March 27, 2000

EA 00-054

Mr. John H. Mueller
Chief Nuclear Officer
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
Operations Building, 2nd Floor
P.O. Box 63
Lycoming, NY 13093

SUBJECT: **NRC INTEGRATED INSPECTION REPORT NOS. 05000220/1999011 AND 05000410/1999011**

Dear Mr. Mueller:

This report transmits the findings of safety inspections conducted by NRC inspectors at the Nine Mile Point Nuclear Station, Units 1 and 2, from December 19, 1999 through February 12, 2000. At the conclusion of the inspection, the findings were discussed with members of your staff.

Overall, the conduct of operations at the Nine Mile Point Nuclear Station reflected an acceptable safety focus. We noted that a station improvement program has been implemented to address performance shortcomings in the corrective action area. Your program exhibits several positive attributes. None-the-less, continued effort in improving human performance and equipment reliability is warranted.

Based on the results of this inspection, the NRC has determined that four Severity Level IV violations of NRC requirements occurred. These violations are being treated as Non-Cited Violations (NCVs), consistent with Section VII.B.1.a of the Enforcement Policy. The NCVs are described in the subject inspection report and involved ineffective corrective actions related to a Unit 2 degraded service water valve, the failure to maintain Unit 1 reactor core thermal power within license limits, the improper use of the protective tagging system at Unit 1, and the failure to perform Unit 2 emergency core cooling systems response time testing within the required frequency. If you contest these violations or their severity level, you should provide a response within 30 days of the date of this inspection report, with basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, Region I, the Director, Office of Enforcement, and the NRC Resident Inspector at the Nine Mile Point facility.

In accordance with 10CFR2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Sincerely,

/RA/

Michele G. Evans, Chief
Projects Branch 1
Division of Reactor Projects

Docket Nos. 05000220, 05000410
License Nos. DPR-63, NPF-69
EA 00-054

Enclosure: NRC Inspection Report Nos. 05000220/1999011 and 05000410/1999011

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REGION I

Docket/Report Nos.:	05000220/1999011 05000410/1999011
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:	December 19, 1999 - February 12, 2000
Inspectors:	G. Hunegs, Senior Resident Inspector R. Fernandes, Resident Inspector B. Fuller, Resident Inspector P. Frechette, Physical Security Inspector J. Furia, Senior Health Physicist W. Cook, Senior Project Engineer
Approved by:	Michele G. Evans, Chief Projects Branch 1 Division of Reactor Projects

EXECUTIVE SUMMARY

Nine Mile Point Units 1 and 2
05000220/1999011 & 05000410/1999011
December 19, 1999 - February 12, 2000

This inspection report included aspects of licensee operations, engineering, maintenance, and plant support. The report covered an eight-week period of resident inspection. The results of a radiation protection program inspection and a security program inspection from January 24-27, 2000 were also included in this inspection report.

Operations

On December 31, 1999, at Unit 2, a control rod positioning error occurred which was the result of inattention to detail by the shift technical advisor, who prepared the control rod move sheet, and the control panel operators' failure to recognize the error. Although the actual error had minor safety consequence, it represented poor reactivity management. In addition, the reactor operators' knowledge of the function of the four-rod display was weak. (O1.2)

Anomalous movement of the turbine control valves at Unit 1 was observed during power ascension on January 29, 2000. The specific cause of the movement has not been determined; however, an engineering support analysis has concluded that the effect of valve motion was not a safety concern. The licensee demonstrated a conservative approach to addressing this valve issue. (O1.3)

On January 7, 2000, the Division III emergency diesel generator (EDG) tripped on reverse power. The reverse power condition occurred during surveillance testing and was attributed to a poorly written test procedure and an operator knowledge deficiency. The procedure was poorly written, in that it left a procedure step open to interpretation by the operator and did not take into consideration the non-routine aspect of the test conditions. NMPC corrective actions were appropriate. (O2.1)

NMPC senior management recognized through recent events, assessments, and performance trends that station performance must improve in the four areas of management effectiveness, operational safety ethic, equipment reliability, and operator training. To address these performance shortcomings, a phased Improvement Plan was implemented and was ongoing at the time of this inspection. Phase I targets the four areas stated above and Phase II, planned to start in mid-April 2000, will carryover selected elements of Phase I and target process and programmatic improvements. Based upon inspector observations at the Daily Leadership Meetings, station management has become more focused in pursuing prompt identification and effective resolution of problems. (O7.1)

Appropriate corrective action process changes have been recently implemented. These include DER screening meetings, Corrective Action Review Boards, and the appointment of a Director of Assessment and Corrective Action to oversee and administer the DER process. A noteworthy corrective action program shortcoming that remains to be addressed by NMPC is the Deviation/Event Report (DER) database system, which lacks real-time DER corrective action item tracking and trending. (O7.2)

Quality Assurance group audits of NMPC corrective action program effectiveness were observed to be critical of plant staff performance. However, the most recent audit concluded that no significant improvement had been made in this area. This conclusion indicated that previous audits have not been constructive in facilitating a performance improvement and that recent corrective action program improvement initiatives had not yet demonstrated a positive impact. Initial Branch self assessments in the area of Corrective Action Effectiveness Reviews were of poor quality and attributable, in part, to the absence of clearly communicated management expectations and written guidance. (O7.3)

NMPC failed to effectively resolve degraded material condition problems involving Unit 2 service water system butterfly valves. This failure to take appropriate corrective action was treated as a non-cited violation. This example of ineffective corrective action was symptomatic of a weak corrective action program which was recognized by NMPC senior management and was being addressed via an Improvement Plan. (O7.4)

On October 6, 1998, the licensee determined that the Unit 1 license limit of 1850 megawatt thermal power was violated. The Technical Specification 3.1.7.d power-to-flow relationship was also violated. The cause was excessive flow not accounted for in the plant process computer reactor power calculation, due to a leaking valve in the control rod drive system. The excess flow was equivalent to two megawatts thermal power. This licensee identified and corrected violation was not cited. (O8.2)

Maintenance

NMPC management promptly responded to green control tag problems revealed during an event involving traveling screen maintenance. Appropriate corrective actions were implemented. The failure to follow station procedures for protective tagging was a non-cited violation. (M1.2)

While reviewing surveillance records, NMPC determined that the 18-month surveillance test for performing time response testing of several safety related emergency core cooling systems were not completed. The missed surveillance testing of the systems was the result of an improperly processed change to the surveillance testing database. Contributing to the error was a weak procedure change incorporated as part of previous corrective actions for a similar issue. The failure to complete these Technical Specification surveillance tests at the required frequency was a non-cited violation. (M1.3)

Plant Support

The radiation protection programs at both units were effectively identifying and controlling access to radiologically significant areas. Generally effective programs for maintaining occupational exposures as low as is reasonably achievable have also been established and maintained. (R1)

An effective program of audits, performance reviews and self-assessments has been implemented and maintained for the radiation protection program. Reviews were of sufficient scope and depth to identify programmatic deficiencies. Identified deficiencies were properly documented, and corrective actions tracked for effectiveness and closure. (R7)

Security and safeguards activities with respect to alarm station controls, communications, and protected area access control of personnel, packages and vehicles were effectively implemented and met license commitments and NRC requirements. (S1)

