

April 24, 2006

Mr. Timothy J. O'Connor  
Vice President Nine Mile Point  
Nine Mile Point Nuclear Station, LLC  
P.O. Box 63  
Lycoming, NY 13093

SUBJECT: NINE MILE POINT NUCLEAR STATION - NRC INTEGRATED INSPECTION  
REPORT 05000220/2006002 and 05000410/2006002

Dear Mr. O'Connor:

On March 31, 2006, the US Nuclear Regulatory Commission (NRC) completed an inspection at Nine Mile Point Units 1 and 2. The enclosed inspection report documents the inspection results discussed on April 18, 2006, with James Hutton and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Brian J. McDermott, Chief  
Projects Branch 1  
Division of Reactor Projects

Docket No.: 50-220, 50-410  
License No.: DPR-63, NPF-69

Enclosure: Inspection Report 05000220/2006002 and 05000410/2006002  
w/Attachment: Supplemental Information

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**U.S. NUCLEAR REGULATORY COMMISSION**

REGION I

Docket No.: 50-220, 50-410

License No.: DPR-63, NPF-69

Report No.: 05000220/2006002 and 05000410/2006002

Licensee: Nine Mile Point Nuclear Station, LLC

Facility: Nine Mile Point, Units 1 and 2

Location: Lake Road  
Oswego, NY

Dates: January 1 - March 31, 2006

Inspectors: L. Cline, Senior Resident Inspector  
B. Fuller, Resident Inspector  
E. Knutson, Resident Inspector  
J. Furia, Senior Health Physicist  
D. Silk, Senior Emergency Preparedness Inspector

Approved by: Brian J. McDermott, Chief  
Projects Branch 1  
Division of Reactor Projects

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## SUMMARY OF FINDINGS

IR 05000220/2006002, 05000410/2006002; 01/01/06 - 03/31/06; Nine Mile Point, Units 1 and 2; Routine Integrated Report.

The report covered a thirteen-week period of inspection by resident inspectors and an announced inspection and in-office review by two regional specialist inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

## REPORT DETAILS

### Summary of Plant Status

Nine Mile Point (NMP) Unit 1 began the inspection period at 100 percent power and operated at full power for the entire report period with the exception of a downpower on March 11 to approximately 50 percent rated to repair a condenser tube leak and make control rod pattern adjustments.

NMP Unit 2 began the inspection period at 100 percent power. On January 28, Unit 2 began power coastdown (gradual reduction of reactor power due to fuel depletion) to Refueling Outage 10 (RFO10). On March 9, an automatic turbine trip/reactor scram occurred from 87 percent power due to loss of main condenser vacuum. The plant was restarted on March 11 and resumed operation at 87 percent power on March 13. Unit 2 shut down on March 20 to commence RFO10, which was in-progress at the end of the inspection period.

### **1. REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity [REACTOR-R]

#### 1R01 Adverse Weather Protection (71111.01 - 1 sample)

##### a. Inspection Scope

The inspectors completed one adverse weather protection sample. On February 17, 2006, the inspectors reviewed the station's preparations for high winds. Outside areas were examined to ensure that materials were properly stored and that building penetrations were secured. Documents reviewed included N1-OP-64, "Meteorological Monitoring," N2-OP-102, "Meteorological Monitoring," and EPIP-EPP-26, "Natural Hazard Preparation and Recovery." The inspectors observed the Unit 2 operator response to a grid transient that occurred as a result of the high winds, and performed a walkdown of the Unit 1 reactor, turbine and screenwell buildings to verify the status of protected equipment. Condition Reports (CRs) that were generated as a result of this transient are listed in the Attachment.

##### b. Findings

No findings of significance were identified.

#### 1R04 Equipment Alignment (71111.04 - 3 samples, 71111.04S - 1 sample)

##### .1 Partial Walkdown

##### a. Inspection Scope

The inspectors performed a partial walkdown of three systems to verify a train was properly restored to service following maintenance or evaluate the operability of one train while the opposite train was inoperable or out of service for maintenance or testing. The inspectors compared system lineups to system operating procedures (OPs), system drawings, and the applicable chapters in the Updated Final Safety Analysis Report (UFSAR). The inspectors also verified the operability of critical system components by

observing component material condition during the system walkdown and reviewing the maintenance history for each component. Documents reviewed during this inspection are listed in the Attachment. The inspectors performed partial walkdowns of the following systems:

- Unit 1 112 containment spray (CS) inspected on March 31, 2006, during surveillance testing of 111 CS;
- Unit 2 high pressure core spray (HPCS) system inspected on January 18, 2006; and
- Unit 2 Division I emergency diesel generator (EDG) inspected on February 1, 2006, due to increased risk significance during concurrent Division II EDG and C residual heat removal (RHR) subsystem unavailability.

b. Findings

No findings of significance were identified.

