

June 7, 2002

Mr. John T. Conway  
Site Vice President  
Nine Mile Point Nuclear Station, LLC  
P.O. Box 63  
Lycoming, NY 13093

SUBJECT: NINE MILE POINT NUCLEAR STATION - NRC INSPECTION REPORT  
50-220/02-03, 50-410/02-03

Dear Mr. Conway:

On May 18, 2002, the NRC completed an inspection of your Nine Mile Point Nuclear Station (NMPNS), Units 1 and 2. The enclosed report documents the inspection findings which were discussed on May 31, 2002, with you 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. No findings of significance were identified.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories, and although the specific actions are not releasable to the public, they generally include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of your response to these advisories and your ability to respond to terrorist attacks with the capabilities of the current design basis threat (DBT). On February 25, 2002, the NRC issued an Order to all nuclear power plant licensees, requiring them to take certain additional interim compensatory measures to address the generalized high-level threat environment. With the issuance of the Order, we will evaluate NMPNS's compliance with these interim requirements.

John T. Conway

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Sincerely,

/RA/

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

Docket Nos. 50-220  
50-410  
License Nos. DPR-63  
NPF-69

Enclosure: Inspection Report 50-220/02-03, 50-410/02-03

Attachment 1 - Supplemental Information

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**U.S. NUCLEAR REGULATORY COMMISSION  
REGION I**

Docket Nos: 50-220, 50-410

License Nos: DPR-63, NPF-69

Report No: 50-220/02-03, 50-410/02-03

Licensee: Nine Mile Point Nuclear Station, LLC (NMPNS)

Facility: Nine Mile Point, Units 1 and 2

Location: P. O. Box 63  
Lycoming, NY 13093

Dates: March 31, 2002 - May 18, 2002

Inspectors: G. Hunegs, Senior Resident Inspector  
B. Fuller, Resident Inspector  
W. Cook, Senior Project Engineer

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

## Summary of Findings

IR 05000220-02-03, IR 05000410-02-03, on 3/31-5/18/2002; Nine Mile Point Nuclear Station, LLC; Nine Mile Point, Units 1 & 2. Resident Inspector Report

This inspection was conducted by resident inspectors and one region-based inspector. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using IMC 0609, "Significance Determination Process," (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/reactors/operating/oversight.html> (the Public Reading Room).

### A. Inspector Identified Findings

No findings of significance were identified.

### B. Licensee Identified Violations

Violations of very low significance which were identified by the licensee have been reviewed by the inspectors. Corrective actions taken or planned by the licensee appear reasonable. The violations are listed in section 4OA7 of this report.

## Report Details

### **SUMMARY OF PLANT STATUS**

Nine Mile Point Unit 1 (Unit 1) began the inspection period at 100 percent power and operated at full power until the unit was shut down on May 14 because of unidentified leakage in the drywell. Repairs were successfully completed and Unit 1 was in the process of power ascension at the end of the inspection period. The unit was subsequently restored to 100 percent power on May 19.

Nine Mile Point Unit 2 (Unit 2) began the inspection period shutdown for a refueling outage. Unit 2 was made critical on April 15 and returned to service on April 17. Unit 2 was returned to 100 percent power on April 19. On May 12, power was reduced to 75 percent as a result of feedwater heater level control system failures. Power was returned to 100 percent on May 13 and remained there through the end of the inspection period.

#### **1. REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

##### 1R04 Equipment Alignment

###### a. Inspection Scope

The inspector selected the Unit 2 Division I and II emergency diesel generators (EDGs) to conduct a partial system walkdown while the Division III (high pressure core spray) EDG was being run for periodic testing (24 -hour run). The walkdown included a local control panel switch verification, and physical inspection and verification of the standby configuration of the EDGs and their respective support systems, using procedure N2-OP-100A, "Standby Diesel Generators," Revision 8.

The inspector selected the Unit 2 high pressure core spray (HPCS) system to conduct a partial system walkdown while the reactor core isolation cooling (RCIC) system was out of service due to emergent work. The walkdown included the control room switch verification, and physical inspection and verification of the HPCS configuration.

The inspector selected the Unit 1 emergency service water (ESW) system to perform a partial system walkdown after quarterly surveillance activities were conducted on both trains of the system. The walkdown included the control room switch verification, and physical inspection and verification of the ESW configuration. A review of deficiency/event reports (DERs) for the ESW system was also performed.