The security facilities and equipment were determined to meet the licensee's commitments and NRC requirements. (S2)

Security and safeguards procedures and documentation were properly implemented. Event Logs were properly maintained and effectively used to analyze, track and resolve safeguards events. (S3.1)

The security force members adequately demonstrated that they had the requisite knowledge necessary to effectively implement the duties and responsibilities associated with their position. (S4)

Security force personnel were being trained in accordance with the requirements of the training and qualification plan. Training documentation was properly maintained and the training provided by the training staff was effective. (S5)

The level of management support was adequate to ensure proper implementation of the security program, and was evidenced by the allocation of resources to support programmatic needs. (S6)

The review of security audits indicated that the program was being properly administered. In addition, a review of the documentation applicable to the self-assessment program indicated that the program was being effectively implemented to identify and resolve potential weaknesses. (S7)

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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 with four recirculation loops in operation. On January 28, 2000, reactor power was reduced to isolate a leaking tube in the main condenser. During the power ascension following the tube repair, an anomaly with turbine control valve operation was observed and power was held at 70 percent until engineering analysis was prepared to address the condition. Reactor power was then raised to 100 percent on February 6, and Unit 1 ended the inspection report period at full power in four loop operation.

Nine Mile Point Unit 2 (Unit 2) remained at 100 percent power throughout the inspection period.

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. During this inspection period, the inspectors monitored station activities related to the year 2000 (Y2K) transition. NMPC activities related to the Y2K transition were appropriate.

O1.2 Control Rod Movement Error (Unit 2)

a. Inspection Scope (71707)

On December 31, 1999, in an attempt to lower reactor power as a precaution for potential computer problems related to Y2K, operators mis-positioned control rod 22-55 from position 48 to position 46. The intended control rod was to be positioned from position 10 to 08. The inspectors interviewed operators and reviewed the event.

b. Observations and Findings

Through interviews with NMPC personnel, the inspectors determined that the control rod mis-position event was, in part, the result of two errors. The first error was that the reactivity maneuvering request form was incorrectly prepared. The second error was the operators' failure to recognize that the selected control rod was not in the expected position.

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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.

As part of the Y2K preparations, the reactor engineer processed a 3D Monicore predictor case (from his home) on December 31, and sent it to the control room. The predictor case form was to be used by the on-shift Shift Technical Advisor (STA) to generate a reactivity maneuvering request (RMR) form, in accordance with procedure GAP-OPS-05, Reactivity Management. This procedure is utilized for conducting reactivity adjustments via control rods to lower reactor power. The RMR form listed the control rods to be moved and included the initial and final positions. However, when the STA read the control rod (CR) positions from the computer predictor case printout, he was off by a row. Due to inadequate self-checking, he transcribed control rods 22-55 and 34-55, instead of 22-51 and 34-51, onto the RMR form.

Following a pre-evolutionary brief of the control room personnel, the reactor operator (RO), with an additional qualified individual designated to verify proper rod selection and positioning, selected CR 22-55, as written on the RMR. However, neither individual observed that CR 22-55 was at position 48, vice position 10, as indicated on the RMR form due to inattention to detail. Through interviews, the inspector determined that a contributing cause for the operators' mistake was not understanding which rod they were looking at on the four-rod display and not checking other CR position indications available to them (the rod worth minimizer and rod sequence control system both display control rod position when a rod is selected). When the rod was selected, the four-rod display lit-up with three rods at position 48, and one rod at position 10 (CR 22-51). After CR 22-55 was repositioned to position 46, the operators and reactivity senior reactor operator (SRO) recognized the error and secured the operation until it could be fully understood. Subsequently, operators corrected the RMR and made the planned reactor power adjustment. It was later determined by NMPC that the insertion of the incorrect control rod had no adverse impact on core thermal limits.

Corrective actions included: temporarily removing involved personnel from licensed activities; changing the RMR form to include an independent verifier; briefing of all licensed personnel on the event; and performance of a root cause analysis. In addition to the obvious human performance issues, NMPC identified that the four-rod display was not working as described in the Updated Safety Analysis Report (USAR). The original design of the four-rod display included a back-lit feature which assisted the operator in identifying which CR was selected. This event demonstrated that the lighting quality did not allow easy identification of the selected rod. NMPC documented this deficiency in their corrective action program.

c. Conclusions

On December 31, 1999, at Unit 2, a control rod positioning error occurred which was the result of inattention to detail by the shift technical advisor, who prepared the control rod move sheet, and the control panel operators' failure to recognize the error. Although the actual error had minor safety consequence, it represented poor reactivity management. In addition, the reactor operators' knowledge of the function of the four-rod display was weak.

O1.3 Turbine Control Valve Degraded Operation (Unit 1)

a. Inspection Scope (71707)

On January 29, 2000, an unexpected step change in turbine control valve (TCV) position was observed. The inspectors interviewed operations and engineering personnel, reviewed the licensee engineering supporting analysis (ESA), and attended the site operations review committee meeting held prior to Unit 1 returning to full power.

b. Observations and Findings

On January 29, while the operators were restoring Unit 1 to full power operation, a step change in TCV position from 69 to 77 percent open was observed with the reactor at a steady state of 70 percent power. The step change was preceded by a decrease in steam flow equivalent to approximately five percent rated steam flow. No operator action initiated this decrease in steam flow. The inspectors noted that the turbine control valves are repositioned by the regulating system in response to a change in reactor power initiated by the operator.

The power ascension was stopped and a team was formed to investigate the anomalous valve operation. Initial data gathering indicated that the TCVs may have moved in response to steam flow changes brought on by the repositioning of the internals of one or more of the TCVs. Radiation levels measured at the TCVs and measurements taken at the valve linkages indicated different steam flows through the four TCVs.

NMPC developed an ESA to evaluate the impact of anomalous valve movement on fuel thermal limits and continued operability of the turbine control system. NMPC concluded that the effect of valve motion on fuel thermal limits was bounded by the fuel reload analysis. The turbine control system was determined to be operable based on repeatable control valve response during power maneuvers and no indication of unstable turbine pressure regulation.

The reactor was returned to full power operation on February 6, 2000, with no observed pressure oscillations or anomalous valve motion. The inspectors determined that NMPC plans to perform corrective actions on the turbine control valves after completion of further data collection and any required engineering analysis.

c. Conclusions

Anomalous movement of the turbine control valves at Unit 1 was observed during power ascension on January 29, 2000. The specific cause of the movement has not been determined; however, an engineering support analysis has concluded that the effect of valve motion was not a safety concern. The licensee demonstrated a conservative approach to addressing this valve issue.

