct observations of work, reviews of radiation work permits, ALARA evaluations, and deviation event reports (DERs), and through discussions with cognizant personnel.

b. Observations and Findings

Radiological controls for the Unit 1 fuel pool re-rack job and a Unit 1 TIP replacement were thoroughly planned and effectively implemented. Examples of control measures used for the spent fuel pool (SFP) re-rack job included use of physical barricades (fences) in the fuel pool, one-hundred percent inspection of fuel rack cells and water flushing prior to removal from the SFP, extensive fuel shuffling, use of remote dosimetry, close health physics oversight, and use of industry events in ALARA reviews. Examples of controls used for the TIP replacement included a detailed ALARA plan and pre-job briefing, use of long handled tools, and close health physics supervisory oversight.

Initial radiological controls for a Unit 2 spent resin disposal project included some fundamental occupational exposure control deficiencies which resulted in a radiation protection (RP) technician receiving an unanticipated exposure of approximately 126 mrem above a 100 mrem administrative limit. The event occurred on August 25, 1999, when the RP technician became involved in the job and focused on controlling contamination rather than his own dose and did not recognize that his electronic dosimeter had exceeded a 100 mR alarm set-point and was alarming. Contributing factors included: 1) the electronic dosimeter's dose accumulation annunciator sounded similar to a dose alarm in a high dose rate field; 2) no dose rate limits were included in the radiation work permit or job plan; and, 3) the stay-time was designed to prevent a regulatory overexposure and was not based on the allowed administrative dose or current survey data. Upon notification, health physics supervision immediately recognized the significance of the event, suspended work, and initiated DER 2-99-2788. A root cause evaluation was performed, a mock-up was conducted, and lessons learned were incorporated into the radiation work permit and the ALARA plan. The evaluation of the corrective and preventive actions are included in section R7.1 of this report.

Technical Specification 6.11, "Radiation Protection Program," states that procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR 20 and shall be approved, maintained, and adhered to for all operations involving personnel radiation exposure. Procedure GAP-RPP-01, "Radiation Protection Program," requires personnel to promptly leave an area and report an abnormal reading on a personal dosimetry device. Contrary to this requirement, on August 25, during support of a Unit 2 spent resin disposal project, the licensee identified that a radiation protection technician did not promptly leave a work area and report that his electronic dosimeter had exceeded an administrative alarm set-point of 100 mR. This severity level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. **(NCV 50-410/99-09-07)** This violation was included in the licensee's corrective action program as DER 2-99-2788.

c. Conclusions

The implementation of the radiological controls program was mixed. At Unit 2, a radiation protection technician failed to promptly leave a work area and report that his electronic dosimeter had exceeded an administrative alarm set-point during support of a spent resin disposal project. This was determined to be a non-cited violation. In contrast, radiological controls for the Unit 1 spent fuel pool re-rack job and a Unit 1 traverse in-core probe replacement were thoroughly planned and effectively implemented.

R1.2 Implementation of the Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope (84750-2)

The following areas of the REMP were reviewed and assessed:

- selected sampling and analysis procedures;
- analytical data from January to September 1999;
- selected sampling techniques;
- operability and calibration of air samplers;
- 1998 and 1999 Land Use Census results;
- 1998 Annual Radiological Environmental Operating Report;
- Technical Specifications;
- Offsite Dose Calculation Manual; and
- Inter-laboratory Comparison Program results for the period of June 1998 to September 1999, including the results of the internal quality control (QC) program (efficiency and resolution checks, daily instrument energy checks, control charts of instrument performance, and routine calibrations).

b. Observations and Findings

The sampling and analysis procedures provided appropriate guidance to perform sample collection and thermo-luminescent dosimeter (TLD) exchanges. Sampling techniques were appropriate to collect environmental sample media. In general, the air sampling equipment and water compositors were operable during 1998 to present, as evidenced in the sample logs and sample analysis results. The air sampling equipment calibration results were within the established tolerances, and calibrations were performed within the frequency specified in the procedure.