.2 Complete Walkdown

a. Inspection Scope

The inspectors performed one complete walkdown inspection sample of the Unit 2 B RHR subsystem to identify discrepancies between the existing equipment lineup and the specified lineup. System drawings and OPs were used to verify proper equipment alignment and operational status. The inspectors reviewed the open maintenance work orders (WOs) on the system for any deficiencies that could affect the ability of the system to perform its function. Documentation associated with unresolved design issues such as temporary modifications, operator workarounds, and items tracked by plant engineering were also reviewed to assess their collective impact on system operation. In addition, the inspectors reviewed the condition report (CR) database to verify that equipment alignment problems were identified and appropriately resolved. Documents reviewed for this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q - 6 samples)

Fire Protection - Tours

a. Inspection Scope

Quarterly. The inspectors toured six areas important to reactor safety on the Nine Mile Point site to evaluate Nine Mile Point Nuclear Stations' (NMPNS) control of transient combustibles and ignition sources and the material condition, operational status, and operational lineup of fire protection systems including detection, suppression and fire



barriers. The inspectors used procedure GAP-INV-02, "Control of Material Storage Areas," the fire hazards analysis and pre-fire plans to perform the inspection. The areas inspected included:

- Unit 1 Screenhouse including diesel fire pump room, circulating water and service water pits;
- Unit 1 Turbine Building (TB) 261 foot elevation;
- Unit 1 Reactor Building (RB) southwest corner room 198 foot elevation;
- Unit 2 HPCS Room;
- Unit 2 RB 289 foot elevation; and
- Unit 2 feed water heater bays.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 - 1 sample)

a. Inspection Scope

Internal Flooding. The inspectors completed one internal flooding inspection sample. The inspectors reviewed the Individual Plant Examination (IPE) and UFSAR for Unit 1 concerning internal flooding events and completed walkdowns of two areas in which flooding could have a significant impact on risk, the cable spreading room and RB corner rooms. The inspectors verified the validity of assumptions made in the IPE regarding flooding scenarios in both locations, the control of equipment needed to comply with the flooding analysis in the IPE, and performance of the RB equipment drain sump inspections.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11Q - 1 sample)

a. Inspection Scope

The inspectors completed one licensed operator requalification training program (LORT) inspection sample. Documents reviewed for this inspection are listed in the Attachment. On February 1, 2006, the inspectors observed Unit 1 LORT to assess operator performance during a scenario involving the loss of one of 115 kV offsite power line, an anticipated transient without a scram and a primary containment leak. The inspectors evaluated the performance of risk significant operator actions, including the use of emergency operating procedures (EOPs), N1-EOP-2, "RPV Control Flowchart," N1-EOP-3, "Failure to Scram Flowchart," and N1-EOP-4, "Primary Containment Control Flowchart." The inspectors assessed the clarity and effectiveness of communications, the implementation of appropriate actions in response to alarms, the performance of

timely control board operation and manipulation, and the oversight and direction provided by the shift manager. During the scenario the inspector also compared simulator performance with actual plant performance in the control room.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q - 3 samples)

a. Inspection Scope

The inspectors reviewed performance-based problems or performance and condition history reviews involving selected in-scope structures, systems or components (SSCs) to assess the effectiveness of the maintenance program. Reviews focused on: proper Maintenance Rule (MR) scoping in accordance with 10 CFR 50.65; characterization of reliability issues; tracking system and component unavailability; 10 CFR 50.65 (a)(1) and (a)(2) classifications; identifying and addressing common cause failures, trending key parameters, and the appropriateness of performance criteria for SSCs classified (a)(2) as well as the adequacy of goals and corrective actions for SSCs classified (a)(1). The inspectors reviewed system health reports, maintenance backlogs, and MR basis documents. Other documents reviewed for the inspection are listed in the Attachment. The following three MR inspection samples were reviewed:

- Unit 1 diesel fire pump test failure on December 3, 2005;
- Unit 1 CS 122 pump degraded pump differential pressure identified during routine surveillance testing documented in CR 2006-0191; and
- Unit 2 feed water system performance.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 8 samples)

a. Inspection Scope

The inspectors reviewed risk assessments for eight work weeks during the inspection period. The inspectors verified that risk assessments were performed in accordance with GAP-OPS-117, "Integrated Risk Management," that risk of scheduled work was managed through the use of compensatory actions and schedule adherence; and that applicable contingency plans were properly identified in the integrated work schedule. Documents reviewed for the inspection are listed in the Attachment. The following work weeks were reviewed:

Unit 1

- Week of January 30, 2006, that included 11 liquid poison pump maintenance, 11 reactor building closed loop cooling (RBCLC) HX maintenance and a 115 kV offsite power Line 1 outage.
- Week of February 6, 2006, that included an emergency condenser high steam flow calibration concurrent with a CS 122 surveillance test (ST), 13 instrument air compressor preventive maintenance (PM) and EDG 103 test.
- Week of February 13, 2006, that included breaker R110 maintenance. Previous maintenance on this breaker resulted in a reactor scram on August 18, 2005.
- Week of March 12, 2006, that included EDG 103 exciter brush retainer replacement and voltage regulator hot spot corrective maintenance, and CS pump 122 quarterly operability testing.