02 Operational Status of Facilities and Equipment

O2.1 Emergency Diesel Generator Reverse Power Trip (Unit 2)

a. Inspection Scope (71707)

On January 7, while performing surveillance test, N2-OSP-ENS-R2002, Functional Test of EDG Load Shedding Circuit, the Division III emergency diesel generator (EDG) was automatically tripped by protection circuitry when a reverse power was sensed on the bus. The inspector discussed the surveillance test with the operators and reviewed the procedure. In addition, the inspectors reviewed NMPC's special report submitted on February 7, concerning this failure.

b. Observations and Findings

The inspector determined that the test was being performed to verify that the contacts in the load shedding circuitry were operating as designed. The surveillance test, as part of the initial conditions, had the operator start the Division III EDG and disconnect its associated safety bus from the offsite power source, leaving the safety bus powered only by the EDG. The EDG automatic trip occurred when the operator, after starting the engine, attempted to lower the power output of the EDG to match the electrical load that was previously on the bus. When the operator lowered the speed of the EDG, to reduce the safety bus load, he lowered EDG speed too far and the offsite power source attempted to run the generator as a motor. The protective relays tripped the EDG prior to any damage occurring. Operators suspended the surveillance test to assess the problem.

The inspector reviewed the test procedure and concluded that the step the operator was following when the EDG tripped was not intended to be used to operate the EDG at minimum output. Preliminary findings by NMPC were that the procedure was not clear and that there was a weakness in operator knowledge. NMPC engineering confirmed that the EDG governor controls under minimum load conditions may result in over-travel of the governor and potential reverse power tripping. Immediate corrective actions included investigation of the trip to verify operability of the EDG and changing the test procedure to reduce the likelihood of another reverse power trip. The ability of the EDG to perform in the emergency mode to supply power to the high pressure core spray system was not adversely impacted.

c. Conclusions

On January 7, 2000, the Division III emergency diesel generator (EDG) tripped on reverse power. The reverse power condition occurred during surveillance testing and was attributed to a poorly written test procedure and an operator knowledge deficiency. The procedure was poorly written, in that it left a procedure step open to interpretation by the operator and did not take into consideration the non-routine aspect of the test conditions. NMPC corrective actions were appropriate.

O7 Quality Assurance in Operations

O7.1 NMPC Improvement Plan

a. Inspection Scope (40500)

The inspectors reviewed various documents associated with the NMPC improvement program, attended management meetings, and discussed program attributes, implementation, and effectiveness with NMPC managers and staff.

b. Observations and Findings

NMPC senior management recognized several performance issues which led them to initiate an improvement plan. These performance issues were identified as a result of: four automatic reactor scrams in 1999; Institute of Nuclear Power Operations accredited technical training program probation; weaknesses in the licensed operator training programs; and third-party evaluations, including the NRC Plant Performance Review (PPR). The performance shortfalls were related to operational safety ethic, conduct of operations, longstanding equipment reliability problems, resolution of repetitive issues, training effectiveness, and management effectiveness. The NMPC senior management team determined that the fundamental issues were management direction, leadership, and ownership.

To address these performance shortfalls, NMPC implemented a phased improvement plan which contained immediate actions followed by Phase 1 and Phase 2. The immediate actions included: safety seminars and town hall meetings; a shift observation program; and a number of organizational and personnel changes. Phase 1 improvement efforts are ongoing and include: focusing the management team and reinforcing leadership; increasing equipment reliability; reducing operational challenges; and improving operator training.

To improve equipment reliability, NMPC management developed a top ten equipment issues list and systematically identified and prioritized the site backlogs. In addition, NMPC recently developed and implemented a work-week schedule review and critique process. To improve station communication and management oversight, NMPC now conducts a combined Unit 1 and 2 “Daily Leadership Meeting” with branch managers and above in attendance. These meetings are conducted with a well defined agenda and clear safety focus.

c. Conclusions

NMPC senior management recognized through recent events, assessments, and performance trends that station performance must improve in the four areas of management effectiveness, operational safety ethic, equipment reliability, and operator training. To address these performance shortcomings, a phased Improvement Plan was implemented and was ongoing at the time of this inspection. Phase I targets the four areas stated above and Phase II, planned to start in mid-April 2000, will carryover selected elements of Phase I and target process and programmatic improvements. Based upon inspector observations at the Daily Leadership Meetings, station management has become more focused in pursuing prompt identification and effective resolution of problems.

O7.2 Corrective Action Program (CAP) Review

a. Inspection Scope (40500)

NMPC has recently implemented several changes to their corrective action program which were designed to improve the program effectiveness. The inspectors reviewed program guidance and procedures and discussed CAP attributes with cognizant personnel. The inspectors observed Deviation/Event Report (DER) screening committee meetings and corrective action review board (CARB) meetings. In addition, the inspectors reviewed selected DERs and their associated root cause evaluations.

b. Observations and Findings

Director of Assessment and Corrective Action

To facilitate improved management oversight and consistency in the implementation of the station corrective action processes, as defined in NIP-ECA-01, "Deviation/Event Report," NMPC established the position of Director of Assessment and Corrective Actions (Director). The Director reports to the Vice President, Nuclear Generation, and oversees the administration of the DER process. With a small assigned staff of one engineer and two clerks, the Director is responsible for: maintaining the DER computer database; coordinating the daily DER screening meetings and periodic Corrective Action Review Board (CARB) meetings; overseeing the departmental self-assessments, including the corrective action effectiveness reviews (CAERs); and training of station managers and supervisors on recently implemented revisions to the corrective action program. In addition, the Director is an alternate (as designated) to the Unit 1 and Unit 2 Plant Managers, who are responsible for the overall implementation of the DER process.

DER Database

Based upon discussions with the Director and review of the available DER information, the inspectors observed that the current DER database has limited tracking and trending capability. Specifically, the database has limited plant staff access and limited key word and/or action item due date search capability (i.e., DER action items are entered into the DER database in text format and are not individually retrievable). The inspectors determined that, in lieu of a centralized action item tracking system, each Branch Manager maintains a departmental tracking system to ensure assigned action items and activities are processed on time and with the appropriate priority. Based upon discussions with the Director, the inspectors learned that NMPC was evaluating new database management software to upgrade the DER database system to a more capable and "user friendly" system.

Daily DER Screening Meeting

NMPC has recently implemented a DER screening committee to ensure that DERs are properly prioritized and assigned to the appropriate department. The inspectors reviewed the DER screening committee charter, attended several committee meetings, and discussed the process with the Director. The inspector observed that the DER screening committee was an appropriate method to improve CAP effectiveness.

Corrective Action Review Board (CARB)

NMPC has recently initiated a CARB to improve the development of DER dispositions. The inspector reviewed the CARB charter, discussed CARB activities with the Director and CARB Chairman, and observed CARB meetings. The CARB reviews Category 1 and selected Category 2 DER dispositions. The intent is to improve corrective action effectiveness by providing additional review to ensure that operating experience, extent of condition, cause determination, immediate corrective and preventive actions, and the prioritization is appropriate. The process is used to determine the overall acceptability and the quality of the DER disposition. The inspector observed that the CARB members appropriately challenged DER dispositions.