A Land Use Census, including residence, milk and garden, was performed in 1998 and 1999. The census was conducted during the growing season as required by the Technical Specifications. No changes in land use were noted during the census therefore, no changes to the REMP were required as a result of the census.

The 1998 Annual Radiological Environmental Operating Report included results of the environmental monitoring program, program changes, 1998 land use census, and interlaboratory comparison program, as required by technical specifications (TS). The

reports provided a comprehensive summary of the results of the REMP around the site and met the TS reporting requirements.

The Quality Assurance/Quality Control (QA/QC) program for analyses of REMP samples continued to be conducted by the primary analytical contract laboratory, J. A. FitzPatrick Environmental Laboratory. The laboratory continued to implement the inter-laboratory (QA) and intra-laboratory (QC) programs. The Inter-laboratory Comparison Program was provided by a vendor (Analytics, Inc.). The laboratory's participation in this program was effective. The results were within the vendor's acceptance criteria. The laboratory implemented the intra-laboratory (QC) program. The results for 1998 and 1999 QC program, including efficiency and resolution checks, daily instrument energy checks, control charts of instrument performance, and routine calibrations, were within the acceptance criteria established within the associated procedures.

In addition to the above required comparison programs, the laboratory participated in a cross check program with the Environmental Measurements Laboratory (EML), Department of Energy. The results of this program were in agreement.

The licensee published a discussion of the quality assurance results in the 1998 Annual Radiological Environmental Operating Report, as required by TS.

c. Conclusions

The licensee effectively maintained and implemented the Radiological Environmental Monitoring Program, including the monitoring, land use census, and inter-laboratory comparison programs, in accordance with regulatory requirements. The monitoring program was implemented using the appropriate procedures, the annual reports accurately reflected the analysis and quality assurance results, and the contractor laboratory continued to implement effective QA/QC programs for the REMP and continued to provide effective validation of analytical results. The environmental monitoring program was capable of ensuring independent verification validation of the integrity of the effluent release program.

R1.3 Implementation of the Meteorological Monitoring Program (MMP)

a. Inspection Scope (84750-2)

The following areas of the MMP were reviewed and assessed:

- Status of the meteorological instrumentation, including system operability, channel calibration, and channel functional test results for the period of June 1998, to September 1999, and the associated procedures;
- DER 98-1638 regarding TS violation 98-05-06 and the licensee's corrective actions in response to the violation;
- DER Procedure NIP-ECA-01, "Deviation/Event Report", Rev. 16;
- Regulatory Guide 1.23, Revision 1; and,
- Updated Final Safety Analysis Report, Section 2.3

b. Observations and Findings

Channel calibrations, channel checks, and channel functional tests were performed within the frequency recommended by Regulatory Guide 1.23, Revision 1, and the Updated Final Safety Analysis Report. The wind speed, wind direction, and temperature sensors on the towers were operable and the data was readily available. The associated procedures provided appropriate guidance to perform channel functional tests and channel calibrations for all the channels.

c. Conclusion

The meteorological monitoring program was effectively implemented in accordance with regulatory requirements. Overall, the licensee effectively maintained system operability and properly performed channel calibrations and channel functional tests for the meteorological instrumentation.

R2 Status of RP&C Facilities and Equipment

R2.1 Review of Radiological Housekeeping

a. Inspection Scope (83750)

A review was performed of the conditions of housekeeping, radiological boundaries, and high radiation area barricades. Information was gathered through plant tours and interviews with cognizant personnel.

b. Observations and Findings

Housekeeping was generally good, in that aisles and walkways were clear and free of debris, storage areas were labeled, and work areas were well illuminated. Radiological boundaries were well defined and all high radiation areas observed were appropriately posted and barricaded and locked when required.

c. Conclusions

Housekeeping conditions in Unit 1 and Unit 2 were effectively maintained as evidenced by clear aisles and walkways, labeled storage areas, and well illuminated work areas. Radiological boundaries were effectively maintained as evidenced by well delineated boundaries, and appropriately posted and barricaded high radiation areas.