###### b. Findings

No findings of significance were identified.

## 1R05 Fire Protection

### a. Inspection Scope

The inspectors conducted walkdowns of selected fire areas to determine if there was adequate control of transient combustibles and ignition sources. The condition of fire detection devices, the readiness of the sprinkler fire suppression systems and the fire doors were also inspected against industry standards. In addition, the passive fire protection features were inspected, including the ventilation system fire dampers, structural steel fire proofing, and electrical penetration seals. Additional emphasis was placed on outage activities conducted in Unit 2. The following plant areas were inspected:

- High pressure core spray room (Unit 2)
- Control building (Unit 2)
- Carbon Dioxide fire suppression system (Unit 1)

### b. Findings

No findings of significance were identified.

## 1R12 Maintenance Rule Implementation

### a. Inspection Scope

The inspectors reviewed performance based problems involving selected in-scope structures, systems, and components (SSCs) to assess the effectiveness of the maintenance program. Reviews focused on: (1) proper maintenance rule scoping, in accordance with 10 CFR 50.65; (2) characterization of failed SSCs; (3) safety significance classifications; (4) 10 CFR 50.65 (a)(1) and (a)(2) classifications; and (5) the appropriateness of performance criteria for SSCs classified as (a)(2), and goals and corrective actions for SSCs classified as (a)(1). The inspectors reviewed the licensee's system scoping documents and system health reports.

The inspectors also reviewed licensee Maintenance Rule records, including the Unit 2 Maintenance Rule Quarterly Report (2002-Q1), and the Periodic Assessment of Maintenance Rule Program (March 2000 through December 2001).

The following DERs were reviewed:

- DER 2001-5609, Failure of 2FWS-M1A (Unit 2).
- DER 2001-4997, Nuclear Engineering Report (NER) 2M-037 is in conflict with the Appendix R design bases for the residual heat removal pump room unit coolers, HVR\*UC401 A thru F (Unit 2).
- DER 2000-3802 and 2000-3839, Reactor recirculation rotary variable differential transformer coupling failures (Unit 2).
- DER 2001-6018 Failure of 2SWP\*MOV33B to stroke (Unit 2).

### b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

For selected maintenance work orders (WOs), the inspectors evaluated: (1) the effectiveness of the risk assessments performed before the maintenance activities were conducted; (2) risk management control activities; (3) the necessary steps taken to plan and control resultant emergent work tasks; and, (4) the overall adequacy of identification and resolution of emergent work and the associated maintenance risk assessments. The following WOs were reviewed, referencing the appropriate procedures:

- WO 02-00840, Replace RCIC minimum flow valve (Unit 2).
- WO 02-04039-01, Perform weld repair to 13 reactor building closed loop cooling (RBCLC) heat exchanger (Unit 1).

Additionally, the inspectors reviewed the contingency actions in Unit 1 to be implemented when shutdown cooling was secured and testing conducted on the system during mode change prior to reactor startup.

a. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events

.1 Carbon Dioxide Hose Reel System Activation

a. Inspection Scope

On April 2, 2002, a Carbon Dioxide (CO<sub>2</sub>) hose reel system inadvertently activated. A plant unusual event (UE) was declared due to Emergency Action Level 8.3.3, "Toxic Gas," and the turbine, reactor, switch gear and control buildings were evacuated. The control room was not evacuated. The UE was terminated after atmosphere conditions were checked satisfactorily.

The cause of the CO<sub>2</sub> discharge was that the header was pressurized when one of the switches that monitor nozzle position changed state, due to a switch failure. When the header pressurized, a different nozzle located in the turbine building shifted which partially compressed the nozzle valve and as a result, a discharge occurred.

The inspectors responded to the site, observed control room activities and walked down the CO<sub>2</sub> system. The inspectors reviewed the licensee's emergency plan activities and hose reel equipment operating design and configuration requirements. The event was documented in the licensee's corrective action system in DER 2002-1665.

b. Findings

No findings of significance were identified.