Review of Selected Deficiency/Event Reports

The inspectors reviewed and discussed with the responsible plant staff the following DERs to assess the adequacy of implementation of the DER process, the completeness of the root cause evaluations, and the adequacy of corrective actions:

- DER No. 1-1999-3779
- DER No. 1-1999-3786
- DER No. C-1999-2919
- DER No. 1-2000-0129
- DER No. 1-1998-2544
- DER No. C-1998-0587
- DER No. 1-1998-1030
- DER No. 1-1999-3456
- DER No. 1-1999-3211
- DER No. 2-1999-3693
- DER No. 2-1999-4018
- DER No. 2-1998-0973
- DER No. 2-1998-1979

The inspectors identified that the DER process was being appropriately followed and that the root cause evaluations were adequate. The inspectors noted that for a number of the Category 1 DERs recently screened by the Station Operations Review Committee and/or the CARB, the root cause evaluations were carefully scrutinized and in some instances rejected (i.e., incomplete extent of condition reviews or incomplete causal analysis). The inspectors did not identify any significant problems or deficiencies with the DERs reviewed or the licensee's DER review process.

c. Conclusions

Appropriate corrective action process changes have been recently implemented. These include DER screening meetings, Corrective Action Review Boards, and the appointment of a Director of Assessment and Corrective Action to oversee and administer the DER process. A noteworthy corrective action program shortcoming that remains to be addressed by NMPC is the Deviation/Event Report (DER) database system, which lacks real-time DER corrective action item tracking and trending.

O7.3 Review of Selected Quality Assurance Audits and Self Assessments

a. Inspection Scope (40500)

The inspectors reviewed a sampling of recent Branch self assessment reports and Quality Assurance (QA) audits to assess the depth and scope of the reviews, significance of licensee identified findings, and the extent of actions to address deficient conditions and/or performance concerns.

b Observations and Findings

The inspector examined QA audit report Nos. 99006 and 99016, dated June 16, 1999 and December 28, 1999, respectively. These audits were required per Unit 1 and Unit 2 Technical Specification 6.5.3.8 and focused on the adequacy of station performance in the area of corrective actions. The inspectors noted that the audit findings in both reports were similar, in that, the auditors were critical of plant staff performance and both reports identified ineffective implementation of the program and associated procedures. Audit 99016 highlighted that there had not been significant improvement in the corrective action program since the previous audit (99006). Inspector follow-up of this finding with the Vice President Quality Assurance and the Chief Nuclear Officer identified that while both were disappointed, the results were not unexpected and they acknowledged that the Improvement Plan had only recently been implemented to address performance shortfalls.

The inspectors sampled recently completed Unit 1 and 2 Branch self assessments and associated DER corrective action effectiveness reviews (CAERs). Per a recent change to NIP-ECA-01, “Deviation/Event Report,” each Branch is responsible for assessing how effective they are in addressing and resolving the problems identified by Category 1 and Category 2 DERs. The initial assessment tasked the Branch managers with reviewing the effectiveness of Category 1 and 2 DERS initiated and closed since January 1, 1998. The completed Branch CAERs were examined by the Director and the Quality Assurance staff whom both concluded that collectively, the reviews indicated a lack of overall consistency and quality that did not meet management expectations. This licensee identified concern was documented in DER No. C-1999-4009. Inspector follow-up determined that this initial review was ill-fated, in part, due to the absence of adequate written guidance and clearly communicated expectations. The inspectors examined the subsequently developed CAER guidance and a few of the re-performed CAERs and observed some improvement.

c. Conclusions

Quality Assurance group audits of NMPC corrective action program effectiveness were observed to be critical of plant staff performance. However, the most recent audit concluded that no significant improvement had been made in this area. This conclusion indicated that previous audits have not been constructive in facilitating a performance improvement and that recent corrective action program improvement initiatives had not yet demonstrated a positive impact. Initial Branch self assessments in the area of Corrective Action Effectiveness Reviews were of poor quality and attributable, in part, to the absence of clearly communicated management expectations and written guidance.

O7.4 Review of Events Involving the December 17, 1999 NOED Request

a. Inspection Scope (71707)

On December 17, 1999, the NRC verbally granted a Notice of Enforcement Discretion (NOED) to NMPC for addressing compliance with Unit 2 Technical Specification 3.6.2.3, Action a, (reference NOED No. 99-1-006, dated December 22, 1999). The NOED granted additional action statement allowed outage time for the Unit 2 staff to affect repairs to the residual heat removal system heat exchanger service water inlet isolation valve 2SWP*MOV90B. The inspector reviewed the circumstances which led NMPC to make this request.

b. Observations and Findings

The NMPC staff identified the degraded condition of valve 2SWP*MOV90B while walking down the service water system in preparation for planned maintenance. Workers found the packing gland follower studs (four) were all sheared. The cause of the broken follower studs was determined by NMPC to have been packing gland follower (carbon steel) seizure to the valve stem (stainless steel) due to general rust and galvanic corrosion. The close tolerances between the gland follower and stem, in combination with the moist environment of the valves and packing gland leakage, contributed to the corrosion build-up. The valve's motor-operator had sufficient torque such that rotation of the valve (an 18-inch butterfly valve) was enough to shear the four studs.

Based on the degradation noted with the Unit 2 service water valves, the inspectors conducted a Unit 1 inspection which was focused on material condition. The inspectors walked down portions of piping systems including emergency diesel generator cooling water, containment spray raw water and emergency service water which are located in the Unit 1 screen house. Several material condition issues were noted. For example, emergency service water piping adjacent to the ultra-sonic flow instrumentation was in poor condition (excessive surface corrosion/rust), several valve packing leaks were evident, and some material storage concerns were identified. NMPC initiated corrective actions to address these observations.

Inspector review of DER 2-1999-4154 and the associated root cause determination identified that these types of service water system butterfly valves have had a history of corrosion related problems. Specifically, in March 1996, the licensee identified excessive corrosion of packing gland follower studs and nuts (DER No. 2-1996-0785). In April 1998, the licensee identified that valve 2SWP*MOV90A had broken gland follower studs and determined that the cause was inappropriate selection of material for the packing gland and associated bolting by the vendor (DER No. 2-1998-0743). Consequently, NMPC concluded that their extent of condition reviews and corrective actions for previous valve problems and failures of this nature were ineffective in preventing repeat failures. The inspectors concluded that the failure to take timely and effective corrective action to resolve this known galvanic corrosion problem involving the service water system butterfly valves is a violation of 10 CFR 50, Appendix B, Criterion XVI. This violation of NRC requirements is being treated as a Non-Cited Violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. **(NCV**

05000410/1999011-01) This violation is in the licensee's corrective action program as DER 2-1999-4154.

c. Conclusions

NMPC failed to effectively resolve degraded material condition problems involving Unit 2 service water system butterfly valves. This failure to take appropriate corrective action was treated as a non-cited violation. This example of ineffective corrective action was symptomatic of a weak corrective action program which was recognized by NMPC senior management and was being addressed via an Improvement Plan.

O8 Miscellaneous Operations Issues (92700)

O8.1 (Closed) VIO 05000220/1998005-01: Failure to Follow Surveillance Test Procedure. Specifically, the core spray system was not declared inoperable as required by a note in the acceptance criteria of Surveillance Test Procedure N1-ST-Q28, Containment Spray Raw Water Inter-Tie Check Valve Quarterly Operability Test. The cross-tie check valve did not open under forward flow when the test torque was applied. The operating crew did not declare the system inoperable and enter the one-hour shutdown limiting condition for operation (LCO), as required by a note to the acceptance criteria for the procedure. System operability was restored by relieving the hydraulic lock on the inter-tie piping which had prevented check valve operation. The licensee subsequently determined that testing of this check valve was not required under forward flow conditions. Operations crews were trained during a performance stand down on procedure adherence and verification methods. Surveillance procedures were reviewed for similar conditions and revised to include sign-offs for acceptance criteria notes. The inspectors confirmed the completion of the corrective actions associated with this violation, as described in NMPC's October 9, 1998, response to the Notice of Violation (NOV). This violation is closed.