R7 Quality Assurance in RP&C Activities

R7.1 Corrective Action Program (Unit 2)

a. Inspection Scope (83750)

A review was performed of the effectiveness of the deviation event reporting (DER) system in resolving radiological control deficiencies. Information was gathered by a review of DER 2-1999-2788, "RP Tech Received Higher than Anticipated Exposure," and through discussions with cognizant personnel.

b. Observations and Findings

DER 2-1999-2788 was initiated to document, evaluate, and implement corrective and preventative actions for the August 25, 1999, event at Unit 2 where a radiation protection technician received a higher than anticipated exposure during oversight of several tasks associated with a spent resin disposal project. The DER included an event summary, a formal root cause analysis, and corrective and preventative actions with specified completion dates. The root cause evaluation accurately identified causes and contributing factors.

c. Conclusions

The corrective action program was effectively used to identify, evaluate, and resolve radiological deficiencies as evidenced by corrective action associated with an August 25, 1999 event at Unit 2 where a radiation protection technician received a dose higher than anticipated during a spent resin transfer evolution. The documentation of the event provided an accurate assessment of root causes and corrective and preventive actions were comprehensive.

R7.2 Quality Assurance Audit Program

a. Inspection Scope (84750-2)

The inspector reviewed the following quality assurance audit reports and self-assessments:

- Nuclear quality assurance (NQA) Audit 98016, "Environmental Protection, Radioactive Effluents, Radiological Material Processing."

- Self-Assessment, "Environmental Monitoring, REMP" (per Procedure S-ENVSP-6, Environmental Program).

b. Observations and Findings

Previous DERs were reviewed for completeness and effectiveness of corrective actions. The auditors reviewed personnel performance, program implementation, and records.

No significant issues were identified. Findings or program deficiencies identified were entered into the corrective action program as deviation/event reports (DERs), as appropriate.

c. Conclusion

The licensee met the QA audit requirements. The audits were thorough and of sufficient depth to assess the REMP and MMP. Performance of audits and assessments were appropriate in that specific REMP and MMP activities were directly observed, timely feedback regarding the activity observed was provided, and identified findings were appropriately categorized.

R8 Miscellaneous RP&C Issues

R8.1 (Closed) Violation 50-410/98-05-06: Failure to perform the channel calibration of the wind speed channel, as required by the Unit 2 TS 3/4.3.7.3. The licensee generated DER 98-1638 in response to this TS violation. The licensee revised the wind speed calibration to incorporate the wind speed calibration methodology, as defined by TS 1.4. The licensee performed the calibrations according to the revised procedure. The results of the calibration were within the acceptance criteria. The inspector concluded that the licensee's corrective actions were appropriate. This violation is closed.

P1 Conduct of Emergency Preparedness (EP) Activities

P1.1 Carbon Dioxide Discharge Unusual Event (Unit 1)

a. Inspection Scope (71750)

On October 8, the Unit 1 automatic carbon dioxide (CO_2) fire suppression system actuated on a fire signal, which released CO_2 into the administration building and adjacent turbine building. The inspectors responded to the control room and monitored licensee activities.

b. Observations and Findings

On October 8, at approximately 8:15 a.m., the Unit 1 control room received indication of CO_2 discharge in the Unit 1 records archive. Fire department personnel responded to the scene. No fire was found, and the archive was verified clear of personnel.

The plant atmosphere was monitored for oxygen due to the tendency for CO_2 to migrate. Deficient oxygen levels were identified in the cable spreading room located in the turbine building. The fire chief ordered that the lower areas of the turbine and administration buildings be evacuated. The order for evacuation led the Station Shift Supervisor to declare an Unusual Event (UE) at 9:05 a.m. in accordance with Emergency Action Level (EAL) 8.8.3, "Toxic Gas Release." The licensee made a one-hour report to the NRC Operations Center, in accordance with 10CFR50.72.