Unit 2

- Week of January 23, 2006, that included Division III EDG maintenance to replace the voltage adjust assembly, and a reactor power reduction for channel bow testing.
- Week of January 30, 2006, that included emergent Division II EDG corrective maintenance, planned electrical maintenance on C RHR, and D service water pump strainer PM that included a NUREG-0612 heavy lift.
- Week of February 6, 2006, that included a three-day planned maintenance period for the reactor core isolation cooling (RCIC) system.
- Week of February 20, 2006, that included reactor protection system (RPS) relay replacements that would require a half scram to be inserted for several hours.

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Non-Routine Evolutions and Events (71111.14 - 3 samples)a. Inspection Scope

The inspectors assessed operator performance during three non-routine evolutions as described below. During the inspection the inspectors reviewed operator logs and interviewed operators and plant management to determine what occurred, how the operators responded, and if the response was in accordance with plant procedures and management expectations. Other documents reviewed for the inspection are listed in the Attachment.

- On January 27, 2006, the inspectors observed reactor fuel assembly channel bow testing at Unit 2. "Channel bow" is a radiologically induced metallurgical phenomenon in which a fuel channel gradually assumes a bow in the vertical plane. This may produce interference with the associated control rod and cause

slower than normal rod motion during manual or automatic operation. Channel bow testing is performed periodically to verify that the speed of subject control rods remains within acceptable limits.

- On February 28, 2006, the inspectors observed the site response to a trip of 345 kv Line 25 in the Scriba switchyard. Unit 1 received an unexpected half scram due to loss of the 12 RPS bus. Partial loss of feedwater heating caused by loss of the 12 RPS bus resulted in a very small reactor power transient that was terminated by the operators. The 12 RPS bus was restored and feedwater heating returned to normal lineup. Unit 2 received Divisional switchgear undervoltage alarms and did not experience any plant transient.
- On March 10, 2006, Unit 2 experienced a problem with the normal supply for main turbine gland sealing steam, the clean steam reboiler system, that caused an automatic transfer to the backup steam supply, the main steam system. A mechanical failure in the pressure controller for the backup gland seal supply valve caused the valve to remain closed, which resulted in a loss of turbine gland sealing steam. The turbine automatically tripped due to low main condenser vacuum causing an automatic reactor scram. The scram was not complicated and the unit was restarted on March 11.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 8 samples)

a. Inspection Scope

The inspectors reviewed operability determinations to assess the acceptability of the evaluations; when needed, the use and control of compensatory measures; and the compliance with technical specifications (TSs). The inspectors' review included a verification that the operability determinations were made as specified by procedure S-ODP-OPS-0116, "Operability Determinations." The technical adequacy of the determinations was reviewed and compared to the TSs, UFSAR, and associated design basis documents design basis documents. Other documents reviewed for this inspection are listed in the Attachment. The following eight evaluations were reviewed:

- CR 2005-5065 concerning a missing temperature element for the jacket water pump suction temperature indicator on Unit 1 EDG 103;
- CR 2006-0499 concerning the trip of the dc control power breaker 72DC3 for the Unit 2 Division 1 EDG, 2EGS\*EG1;
- CR 2006-0191 concerning Unit 1 CS pump 122 identified as having degraded flow;
- CR 2006-0742 and 2006-0959 concerning Unit 1 fire sprinkler preaction system in the TB and RB fouled by silt;

- ACR 2006-1036 concerning a pinhole leak that developed on the suction relief valve for Unit 1 feedwater pump 12;
- CR 2006-0436 concerning failure of one of the two emergency fuel control solenoid valves for the Unit 2 Division II EDG;
- CR 2006-0770 concerning the energizing of two RPS relays by induced or residual voltage during replacement of the K59K relay in RPS channel B2 at Unit 2; and
- CR 2006-1250 concerning the decision to defer Unit 2 suppression pool cleaning until the next refueling outage.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17A - 1 sample)

a. Inspection Scope

The inspectors reviewed one permanent plant modification, the designation of Unit 2 emergency core cooling (ECCS) and RCIC systems as closed loop systems. This modification credits the individual system as a primary containment barrier, reducing the number of required primary containment isolation valves (PCIVs) per penetration from two to one. The valves that were functioning as PCIVs now serve only as pressure isolation valves subject to less stringent leak rate testing requirements.