O8.2 (Closed) Licensee Event Report (LER) 05000220/1998018: Violation of License Condition 2.C.1 and the Power to Flow Relationship Technical Specification Due to a Degraded Valve

a. Inspection Scope (90712, 92700)

On October 6, 1998, NMPC personnel determined that the actual total control rod drive (CRD) flow exceeded the indicated total flow due to leakage through a filter bypass valve. The excess CRD flow represented approximately a two megawatt thermal power increase over core power calculated by the process computer, resulting in exceeding the Unit 1 license limit of 1850 megawatt thermal power. The Technical Specification 3.1.7.d power-to-flow relationship was also violated. The inspectors conducted on-site follow-up and completed a review of the LER.

b. Observations and Findings

The licensee administratively limited power to account for the increased CRD system flow. CRD system bypass flowrate trending was added to the operators log sheets to allow further adjustments in power to account for changes in flowrate.

The CRD filter bypass valve was replaced during the 15th refueling outage. Routine monitoring of the bypass valve has revealed no degradation since installation.

The failure to maintain reactor core thermal power less than 1850 MW_{th} is contrary to the Unit 1 Technical Specifications, Section 3.1.7.d which requires the reactor power and recirculation flow relationship be maintained in accordance with the limits identified in the Core Operating Limits Report. The reactor power increase due to the bypass flow did not exceed the accident analysis limits, therefore the safety significance was low. This severity level IV violation is being treated as a Non-Cited Violation (NCV), consistent with Section VII.B.1.a of the NRC Enforcement Policy. **(NCV-05000220/1999011-02)** This LER is closed.

c. Conclusions

On October 6, 1998, the licensee determined that the Unit 1 license limit of 1850 megawatt thermal power was violated. The Technical Specification 3.1.7.d power-to-flow relationship was also violated. The cause was excessive flow not accounted for in the plant process computer reactor power calculation, due to a leaking valve in the control rod drive system. The excess flow was equivalent to two megawatts thermal power. This licensee identified and corrected violation was not cited.

O8.3 (Closed) LER 05000220/1999004: Reactor Scram Due to Mechanical Pressure Regulator Suppressor Valve Failure and Mode Switch Position not in Conformance with Technical Specifications. The technical and enforcement issues associated with this LER were described in NRC inspection report 050000220/19999007, Section O1.2. The inspectors completed an on site review of the LER and verified that the report was completed in accordance with the requirements of 10CFR50.73. Specifically, the description and analysis of the event as documented in the LER were consistent with the inspectors' understanding of the event. The root cause and corrective and preventive actions as described in the LER were reasonable. The inspectors noted that several additional preventive actions have been implemented to improve the operational safety culture and conduct of operations. Preventive actions included: the conduct of safety seminars and town hall meetings to address safety ethic and conservative decision making; the implementation of a shift observation program to reduce operator challenges through greater schedule discipline and improved contingency planning; organizational changes to focus the organization on safe operation; weekly management reviews of upcoming work week schedules and critiques of previous work week execution; and the establishment of heightened level of awareness (HLA) process. This LER is closed.

O8.4 (Closed) LER 05000220/1999005 and Supplement 001: Reactor Trip During Plant Startup on Intermediate Range Monitor Spiking Caused by Electromagnetic Interference. The technical issues associated with this LER were described in NRC inspection report 05000220/1999007, Section O1.3. Supplement 001 addressed the

status of corrective actions. The inspectors completed an on site review of the LER and verified that the report was completed in accordance with the requirements of 10CFR50.73. Specifically, the description and analysis of the event as documented in the LER were consistent with the inspectors' understanding of the event. The root cause and corrective and preventive actions as described in the LER were reasonable. These LERs are closed.

O8.5 (Closed) LER 05000410/1999005 and Supplement 001: Reactor Trip Due to a Main Generator Protection Volts/Hertz Relay Failure. The technical issues associated with this LER were described in NRC inspection report 05000410/1999004, Sections O1.2 and M2.2. Supplement 001 addressed the status of corrective actions. The inspectors completed an on site review of the LER and verified that the report was completed in accordance with the requirements of 10CFR50.73. Specifically, the description and analysis of the event as documented in the LER were consistent with the inspectors' understanding of the event. The root cause and corrective and preventive actions as described in the LER were reasonable. These LERs are closed.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments (61726, 62707)

Using NRC Inspection Procedures 61726 and 62707, the resident inspectors periodically observed various maintenance and surveillance activities. As part of the observations, the inspectors evaluated the activities with respect to the requirements of the Maintenance Rule, as detailed in 10 CFR 50.65. In general, maintenance and surveillance testing 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.

M1.2 Misapplication of Green Control Tag (Unit 1)

a. Inspection Scope (62707, 71707)

NMPC identified that maintenance mechanics improperly transferred green control tags during maintenance on the No. 11 traveling screen. The inspectors reviewed the tagout/lockout instruction, observed the work site, and interviewed operations and maintenance personnel.

b. Observations and Findings

On January 10, 2000, preventive maintenance was started on the No. 11 traveling screen. The maintenance and operation of the traveling screen was controlled under a green control tag (GCT) because the equipment was required to be operated many times during the maintenance activity to reposition the screens. The tagout /lockout procedure requires that only operations department personnel will remove and hang a GCT. The method of attaching the GCT to the breaker handle (plastic tie-wrap) precluded handle motion. Thus, when it became necessary to close the breaker in order to move the screens, the maintenance staff removed and re-attached the GCT. It was subsequently determined by NMPC management that it was common practice for the maintenance staff to remove and re-attach GCTs, vice request operations staff assistance.

For the maintenance on No. 11 traveling screen, the lead mechanic responsible for the work and the GCT was the individual who removed and re-attached the tag many times throughout the job. On January 11, 2000, after numerous breaker manipulations, the job was to be stopped for lunch. Prior to leaving the job site for lunch, the lead mechanic was momentarily distracted by another mechanic, and re-attached the GCT to the wrong breaker, leaving the No. 11 traveling screen energized.

The misapplication of the GCT was discovered by a senior reactor operator license candidate performing a walkdown as part of his qualifications. No work on the affected traveling screen was performed during the period the GCT was improperly attached. DER 1-2000-0129 was initiated to enter the failure to properly control a GCT and tagging error event into the corrective action program.

The inspector noted that NMPC's response was timely and appropriate, with a stand-down on all work involving GCT equipment protection. This failure to properly remove and re-attach green control tags is contrary to the licensee's tagout/lockout procedure. 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-05000220/1999011-03)**.

c. Conclusions

NMPC management promptly responded to green control tag problems revealed during an event involving traveling screen maintenance. Appropriate corrective actions were implemented. The failure to follow station procedures for protective tagging was a non-cited violation.