Control room operators did not monitor for oxygen levels in the control room until 9:46 a.m., after the operations manager prompted the control room crew. Control room oxygen levels were normal. The inspector noted that the control room ventilation system was not verified to be operating properly to maintain positive pressure in the control room envelope when CO_2 was confirmed to be migrating in the plant lower levels. In addition, the inspectors noted that there was an absence of procedural guidance to address these types of conditions potentially impacting the control room environment. The inspector will follow-up on the licensee's response to these observations in a subsequent inspection period. **(Inspector Follow-up Item 50-220/99-09-08)**

At 12:10 p.m. oxygen levels were verified to be satisfactory in all areas and the UE was terminated. The cause of the fire signal and resulting CO_2 actuation was determined to have been smoke from an overheated fan motor in the humidifier unit located in the archives room ventilation ductwork.

c. Conclusions

On October 8, Unit 1declared an Unusual Event when the carbon dioxide suppression system was automatically discharged in the lower level of the administration building in response to an actual fire/smoke condition. The control room operators were slow to take action to verify the adequacy of the control room ventilation system line-up and to ensure that oxygen levels in the control room were properly maintained.

P1.2 Emergency Preparedness Exercise (Unit 1)

a. Inspection Scope (71707, 71750)

The inspectors observed the Unit 1 October 27, 1999, EP exercise which was conducted to evaluate the implementation of the EP program. The inspectors observed activities in the simulator, technical support center, operations support center, emergency operations facility, and joint news center. The inspectors reviewed EP facility condition, communications and briefings, and EP facility staffing and activation. Additionally, the inspector discussed the exercise critique results with the emergency preparedness director.

b. Observations and Findings

Emergency classifications and notifications were proper and made in a timely manner. Staffing and activation of the emergency response facilities met exercise objectives. The inspectors noted that performance discrepancies were discussed during the exercise critique and that corrective actions were developed.

c. Conclusions

The emergency response organization demonstrated the ability to properly implement the Emergency Plan during an exercise on October 27, 1999. Overall, performance during the exercise was good.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of the licensee management on November 9, 1999. The licensee acknowledged the findings presented.

X2 Plant Performance Review Meeting

On October 22, 1999, the NRC held a public meeting with NMPC management at the NMPC training center to discuss the plant performance review (PPR). A list of meeting attendees is provided in Attachment 2.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Niagara Mohawk Power Corporation

R. Abbott, VP Nuclear Engineering
J. Conway, VP Nuclear Generation
L. Hopkins, Unit 1 Plant Manager
J. Mueller, Senior VP and Chief Nuclear Officer
M. Peckham, Unit 2 Plant Manager
C. Terry, VP Quality Assurance, Nuclear

INSPECTION PROCEDURES USED

IP 37550	Engineering
IP 37551	On-Site Engineering
IP 61726	Surveillance Observations
IP 62707	Maintenance Observations
IP 71707	Plant Operations
IP 71750	Plant Support
IP 83750	Occupational Radiation Exposure
IP 84750-02	Radioactive Waste Treatment, and Effluent and Environmental Monitoring
IP 92700	Onsite Follow-up of Written Reports of Non-Routine Events at Power Reactor Facilities
IP 92904	Followup - Plant Support
IP 92900	Followup - Engineering

ITEMS OPENED, CLOSED, AND UPDATED

OPENED

50-410/99-09-01	IFI	Use of process computer to determine control rod position on loss of full core display.
50-410/99-09-02	NCV	Markup error on line 6.
50-410/99-09-03	IFI	Simulator performance of the operating crew and two individuals found unsatisfactory.
50-410/99-09-04	IFI	Initial operator training program incomplete.
50-220/99-09-05	NCV	Failure to perform the required IRM surveillance test.
50-410/99-09-06	NCV	Inadequate conduct of leak rate testing for automatic depressurization system nitrogen supply.