The inspectors reviewed the modification, N2-05-142, "Unit 2 ECCS Closed Loop System Designation," against the criteria for the closed loop system designation as specified in ANSI/ANS-56.2 1984, "Containment Isolation Provisions for Fluid Systems After a LOCA," and endorsed by Regulatory Guide 1.141, "Containment Isolation Provisions for Fluid Systems." The inspectors also reviewed NMPNS's 10 CFR 50.59 evaluation for this modification. The inspectors verified the adequacy of N2-05-142, and verified that the design and licensing bases requirements of the affected systems were not degraded by the modification. The inspectors also verified that revised isolation valve testing requirements for the affected systems adequately demonstrated continued reliability and satisfactory performance of the associated valves.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19 - 7 samples)

a. Inspection Scope

The inspectors completed seven post maintenance testing inspection samples. The inspectors reviewed post maintenance test procedures and associated testing activities for selected risk significant mitigating systems to assess whether the effect of

maintenance on plant systems was adequately addressed by control room and engineering personnel. The inspectors verified that test acceptance criteria were clear; demonstrated operational readiness and were consistent with design basis documents; that test instrumentation had current calibrations and the range and accuracy for the application; and that tests were performed, as written, with applicable prerequisites satisfied. Upon completion, the inspectors verified that equipment was returned to the proper alignment necessary to perform its safety function. The adequacy of the identified post maintenance testing requirements were verified through comparisons with the recommendations of GAP-SAT-02, "Pre/Post-Maintenance Test Requirements," and the design basis documentation contained in the TSs, UFSAR and associated design basis documentation. Other documents reviewed for this inspection are listed in the attachment. The following seven post maintenance test activities were reviewed:

- WO 06-00581-00 that repaired electric fire pump discharge check valve 100-34. The retest was performed in accordance with N1-PM-C3, "Electric and Diesel Fire Pump Performance Tests."
- WO 06-03025-00 that replaced the quick exhaust valve on vacuum breaker IV-68-09. The retest was performed in accordance with N1-ST-Q5, "Primary Containment Isolation Valves Operability Test."
- WO 05-00367-00 that replaced voltage regulator for motor generator 141. The retest was performed in accordance with N1-ST-W15, "Manual Scram Instrument Channel Test."
- WO 05-00069-01 that performed corrective maintenance on the voltage regulator motor operated potentiometer for the Unit 2 Division III EDG. The retest was performed and voltage stability verified by performance of N2-OSP-EGS-M@002, "Diesel Generator and Diesel Air Start Valve Operability Test - Division III."
- WO 05-10499-00 that performed planned maintenance on the Unit 2 C RHR pump circuit breaker. The retest was performed by verifying breaker closure during the performance of N2-OSP-RHS-Q@006, "RHR System Loop C Pump and Valve Operability Test and System Integrity Test."
- WO 05-27121-00 that replaced brush retainers on the EDG 103 exciter. The retest was performed in accordance with N1-ST-M4B, "EDG 103 and Power Board 103 Operability Test."
- WO 05-02066-00 that performed preventive electrical maintenance on the 600 Vac feeder breaker to the safety-related motor control center 2 EHS\*MCC302. The retest was performed in accordance with Attachment 1, Sections 4.12 to 4.18, of S-EPM-GEN-551, "600/480 Vac/125 Vdc ITE Breaker/Motor and Breaker Load Test."

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20 - 1 sample)a. Inspection Scope

Forced Outage F501: The inspectors observed and reviewed the following activities during the Nine Mile Point Unit 2 forced outage F501 from March 9 to March 11, 2006. Documents reviewed for this inspection are listed in the Attachment.

- The inspectors reviewed outage schedules and procedures and verified that TS required safety system availability was maintained, shutdown risk was considered, and that contingency plans existed to restore key safety functions such as electrical power and containment integrity.
- The inspectors observed portions of the reactor startup following the outage, and verified through plant walkdowns, control room observations, and ST reviews that safety-related equipment required for mode change was operable.

RFO10: The inspectors observed and/or reviewed the following refueling outage activities to verify that operability requirements were met and that risk, industry experience, and previous site specific problems were considered. The refueling outage and inspection sample were in-progress at the end of the inspection period. Documents reviewed for this inspection are listed in the Attachment.

- The inspectors reviewed outage schedules and procedures, and verified that TS-required safety system availability was maintained, shutdown risk was minimized. The inspectors verified that when specified by NUMARC 91-06, "Guidelines for Industr Actions to Assess Shutdown Management," and NMPNS procedure NIP-OUT-01, "Shutdown Safety," contingency plans existed for restoring key safety functions.
- The inspectors observed portions of the plant shutdown and cooldown on March 20 and 21, and verified that the TS cooldown rate limits were satisfied.
- Through plant tours, the inspectors verified that NMPNS maintained and adequately protected electrical power supplies to safety-related equipment and that TS requirements were met.
- The inspectors verified proper alignment and operation of shutdown cooling and other decay heat removal systems. The verification also included reactor cavity and fuel pool makeup paths and water sources, and administrative control of drain down paths.
- The inspectors reviewed N2-FHP-003, "Refueling Manual," N2-FHP-13.3, "Core Shuffle," and TS, and verified all requirements for refueling operations were met through refuel bridge observations, control room panel walkdowns and surveillance procedure reviews.