M1.3 Missed Emergency Core Cooling Systems (ECCS) Time Response Testing (Unit 2)

a. Inspection Scope (61726)

On January 12, 2000, while reviewing surveillance records, NMPC determined that the 18-month surveillance tests for performing time response testing of several safety related ECCS were not completed. NMPC declared the associated safety systems

inoperable and entered the appropriate Limiting Condition for Operations (LCOs). The inspector reviewed the event and surveillance procedures.

b. Observations and Findings

Technical Specification (TS) 4.3.3.3 requires the response time for each ECCS to be tested at least once per every 18 months and that each test shall include at least one channel per trip system so that all channels are tested at least once per N times 18 months (N is the total number of redundant channels in the trip system). NMPC determined that an error was made during the development of the surveillance schedule which resulted in the surveillance frequency being submitted as three years vice 18 months per channel.

Administrative procedure GAPS-PSH-02, Preventive Maintenance and Surveillance Test (PM/ST) Database, Revision 4, provides the administrative controls for maintaining a scheduling and tracking system to ensure required surveillance tests and preventive maintenance activities are completed, as required. The procedure also provides for controls to make changes to the database, including independent verification of the changes. The inspector noted that, because of a previous error, GAPS-PSH-02 had been changed to require an independent technical review and verification for changes made to the PM/ST database. However, the change form did not include or require a signature for the independent verification.

NMPC determined that the scope of missed surveillance testing included the drywell pressure transmitters and reactor low water level transmitters which provide a start signal to the high pressure core spray system. Further review of the database indicated that the main steam flow transmitters had also exceeded the testing frequency. All channels were tested satisfactorily. The failure to conduct surveillance testing at the required frequency is a violation of Technical Specifications. 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-05000410/1999011-04)**.

c. Conclusions

While reviewing surveillance records, NMPC determined that the 18-month surveillance test for performing time response testing of several safety related emergency core cooling systems were not completed. The missed surveillance testing of the systems was the result of an improperly processed change to the surveillance testing database. Contributing to the error was a weak procedure change incorporated as part of previous corrective actions for a similar issue. The failure to complete these Technical Specification surveillance tests at the required frequency was a non-cited violation.

III. Engineering

E8 Miscellaneous Engineering Issues (92903)

E8.1 (Closed) VIO 05000220/1998001-06: Failure to perform engineering safety analysis for inoperable control room emergency ventilation system (CREVS). The temperature control valve for the Unit 1 CREVS had been inoperable since 1983. An engineering evaluation had not been performed, as required by procedures, to determine if continued operation with the degraded condition was acceptable. The inspectors reviewed the engineering evaluation for the inoperable valve. The inspectors confirmed the completion of the corrective actions associated with this violation, as described in NMPC's April 20, 1998, response to the NOV. This violation is closed.

E8.2 (Closed) LER 05000410/1999001/001: Unit 2 Outside the Design Basis Due to Safe Shutdown Service Water Pump Bay Unit Coolers Being Out-of-Service. The technical issues associated with this LER were described in NRC inspection report 05000410/1999003, Section E1.3. Supplement 001 documented additional corrective actions that have been completed. The inspectors completed an on site review of the LER and verified that the report was completed in accordance with the requirements of 10CFR50.73. Specifically, the description and analysis of the event as documented in the LER were consistent with the inspectors' understanding of the event. The root cause and corrective and preventive actions as described in the LER were reasonable. This LER is closed.

E8.3 (Closed) LER 05000410/1999009/001: Non-Conformance with Technical Specifications Regarding Check Valve Reverse Flow testing. The technical issues associated with this LER were described in NRC inspection report 05000410/1999008, Section E8.1. Supplement 001 documented additional corrective actions that have been completed. The inspectors completed an on site review of the LER and verified that the report was completed in accordance with the requirements of 10CFR50.73. Specifically, the description and analysis of the event as documented in the LER were consistent with the inspectors' understanding of the event. The root cause and corrective and preventive actions as described in the LER were reasonable. This LER is closed.

E8.4 (Closed) LER 05000410/1999012/001: Inadequate In-service Testing of Testable Check Valve. The technical issues associated with this LER were described in NRC inspection report 05000410/1999008, Section E8.1. Supplement 001 documented the cause of the event and additional corrective actions that have been completed. The inspectors completed an on site review of the LER and verified that the report was completed in accordance with the requirements of 10CFR50.73. Specifically, the description and analysis of the event as documented in the LER were consistent with the inspectors' understanding of the event. The root cause and corrective and preventive actions as described in the LER were reasonable. This LER is closed.

E8.5 (Closed) LER 05000410/1999014/001: Missed Technical Specification ASME Section XI Surveillance Testing. The technical issues associated with this LER were described in NRC inspection report 05000410/1999008, Section E8.1. Supplement 001 documented revised corrective actions that have been completed. The inspectors completed an on

site review of the LER and verified that the report was completed in accordance with the requirements of 10CFR50.73. Specifically, the description and analysis of the event as documented in the LER were consistent with the inspectors' understanding of the event. The root cause and corrective and preventive actions as described in the LER were reasonable. This LER is closed.

IV. Plant Support

P8 Emergency Preparedness (EP) Miscellaneous Activities

P8.1 (Closed) IFI 05000220/1999009-08: Carbon Dioxide Discharge Unusual Event (Unit 1) During the follow-up to a carbon dioxide discharge Unusual Event at Unit 1 in October 1999, the inspectors noted that procedural guidance did not address the impact of firefighting and hazardous material spills on control room habitability. The inspectors discussed licensee actions with operations, firefighting, and emergency planning personnel.

NMPC revised the emergency plan implementing procedures (EPIPs) for firefighting and hazardous material spills to include verification that both unit control rooms are at a positive pressure with respect to the outside environment or to initiate control room pressurization equipment. Also, a requirement to periodically monitor oxygen concentration in the control rooms, in addition to affected and adjacent spaces, was added to the EPIPs. The inspectors noted that the licensee had previously analyzed these conditions and that there was no regulatory requirement to perform monitoring or ensure positive pressure in the control rooms during firefighting or hazardous material spill events. This inspector follow-up item is closed.

R1 Radiological Protection and Chemistry (RP&C) Controls

a. Inspection Scope (83750)

A health physics inspection during routine operations was conducted. Areas of inspection focus were based on the following regulatory requirements from 10 CFR Part 20:

20.1101	Radiation protection program
20.1601	Control of access to high radiation areas
20.1602	Control of access to very high radiation areas
20.1902	Posting requirements
20.1904	Labeling containers
20.2103	Records of surveys

Special focus during this inspection was on the program for maintaining occupational exposures as low as is reasonably achievable (ALARA) and preparations for the Unit 2 refueling outage (2RF07).

b. Observations and Findings

Unit 1

Tours of various portions of the radiologically controlled area (RCA), including the turbine, reactor, old radwaste and new radwaste buildings, indicated that appropriate radiological postings and controls were in place and being maintained. All high radiation areas were found to be appropriately marked and barricaded, while locked high radiation areas were also appropriately secured. A number of areas previously controlled as contaminated areas, especially in the old and new radwaste buildings have been decontaminated and were now maintained as clean areas.