50-410/99-09-07	NCV	Failure to follow radiation protection procedures to promptly leave a work area and report an abnormal dosimetry reading.
50-220/99-09-08	IFI	Control room response to toxic gas.

CLOSED

50-410/99-09-02	NCV	Markup error on line 6.
50-220/98-11-01	VIO	Failure to follow procedure.
50-220/98-11-02	VIO	Failure to maintain primary containment integrity.
50-220/99-09-05	NCV	Failure to perform the required IRM surveillance test.
50-410/99-06	LER	Inadequate Surveillance of Automatic Depressurization Nitrogen Supply System Isolation Valves.
50-410/99-09-06	NCV	Inadequate conduct of leak rate testing for automatic depressurization system nitrogen supply.
50-410/99-09-07	NCV	Failure to follow radiation protection procedures to promptly leave a work area and report an abnormal dosimetry reading.
50-410/98-05-06	VIO	Failure to perform the channel calibration of the wind speed channel according to the channel calibration definition in TS 1.4, as required by the Unit 2 TS 3/4.3.7.3.

LIST OF ACRONYMS USED

ADS	Automatic Depressurization System
ALARA	As Low As Reasonably Achievable
ASSS	Assistant Station Shift Supervisor
CFR	Code of Federal Regulations
CS	Containment Spray
DER	Deviation/Event Report
EOP	Emergency Operating Procedure
EP	Emergency Preparedness
EML	Environmental Measurements Laboratory
ESF	Engineered Safeguards Feature
GAP	Generation Administration Procedure
I&C	Instruments and Control
IR	Inspection Report
IRM	Intermediate Range Monitor
JPMs	Job Performance Measures
LER	Licensee Event Report
LORT	Licensed Operator Requalification Program
MMP	Meteorological Monitoring Program
MPR	Mechanical Pressure Regulator
mR	MilliRoentgen
mrem	Millirem
NCV	Non-Cited Violation
NMPC	Niagara Mohawk Power Corporation
NRC	Nuclear Regulatory Commission
PIM	Plant Issues Matrix
PPR	Plant Performance Review
OP	Operating Procedure
QA	Quality Assurance
QC	Quality Control
REMP	Radiological Environmental Monitoring Program
RO	Reactor Operator
RP	Radiation Protection
RPP	Reactor Recirculation Pump
SFP	Spent Fuel Pool
SRM	Source Range Monitor
SRO	Senior Reactor Operator
SSS	Station Shift Supervisor
TLD	Thermo-Luminescent Dosimeter
TS	Technical Specification
UE	Unusual Event
UFSAR	Updated Final Safety Analysis Report
USAR	Updated Safety Analysis Report
Unit 1	Nine Mile Point Unit 1
Unit 2	Nine Mile Point Unit 2

ATTACHMENT 2

PERSONNEL ATTENDING PLANT PERFORMANCE REVIEW MEETING ON OCTOBER 22,1999

U. S. Nuclear Regulatory Commission

E. Adensam, Project Directorate, I-1, Nuclear Reactor Regulation (NRR)
A. Randolph Blough, Director Division of Reactor Projects (DRP)
R. Crlenjak, Deputy Division Director, DRP
R. Fernandes, Resident Inspector
B. Fuller, Resident Inspector
M. Evans, Branch Chief, Projects Branch 1, DRP
D. Hood, Project Manager, NRR
G. Hunegs, Senior Resident Inspector
H. Miller, Regional Administrator
D. Screnci, Senior Public Affairs Officer

Niagara Mohawk Power Corporation

R. Abbott, VP Nuclear Engineering
J. Conway, VP Nuclear Generation
L. Hopkins, Unit 1 Plant Manager
J. Mueller, Senior VP and Chief Nuclear Officer
M. Peckham, Unit 2 Plant Manager
C. Terry, VP Quality Assurance, Nuclear