- After the drywell was opened for general access on March 22, the inspectors performed an “as-found” walkdown to identify evidence of RCS leakage and verify the condition of drywell structures, piping, and supports.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - 7 samples)

a. Inspection Scope

The inspectors witnessed performance of and/or reviewed test data for seven risk-significant STs to assess whether the SSCs tested satisfied TS, UFSAR, Technical Requirements Manual, and NMPNS procedure requirements. The inspectors verified that test acceptance criteria were clear, demonstrated operational readiness and were consistent with the design basis documents; that test instrumentation had current calibrations and the range and accuracy for the application; and that tests were performed, as written, with applicable prerequisites satisfied. Upon ST completion, the inspectors verified that equipment was returned to the status specified to perform its safety function. The following seven STs were reviewed:

- N1-ST-M1B, “Liquid Poison Pump 12 Operability Test;”
- N1-ISP-036-006, “Emergency Cooling System - High Steam Flow Instrument Trip Channel Test /Calibration;”
- N1-ISP-032-008, “Reactor Recirculation Flow Loop Calibration;”
- N1-ST-Q6A, “CS System Loop 111 Quarterly Operability Test;”
- N2-OSP-CSH-Q@002, “HPCS Pump and Valve Operability and System Integrity Test;”
- N2-OSP-SWP-Q002, “Service Water Pump and Valve Operability Test;” and
- N2-OSP-RHS-R@002, “RHR Loop B Pressure Isolation Valve Leakage Test.”

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness [EP]

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 - 1 sample)

a. Inspection Scope

An in-office inspection that reviewed recent changes to the Nine Mile Point emergency plan and implementing procedures was conducted on March 1, 2006. These changes were made in accordance with 10 CFR 50.54(q), which NMPNS determined did not result in a decrease in effectiveness to the Plan and concluded that the changes continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50.



During this inspection, the inspector performed a sampling review of the changes that could potentially result in a decrease in effectiveness. This review does not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4, and the applicable requirements in 10 CFR 50.54(q) were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06 - 1 sample)

a. Inspection Scope

The inspectors completed one drill evaluation inspection sample. The inspectors observed control room operator emergency plan response actions during a Unit 1 evaluated LORT scenario on February 1, 2006. The inspectors verified that emergency classification declarations and notifications were completed in accordance with 10 CFR 50.72, 10 CFR 50, Appendix E, and the Nine Mile Point emergency plan implementing procedures. Documents reviewed for this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

**2. RADIATION SAFETY**

Cornerstone: Occupational Radiation Safety [OS]

2OS1 Access Control to Radiologically Significant Areas (71121.01 - 7 samples)

a. Inspection Scope

Based on NMPNS's schedule of work activities during the Unit 2 refueling outage, the inspectors selected three jobs performed in radiation areas, airborne radioactivity areas, or high radiation areas (HRAs) (less than 1 R/hr) for observation; radiation work permit (RWP) and work procedure requirements; observed job performance with respect to these requirements; and, determined that radiological conditions in the work area were adequately communicated to workers through briefings and postings. The jobs reviewed were: drywell in-service inspection; drywell insulation; and, drywell scaffold.

During job performance observations, the inspectors verified the adequacy of radiological controls, such as: required surveys including system breach radiation, contamination, and airborne surveys, radiation protection (RP) job coverage including audio and visual surveillance for remote job coverage, and contamination controls.

During job performance observations, the inspectors observed radiation worker performance with respect to stated RP work requirements and determined that they were aware of the significant radiological conditions in their workplace, and the RWP controls/limits in place, and that their performance took into consideration the level of radiological hazards present.

During job performance observations, the inspectors observed RP technician performance with respect to RP work requirements; determined that they were aware of the radiological conditions in their workplace and the RWP controls/limits; and, determined that their performance was consistent with their training and qualifications regarding radiological hazards and work activities.

The inspectors identified exposure significant work areas within radiation areas, HRA (less than 1 R/hr), or airborne radioactivity areas in the plant and reviewed associated NMPNS controls and surveys of these areas to determine if controls were acceptable.

The inspectors walked down these areas or their perimeters to determine: whether prescribed RWP, procedure, and engineering controls were in place; whether NMPNS surveys and postings were complete and accurate; and, whether air samplers were properly located.

The inspectors reviewed RWPs used to access these and other HRAs and identified what work control instructions or control barriers were specified. The inspectors reviewed electronic personal dosimeter alarm set points (both integrated dose and dose rate) for conformity with survey indications and plant policy.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02 - 3 samples)

a. Inspection Scope

The inspectors obtained from NMPNS a list of work activities ranked by actual/estimated exposure that were in progress during the current outage and selected the three work activities of highest exposure significance, the activities selected are:

The inspectors reviewed the as low as is reasonably achievable (ALARA) work activity evaluations, exposure estimates, and exposure mitigation requirements and determined that NMPNS had established procedures, engineering and work controls, based on sound RP principles, to achieve occupational exposures that are ALARA.