.2 LERs Reviewed

a. Inspection Scope

The inspectors reviewed selected Licensee Event Reports (LERs) to ensure that licensee staff actions taken in response to the events were in accordance with station procedures and regulatory requirements. The inspectors reviewed the licensee's analysis of the event and associated corrective actions to ensure that appropriate measures were implemented to address any personnel performance concerns and that equipment problems were adequately resolved to prevent a recurrence of the identified problems.

b. Findings

LER 50-410/2001-002 and Supplement 1, "Rated Thermal Power Exceeded When Recirculation Flow Control Valve Malfunctioned." This event occurred on May 24, 2001, while the reactor was operating at 100 percent power. The malfunction of the position feedback linkage for the B recirculation flow control valve (FCV) caused cycling of the FCV and resultant reactor core thermal power swings of between 103 percent and 73 percent of rated power, before the control room operators stabilized power by securing the hydraulics to the FCV. The inspectors reviewed and documented their initial assessment of licensee performance during this event in inspection report 50-410/2001-004, Section 1R14.2.

The malfunction of the FCV position feedback linkage caused thermal reactor power to exceed 100 percent of the licensed limit by three percent, in violation of the licensed maximum power level specified in license condition 2.C.(1). This short duration power excursion was within the Updated Final Safety Analysis Report (UFSAR) operational transient analyses and did not result in any automatic reactor protection system or emergency core cooling system challenges or actuations. Accordingly, this event was of very low safety significance (GREEN) and the violation of license condition 2.C.(1) is being treated as a Non-Cited Violation (NCV), in accordance with the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600. **(NCV 50-410/2002-003-01)**

LER 50-410/2000-009, "Violation of Technical Specifications Due to Design Deficiency of Off Gas Grab Sample." This event occurred between April 20 and April 21, 2000, during plant startup from a refueling outage. The licensee identified that the grab samples being taken to satisfy Technical Specification (TS) 3.3.7.10 (because the installed off gas radiation monitors and hydrogen monitors were inoperable) did not represent the off gas process stream. The cause of this improper sampling method was determined by the licensee to have been an inadequate understanding of the system design and inadequate post modification testing. The grab sampling procedure was revised and responsible plant staff trained. The licensee also conducted an extent of condition review and addressed shortcomings in the engineering design change processes.

The failure to properly sample the off gas stream during unit startup was a violation of TS 3.3.7.10. Subsequently performed samples and review of the main stack release rate data did not identify any potentially hazardous hydrogen concentrations or any concentrations of noble gases released in excess of regulatory limits. Consequently, this event was of very low safety consequence (GREEN). This licensee identified violation of TS 3.3.7.10 is being treated as a Non-Cited Violation, consistent with the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600. **(NCV 50-410/2002-003-02)**

#### 1R15 Operability Evaluations

##### a. Inspection Scope

The inspectors reviewed operability evaluations affecting risk significant mitigating systems, to assess: (1) the technical adequacy of the evaluation; (2) whether continued system operability evaluations were warranted; (3) whether other existing degraded systems adversely impacted the affected system or compensatory measures; (4) where compensatory measures were used, whether the measures were appropriate and properly controlled; and, (5) the degraded systems impact on TS limiting condition for operations. Appropriate procedures were referenced during the review of the following licensee documents:

- DER 2002-2007, Reactor core isolation cooling system minimum flow check valve failed forward flow test (Unit 2).
- DER 2002-2220, Fuel zone water level instrument channel differences (Unit 1).
- DER 2002-0906, Adverse trend in control rod position indication deficiencies (Unit 1).

##### b. Findings

No findings of significance were identified.

#### 1R19 Post-Maintenance Testing

##### a. Inspection Scope

The inspectors reviewed post-maintenance testing (PMT) procedures and associated testing activities for selected risk significant mitigating systems to assess whether: (1) the effect of testing on the plant had been adequately addressed by control room and engineering personnel; (2) testing was adequate for the maintenance performed; (3) acceptance criteria were clear and adequately demonstrated operational readiness, consistent with the design and licensing basis documents; (4) test instrumentation had current calibrations, range, and accuracy for the application; (5) tests were performed, as written, with applicable prerequisites satisfied; (6) jumpers installed or leads lifted were properly controlled; (7) test equipment was removed following testing; and (8) equipment was returned to the status required to perform its safety function. The following test and activity was reviewed:

- WO 0200840, Replace RCIC minimum flow valve (Unit 2).