For 1999, Unit 1 had established an exposure goal of not more than 307 person-rem, including 280 person-rem for a refueling outage. For the year, the unit finished at 381 person-rem, including 320 person-rem for the outage. Emergent outage work involving in-service inspection of all welds in the recirculation system appeared to be the primary reason for the unit exceeding its outage exposure goal. Other work activities tracked well with the pre-outage estimates. Three forced outages related to rebuilding recirculation pump seals contributed to the additional exposures for the year. For 2000, the exposure goal has been established at 61 person-rem, including a mid-cycle outage for the injection of noble metals, followed by the commencement of hydrogen injection.

Unit 2

Tours of various portions of the radiologically controlled area (RCA), including the turbine, reactor, radwaste and off-gas buildings, indicated that appropriate radiological postings and controls were in place and being maintained. All high radiation areas were found to be appropriately marked and barricaded, while locked high radiation areas were also appropriately secured. A significant amount of work in preparation for the upcoming outage was underway at the time of these tours, principally involving the erection/installation of scaffolding in both clean and posted contaminated areas. Appropriate radiological controls were observed throughout these evolutions.

For 1999, an exposure goal of 68 person-rem was established, while the final exposure was determined to be 65 person-rem. For the refueling outage (2RF07), the initial goal has been established at 171 person-rem, based on a thirty day outage. As of the end of January 2000, the outage scope had been modified such that the outage should be completed in 28 days and, thus, the ALARA group believed that the 171 person-rem goal may not be challenging enough. Outage scope included refueling, some in-service inspections, and limited plant modifications.

c. Conclusions

The radiation protection programs at both units were effectively identifying and controlling access to radiologically significant areas. Generally effective programs for maintaining occupational exposures as low as is reasonably achievable have also been established and maintained.

R7 Quality Assurance in RP&C Activities

a. Inspection Scope (83750)

Audits, surveillances, and self-assessments performed were reviewed for scope and depth. Adequacy of the corrective action program for findings and deficiencies, including timeliness and breadth of corrective actions, was also reviewed.

The inspection was accomplished via reviews of licensee documents and discussions with cognizant plant personnel. Special focus was placed on audits, surveillances, and self-assessments made in support of the licensee's requirement for a periodic review of the radiation protection program content and implementation, as found in 10 CFR 20.1101(c).

b. Observations and Findings

A variety of audits, surveillances, and self-assessments were performed in 1999 in the areas of radiation protection and radwaste. A quality assurance audit performed in October 1999, (Audit 99013) was utilized to meet the requirements of 10 CFR 20.1101 (c), while Audit 99015 was conducted to meet the plant technical specification requirements for periodic audits of the radiological effluent technical specification, radiological environmental monitoring program, and process control program reviews.

Periodic monthly roll-ups were also generated within the radiation protection departments to analyze events, reports, and incident data to identify adverse trends in radiation protection performance. Additionally, quarterly self-assessments of all major radiation protection program areas were performed, with identified deficiencies documented as DERs. Four special program self-assessments were also conducted during 1999.

The scope and depth of this combination of audits, reviews, and self-assessments appeared to be adequate to identify and correct programmatic deficiencies within the radiation protection programs at both units. Identified deficiencies were properly categorized as DERs and the corrective actions for DERs were tracked until completion, and the actions taken evaluated for effectiveness.

c. Conclusions

An effective program of audits, performance reviews, and self-assessments has been implemented and maintained for the radiation protection program. Reviews were of sufficient scope and depth to identify programmatic deficiencies. Identified deficiencies were properly documented, and corrective actions tracked for effectiveness and closure.

S1 Conduct of Security and Safeguards Activities

a. Inspection Scope (81700)

The areas inspected included alarm stations, communications, and protected area (PA) access control of personnel, packages, and vehicles.

b. Observations and Findings

Multiple observations of operations in both alarm stations provided verification that the alarm stations were equipped with appropriate alarms, surveillance, and communications capabilities. Interviews with the alarm station operators found them knowledgeable of their duties and responsibilities. It was also verified, through observations and interviews, that the alarm stations were continuously manned, independent and diverse so that no single act could remove the plants capability for detecting a threat and calling for assistance. The alarm stations did not contain any operational activities that could interfere with the execution of the detection, assessment, and response functions.

Document reviews and discussions with alarm station operators demonstrated that the alarm stations were capable of maintaining continuous intercommunications, communications with each security force member (SFM) on duty, and were exercising communication methods with the local law enforcement agencies as committed to in the Security Plan (Plan).

On January 25 and 26, 2000, personnel and package search activities were observed at the personnel access portals. It was determined that positive controls were in place to ensure only authorized individuals were granted access to the PA, that all personnel and hand carried items entering the PA were properly searched, and that vehicles entering the PA were properly controlled and searched.

c. Conclusions

Security and safeguards activities with respect to alarm station controls, communications, and protected area access control of personnel, packages and vehicles were effectively implemented and met license commitments and NRC requirements.

S2 Status of Security Facilities and Equipment

a. Inspection Scope (81700)

Areas inspected were PA assessment aids, PA detection aids, personnel search equipment and testing, maintenance, and compensatory measures.

b. Observations and Findings

On January 25, 26 and 27, 2000, the effectiveness of the assessment aids was evaluated by observing on closed circuit television a walkdown of portions of the perimeter of the PA. The assessment aids had generally good picture quality and zone overlap. Additionally, to ensure Plan commitments were satisfied, the licensee has procedures in place requiring the implementation of compensatory measures in the event the alarm station operators are unable to properly assess the cause of an alarm.

On January 25 and 26, 2000, both routine use and performance testing of the licensee's personnel and package search equipment were observed. Observations and procedural reviews indicated that the search equipment performed in accordance with licensee procedures and Plan commitments.

Multiple observations of an SFM conducting performance testing of the perimeter intrusion detection system (PIDS) were conducted. The testing consisted of intrusion attempts in numerous randomly selected zones. The appropriate alarms were generated in each attempt. The equipment was functional and effective and met the requirements of the Plan.

c. Conclusions

The security facilities and equipment were determined to meet the licensee's commitments and NRC requirements.

S3 Security and Safeguards Procedures and Documentation

S3.1 Security Implementing Procedures and Event Logs

a. Inspection Scope (81700)

Implementing procedures and security event logs were inspected.

b. Observations and Findings

Verification that the procedures were consistent with the Plan commitments and were properly implemented was accomplished by: reviewing selected implementing procedures associated with PA access control of personnel, packages, and materials; examining testing and maintenance of personnel search equipment; and reviewing performance testing of PA detection aids.

The Security Event Logs for the previous twelve months were reviewed. Based on this review and discussion with security management, it was determined that the licensee appropriately analyzed, tracked, resolved, and documented safeguards events.

c. Conclusions

Security and safeguards procedures and documentation were properly implemented. Event Logs were properly maintained and effectively used to analyze, track, and resolve safeguards events.

S3.2 Security Program Plans (81700)

An in-office review was conducted of changes to the Nine Mile Point Physical Security and Safeguards Contingency Plan, Issue 5, Rev. 0 and Rev. 1 and Security Training and Qualification Plan, Issue 3, Rev. 1, submitted to the NRC on May 21 and October 8, 1999, in accordance with the provisions of 10 CFR 50.54(p). Based on a limited review of the changes, as described in the plan revision, no NRC approval of these changes was required, in accordance with 50.54(p). These changes will be subject to future inspection to confirm that the changes, as implemented, have not decreased the overall effectiveness of the Security Plan.