The inspectors compared the results achieved (dose rate reductions, person-rem used) with the intended dose established in NMPNS's ALARA planning for these work activities

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation (71121.03 - 1 sample)a. Inspection Scope

The inspectors verified the calibration expiration and source response check currency on radiation detection instruments staged for use.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES [OA]**4OA2 Identification and Resolution of Problems.1 Review of Items Entered into the Corrective Action Programa. Inspection Scope

As specified by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of all items entered into NMPNS' corrective action program (CAP). The review was accomplished by accessing the computerized database for CRs and attending CR screening meetings. In accordance with the baseline inspection modules, the inspectors also selected 86 CAP items across the initiating events, mitigating systems, and barrier integrity cornerstones for additional follow-up and review. The inspectors assessed NMPNS's threshold for problem identification, the adequacy of the cause analyses, extent of condition review, and operability determinations, and the timeliness of the specified corrective actions. The CRs reviewed are noted in the Attachment.

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153 - 1 sample).1 (Closed) LER 05000220/2005-003-00, Automatic Reactor Scram during Surveillance Testing due to Inadvertently De-energizing 4160 VAC Power Board 11

The event detailed in this LER was discussed in Section 1R14 of Inspection Report 05000220/2005004. The loss of power board 11 was caused by inadvertent actuation of a relay during installation of a non safety-related feeder breaker into the power board. A

noncited violation of 10 CFR 50.65(a)(4) was identified for the failure to assess and manage the increase in risk associated with power board maintenance coincident with RPS testing on the other channel. The inspectors reviewed this LER and no additional findings of significance were identified. This LER is closed.

4OA6 Meetings, Including Exit

The inspectors presented the inspection results to Mr. James Hutton and other members of NMPNS management on April 18, 2006. NMPNS acknowledged that no proprietary information was involved.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee personnel

N. Conicella, Manager, Operations  
M. Faivus, General Supervisor, Chemistry  
J. Gerber, Manager, Radiation Protection  
G. Harland, Manager, Work Control, Outage Management  
J. Hutton, Plant General Manager  
T. Maund, Manager, Maintenance  
M. Miller, Director, Licensing  
T. O'Connor, Site Vice President  
M. Schimmel, Manager, Engineering Services  
T. Shortell, Manager, Training, Nuclear  
R. Dean, Director, Quality and Performance Assessment

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

#### Closed

05000220/2005-003-00	LER	Automatic Reactor Scram during Surveillance Testing (Section 4OA3)
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### LIST OF DOCUMENTS REVIEWED

#### Section 1R01: Adverse Weather Protection

2006-0677, Annunciators 852622 'GENERATOR NEGATIVE PHASE SEQUENCE', 852140 '4KV BUS 101 UNDERVOLTAGE' and 852240 '4KV BUS 103 UNDERVOLTAGE' came in and immediately cleared.  
2006-0692, Response to high wind events on 2/17/2006

#### Section 1R04: Equipment Alignment

N2-OP-33, HPCS System  
N2-OP-100A, Standby Diesel Generators  
N2-OP-31, Residual Heat Removal System  
N2-VLU-01, Walkdown Order Valve Lineup and Valve Operations  
Dwg PID-31, Residual Heat Removal

**Section 1R11: Licensed Operator Requalification Program**

NMPNS Operations Manual  
NMP Simulator Scenario, O1-OPS-009-1DY-1-47, Loss of Line #4, Primary Containment Leak, ATWS W/ Main Condenser  
NEI 99-02, Performance Indicator Guidelines, Revision 2  
CNG-HU-1.01, "Human Performance Program"  
CNG-HU-1.01-1000, "Human Performance"  
CNG-HU-1.01-1001, "Human Performance Tools and Verification Practices"  
S-ODP-OPS-0001, "Conduct of Operations"  
N1-EOP-2, "RPV Control Flowchart"  
N1-EOP-3, "Failure to Scram Flowchart"  
N1-EOP-4, "Primary Containment Control Flowchart"

**Section 1R12: Maintenance Effectiveness**

NIP-REL-01, "Maintenance Rule"  
S-MRM-REL-0101, "Maintenance Rule"  
S-MRM-REL-0104, "Maintenance Rule Scope"  
GAP-PSH-03, "Control of On-line Work Activities"  
Unit 1 Integrated Performance Criteria Matrix  
S-MRM-REL-0105, "Maintenance Rule Performance Criteria"  
Unit 1 Integrated Scoping Matrix  
Unit 1 High Safety Significant Functions and Related Key Safety Functions Matrix  
WO 05-01654-00, N1 MPM-100-851, Diesel fire pump engine PM  
CR-2005-4924, Unit 1 diesel fire pump discharge pressure reading low  
CR-2006-110, Degraded condition found on ENG-100-01  
N1-MPM-100-851, "Diesel Fire Pump Engine Preventative Maintenance"

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control**

GAP-OPS-117, "Integrated Risk Management"  
GAP-PSH-03, "Control of On-line Work Activities"  
NAI-PSH-03, "On-line Work Management Process"  
WO 05-27121-00, EDG 103 Exciter brush holders need new springs installed  
ACR 06-00632, Thermography on voltage regulator fuse from transformer T2 indicates a 17 degree higher reading on the fuse clip  
CR-2006-0513 Thermography on EDG 103 controller cabinet found two hot spots  
N1-ST-Q6D, "CS System Loop 122 Quarterly Operability Test"  
WO 06-01539-00, N1-ST-Q6D, CS system loop 122 increased frequency for pump-80-23 to monthly  
WO 05-10378-00, Perform annual PM on RBCLC Heat Exchanger HTX-70-13R  
WO 04-02691-00, Perform PM of liquid poison pump 11  
WO 05-09854-00, N1-MPM-094-602, Perform Instrument air compressor 13 - 2 year Annual and Semi-annual PM  
WO 03-03990-00, N1-EPM-GEN-151, Inspection and load testing of type AK breaker (Feeder to PB 17A, R-1051)

WO 05-02331-00, N2-MPM-SWP-A513, Service Water Strainer PM  
N2-MMP-GEN-923, "Lifting of Miscellaneous and Specific Heavy Loads in Designated Areas"  
NUREG 0612, "Control of Heavy Loads at Nuclear Power Plants"  
N2-MPM-SWP-A513, "Service Water Strainer P.M."  
Ltr Dated November 5, 1984, A. Schwencer to B. G. Hooten, "Control of Heavy Loads (NUREG-0612) at Nine Mile Point 2"  
Ltr Dated November 30, 1984, C. V. Mangan to A. Schwencer, "Control of Heavy Loads - Nine Mile Point 2, Docket No. 50-410"  
Ltr Dated March 5, 1985, D.B. Vassallo to B. G. Hooten, "Control of Heavy Loads (Phase I) - Nine Mile Point Nuclear Station, Unit 1"

**Section 1R14: Operator Performance During Non-Routine Evolutions and Events**

N2-OP-30, "Control Rod Drive," Attachment 5, "Rod Insertion Testing for Potential Fuel Channel Bow"  
CR 2006-832  
N2-SOP-101C, "Reactor Scram"  
N2-SOP-101C, "Plant Shutdown"  
N2-EOP-RPV, "RPV Control"  
N2-ARP-01, "Control Room Alarm Response Procedures"  
N2-REP-6, "Post-Scram Review"

**Section 1R15: Operability Evaluations**

NMP2 Dwg No. 0001.040-209-018, Control Schematic Starting Sequence 2CES\*IPNL 406(G) & 2CES\*IPNL 408(Y)  
NMP2 Dwg No. 0001.040-209-019, Control Schematic Starting Sequence  
NMP2 Dwg No. 0001.040-209-028, Control Schematic Legend 2CES\*IPNL 406(G) & 2CES\*IPNL 408(Y)  
NMP2 Dwg No. 0001.040-209-014, Control Schematic Starting Sequence  
NMP2 Dwg No. 0001.040-209-015, Control Schematic Starting Sequence Control  
NMP2 Dwg No. 0001.040-209-016, Control Schematic Starting Sequence 2CES\*IPNL406(G) & 2CES\*IPNL 408(Y)  
NMP2 Dwg No. 0001.040-209-019, Control Schematic Starting Sequence 2CES\*IPNL406(G) & 2CES\*IPNL 408(Y)  
NMP2 Dwg No. 0001.04-0209-048, Control Diagram Shutdown System  
NMP2 Dwg No. 0001.04-0209-050, Control Diagram Shutdown System  
NMP2 Dwg No. 0001.04-0209-028, Control Schematic Legend 2CES\*IPNL406(G) & 2CES\*IPNL 408(Y)  
NMP2 Dwg No. 0001.04-0209-023, Control Schematic Miscellaneous 2CES\*IPNL406(G) & 2CES\*IPNL 408(Y)  
NMP2 Dwg No. 0001.040-209-017, Control Schematic Starting Sequence 2CES\*IPNL406(G) & 2CES\*IPNL 408(Y)  
NMP2 Dwg No. 0001.040-209-025, Control Schematic Shutdown & Alarm System  
NMP2 Dwg No. 0001.040-209-026, Control Schematic Shutdown & Alarm System

DOE Contract No. DE-AC09-96SR18500, WSRC-TR-2000-00263, Minimum Velocity Required to Transport Solid Particles from the 2H-Evaporator to the Tank Farm, Michael R. Poirer, Westinghouse Savannah River Company  
Vendor Manual N1E14700VALVE001, Maintenance Instruction Thermostatic Valve  
Vendor Manual N1E14700ENGINE008, 645E4 Turbocharged Diesel Engine Maintenance Manual