S4 Security and Safeguards Staff Knowledge and Performance

a. Inspection Scope (81700)

The area inspected was security staff requisite knowledge.

b. Observations and Findings

Observations of a number of SFMs in the performance of their routine duties were conducted during the inspection period. These observations included alarm station operations, personnel, vehicle, and package searches, and performance testing of the PIDS. Additionally, interviews of SFMs were conducted. The inspector determined that the SFMs were knowledgeable of their responsibilities and duties, and could effectively carry out their assignments.

c. Conclusions

The security force members adequately demonstrated that they had the requisite knowledge necessary to effectively implement the duties and responsibilities associated with their position.

S5 Security and Safeguards Staff Training and Qualification

a. Inspection Scope (81700)

The areas inspected were security training and qualifications (T&Q) and training records.

b. Observations and Findings

On January 26, 2000, eight randomly selected T&Q records of SFMs were reviewed. Physical and requalification records were inspected for armed and supervisory personnel. The review indicated that the security force was being trained in accordance with the approved T&Q plan. Training records were properly maintained, accurate, and reflected the current qualifications of the SFMs.

c. Conclusions

Security force personnel were being trained in accordance with the requirements of the training and qualification plan. Training documentation was properly maintained and the training provided by the training staff was effective.

S6 Security Organization and Administration

a. Inspection Scope (81700)

The areas inspected were management support, effectiveness, and staffing levels.

b. Observations and Findings

Review of program implementation since the last program inspection disclosed that adequate support and resources continued to be available to ensure proper program implementation. The total number of trained SFMs immediately available on shift met the minimum requirements specified in the Plan. No performance issues were noted in the areas inspected.

c. Conclusions

The level of management support was adequate to ensure proper implementation of the security program, and was evidenced by the allocation of resources to support programmatic needs.

S7 Quality Assurance (QA) in Security and Safeguards Activities

a. Inspection Scope (81700)

The areas inspected were audits, problem analyses, corrective actions, and effectiveness of management controls.

b. Observations and Findings

A review of the annual physical security audit, was conducted. The audit was thorough and in-depth. The audit team included technical specialists from other utilities. None of the audit findings were indicative of programmatic problems.

A review of data derived from the security department's self-assessment program was accomplished. Potential weaknesses were being properly identified, tracked, and trended.

A review of the corrective actions implemented by the licensee in response to the 1999 QA audit and self-assessment program indicated that the corrective actions were technically sound and were performed in a timely manner.

The licensee had programs in place for identifying, analyzing, and resolving problems. They included the performance of annual QA audits, a departmental self-assessment program and the use of industry data such as violations of regulatory requirements identified by the NRC at other facilities, as a criterion for self-assessment.

c. Conclusions

The review of security audits indicated that the program was being properly administered. In addition, a review of the documentation applicable to the self-assessment program indicated that the program was being effectively implemented to identify and resolve potential weaknesses.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of the licensee management on March 2, 2000. The licensee acknowledged the findings presented.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Niagara Mohawk Power Corporation

R. Abbott,	VP Nuclear Engineering
D. Barcomb	Radiation Protection Manager, Unit 2
H. Christensen	Manager, Nuclear Security
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
V. Schuman	Radiation Protection Manager, Unit 1
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 64704	Fire Protection Program
IP 71707	Plant Operations
IP 71750	Plant Support
IP 81700:	Physical Security Program for Power Reactors
IP 83750	Occupational Exposure Control
IP 92700	Onsite Follow-up of Written Reports of Non-Routine Events at Power Reactor Facilities
IP 92903	Followup - Engineering

ITEMS OPENED, CLOSED, AND UPDATED

OPENED AND CLOSED

05000410/1999011-01	NCV	Ineffective corrective actions related to a degraded service water valve
05000220/1999011-02	NCV	Failure to maintain reactor core thermal power less than 1850 Megawatts thermal.
05000220/1999011-03	NCV	Misapplication of green control tag.
05000410/1999011-04	NCV	Failure to complete ECCS response time testing within the required intervals.

CLOSED

05000220/1998005-01	VIO	Failure to Follow Surveillance Test Procedure.
05000220/1998018	LER	Violation of License Condition 2.C.1 and the Power to Flow Relationship Technical Specification Due to a Degraded Valve.
05000220/1999004	LER	Reactor Scram Due to Mechanical Pressure Regulator Valve Failure and Mode Switch Position Not in Conformance with Technical Specifications.
05000220/1999005	LER	Reactor Trip During Plant Startup on Intermediate Range Monitor Spiking Caused by Electromagnetic Interference.
05000220/1999005/001	LER	Reactor Trip During Plant Startup on Intermediate Range Monitor Spiking Caused by Electromagnetic Interference.
05000410/1999005	LER	Reactor Trip Due to a Main Generator Protection Volts/Hertz Relay Failure.
05000410/1999005/001	LER	Reactor Trip Due to a Main Generator Protection Volts/Hertz Relay Failure.
05000220/1998001-06	VIO	Failure to Perform Engineering Safety Analysis for Inoperable CREVS.
05000410/1999001/001	LER	NMP2 Outside the Design Basis Due to Safe Shutdown Service Water Pump Bay Unit Coolers Being Out-of-Service.
05000410/1999009/001	LER	Nonconformance with Technical Specifications Regarding Check Valve Reverse Flow Testing.
05000410/1999012/001	LER	Inadequate In-Service Testing of Testable Check Valve.
05000410/1999014/001	LER	Missed Technical Specification ASME Section XI Surveillance Testing.
05000220/1999009-08	IFI	Carbon Dioxide Discharge Unusual Event.

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
CAER	Corrective Action Effectiveness Review
CAP	Corrective Action Program
CARB	Corrective Action Review Board
CR	Control Rod
CRD	Control Rod Drive
CREVS	Control Room Emergency Ventilation System
DER	Deviation/Event Report
ECCS	Emergency Core Cooling Systems
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
EPIP	Emergency Plan Implementing Procedures
ESF	Engineered Safeguards Feature
ESA	Engineering Supporting Analysis
GCT	Green Control Tag
LCO	Limiting Condition for Operation
LER	Licensee Event Report
NCV	Non Cited Violation
NMPC	Niagara Mohawk Power Corporation
NOED	Notice of Enforcement Discretion
NOV	Notice of Violation
PA	Protected Area
PIDS	Perimeter Intrusion Detection System
PM/ST	Preventive Maintenance/ Surveillance Test
PPR	Plant Performance Review
QA	Quality Assurance
RCA	Radiologically Controlled Area
2RFO7	Unit 2 Refueling Outage 7
RMR	Reactivity Maneuvering Request
RO	Reactor Operator
RP&C	Radiation Protection & Chemistry
SFM	Security Force Member
SRO	Senior Reactor Operator
STA	Shift Technical Advisor
TCV	Turbine Control Valve
T&Q	Training and Qualification
TS	Technical Specification
USAR	Updated Safety Analysis Report
VIO	Violation
WO	Work Order
Y2K	Year 2000