**Section 1R19: Post Maintenance Testing**

GAP-SAT-02, "Pre/Post-Maintenance Test Requirements"  
CNG-HU-1.01, "Human Performance Program"  
CNG-HU-1.01-1000, "Human Performance"  
CNG-HU-1.01-1001, "Human Performance Tools and Verification Practices"  
ACR 06-00632, Thermography on voltage regulator fuse from transformer T2 indicates a 17 degree higher reading on the fuse clip  
CR-2006-0513 Thermography on EDG 103 controller cabinet found two hot spots  
Memorandum dated 10/28/2002, M. Pierce to Unit 1 and 2 Manager of Operations and Manager of Work Control regarding Maintenance Department expectations for conduct and control of post maintenance testing on circuit breakers  
CR-2006-0966, Feeder breaker to 2EHS\*MCC302 failed as found testing

**Section 1R20: Refueling and Other Outage Activities**

N2-OP-115, "Alternate Decay Heat Removal System"  
NIP-OUT-01, "Shutdown Safety"  
N2-OP-39, "Fuel Handling and Reactor Service Equipment"  
N2-FHP-003, "Refueling Manual"  
N2-FHP-13.3, "Core Shuffle"  
N2-OSP-RCS-@001, "RCS Pressure/Temperature Verification"

**Section 1EP4: Emergency Action Level and Emergency Plan Changes**

Site Emergency Plan, Revision 51  
EPIP-EPP-01, "Classification of Emergency Conditions at Unit 1," Revision 15  
EPIP-EPP-02, "Classification of Emergency Conditions at Unit 2," Revision 15  
EPIP-EPP-10, "Security Contingency Event," Revision 11  
EPIP-EPP-28, "Fire Fighting," Revision 11

**Section 1EP6: Drill Evaluation**

NMP Simulator Scenario, O1-OPS-009-1DY-1-47, Loss of Line #4, Primary Containment Leak, ATWS W/ Main Condenser  
NEI 99-02, "Performance Indicator Guidelines," Revision 2  
CNG-HU-1.01, "Human Performance Program"  
CNG-HU-1.01-1000, "Human Performance"  
CNG-HU-1.01-1001, "Human Performance Tools and Verification Practices"  
S-ODP-OPS-0001, "Conduct of Operations"



EPIP-EPP-01, "Classification of Emergency Conditions at Unit 1"  
 EPIP-EPP-17, "Emergency Communications Procedure"  
 EPIP-EPP-20, "Emergency Notifications"

### **Section 20S2: ALARA Planning and Controls**

06-2-02 (Drywell in-service inspection Activities); 06-2-03 (Drywell safety relief valves); 06-2-04 (Drywell under vessel activities); 06-2-06 (Drywell scaffold); 06-2-13 (Drywell insulation)

### **Section 40A2: Identification and Resolution of Problems**

#### Condition Reports

2004-0761	2006-0035	2006-0478	2006-0881
2004-0846	2006-0064	2006-0499	2006-0955
2004-1551	2006-0110	2006-0511	2006-0959
2004-1647	2006-0966	2006-0513	2006-0964
2004-1650	2006-0588	2006-0545	2006-0966
2004-1675	2006-0059	2006-0550	2006-0974
2004-1725	2006-0107	2006-0588	2006-1036
2004-1730	2006-0110	2006-0643	2006-1101
2004-1742	2006-0113	2006-0648	2006-1131
2004-1770	2006-0166	2006-0663	2006-1247
2004-1771	2006-0191	2006-0677	2006-1250
2004-1829	2006-0211	2006-0678	2006-1315
2004-1898	2006-0212	2006-0688	2006-1349
2004-2027	2006-0232	2006-0692	2006-1354
2004-2436	2006-0264	2006-0742	2006-1358
2004-2438	2006-0265	2006-0770	2006-1386
2004-3688	2006-0298	2006-0831	2006-1388
2004-3941	2006-0306	2006-0832	2006-1399
2005-3238	2006-0318	2006-0839	2006-1458
2005-4967	2006-0331	2006-0845	2006-1476
2005-4924	2006-0436	2006-0860	
2005-4187	2006-0463	2006-0871	

### **LIST OF ACRONYMS**

ALARA	as low as is reasonably achievable
CAP	corrective action program
CR	condition report
CS	containment spray
ECCS	emergency core cooling system
EDG	emergency diesel generator
EOP	emergency operating procedures
HPCS	high pressure core spray

HRA	high radiation area
IPE	individual plant examination
ISI	in-service inspection
LORT	licensed operator requalification training program
MR	maintenance rule
NMPNS	Nine Mile Point Nuclear Station
NRC	Nuclear Regulatory Commission
OP	operating procedure
PCIV	primary containment isolation valves
PM	preventive maintenance
RB	reactor building
RBCLC	reactor building closed loop cooling
RCIC	reactor core isolation cooling
RFO10	refueling outage 10
RHR	residual heat removal system
RP	radiation protection
RPS	reactor protection system
RWP	radiation work permit
SSC	structures, systems or components
ST	surveillance test
TB	turbine building
TM	temporary modifications
TS	technical specification
UFSAR	Updated Final Safety Analysis Report
WO	work order