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

a. Inspection Scope

The inspectors reviewed the following activities related to the Unit 2 refueling outage for conformance to the applicable procedure and witnessed selected activities associated with each evolution. Surveillance tests were reviewed to verify TS were satisfied. Inspections were focused on reactor decay heat removal, spent fuel pool decay heat removal, inventory control, power availability, reactivity control and secondary containment. The inspectors reviewed the outage plant and outage risk mitigation strategies and evaluations. Portions of the following outage activities were observed:

- Hydrostatic test.
- Reactor startup.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors witnessed performance of surveillance test procedures and reviewed test data of selected risk significant SSCs to assess whether the SSCs satisfied Technical Specifications, Updated Final Safety Analysis Report (UFSAR), and licensee procedure requirements; and to determine if the testing appropriately demonstrated that the SSCs were operationally ready and capable of performing their intended safety functions. The following tests were witnessed:

- N2-OSP-ICS-Q@002, RCIC Pump and Valve Operability Test (Unit 2)
- N2-OSP-CSL-R001, Division I Emergency Core Cooling System Functional Test (Unit 2).
- N1-ST-Q12, Spent Fuel Pool Pump and Valve Operability (Unit 1).
- N1-ST-Q13, ESW Pump Operability (Unit 1).
- N1-REP-12, APRM Gain Adjustment (Unit 1).

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

#### 4OA3 Event Followup

(Closed) LER 50-410/2001-002 and Supplement 1, "Rated Thermal Power Exceeded When Recirculation Flow Control Valve Malfunctioned." Reference Section 1R14 of this report for additional details.

(Closed) LER 50-410/2000-009, "Violation of Technical Specification due to Design Deficiency of Off Gas Grab Sample System." Reference Section 1R14 of this report for additional details.

(Closed) LER 50-410/2001-003, "Methodology Error Results in Inoperable Oscillation Power Range Monitors (OPRMs)." On June 29, 2001, the licensee was notified by General Electric of a Part 21 notification that the OPRM setpoints could be non-conservative. The licensee promptly declared the OPRMs inoperable and initiated actions to resolve the problem and restore them to an operable status. Details of the licensee's corrective actions and safety analysis were reviewed by the inspectors and determined to be appropriate. This LER is closed.

#### 4OA6 Management Meetings

##### Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Conway, Site Vice President, and other members of licensee management at the conclusion of the inspection on May 31, 2002. The licensee acknowledged the findings presented. No proprietary information was identified.

##### Annual Assessment Meeting

The NMPNS annual assessment meeting was held on April 18, 2002, at the Joint News Center located adjacent to the Oswego County Airport. The NRC presented the results of the annual performance assessment for the period April 1 thru December 31, 2001. The meeting was open to public observation. The annual assessment letter, dated March 4, 2002, is available on the NRC's website.

#### 4OA7 Licensee Identified Violations

The following violations of very low safety significance (GREEN) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV:

##### NCV Tracking Number

05000410/2002-003-01

##### Requirement Licensee Failed to Meet

On May 24, 2001, the position feedback linkage for the B recirculation flow control valve (FCV) caused cycling of the FCV and resultant reactor core thermal power swings of between 103 percent and 73 percent of rated power. The malfunction of the FCV position feedback linkage caused thermal

reactor power to exceed 100 percent of the licensed limit by three percent, in violation of the licensed maximum power level specified in license condition 2.C.(1). (Reference Section 1R14 of this report.)

05000410/2002-003-02

Technical Specification 3.3.7.10 requires that with the off gas system in service, off gas radiation and hydrogen monitors are required to be operable or grab samples taken. Between April 20 and 21, 2000, grab samples were being taken, but because of inadequate procedures and understanding of the grab sample piping arrangement, non-representative samples were taken. (Reference Section 1R14 of this report.)

If you deny one or both of these NCVs, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, 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 Nuclear Station, LLC.

**ATTACHMENT 1**a. Key Points of ContactLicensee

J. Conway, Site Vice President  
 L. Hopkins, Unit 1 Plant General Manager  
 S. Minihan, Unit 2 Operations Manager  
 B. Montgomery, General Manager Nuclear Engineering  
 M. Peckham, Unit 2 Plant General Manager  
 B. Randall, Manager Unit 1 Engineering  
 C. Terry, General Manager, Quality Assurance  
 D. Topley, Unit 1 Operations Manager  
 D. Wolniak, Licensing Manager

b. List of Items Opened, Closed and DiscussedOpened and Closed

50-410/2002-003-01	NCV	Malfunction of the FCV position feedback linkage resulted in exceeding rated thermal power.
50-410/2002-003-02	NCV	Violation of Technical Specification due to design deficiency of off gas grab sample system.

Closed

50-410/2001-002 and Supplement 1	LER	Rated Thermal Power Exceeded When Recirculation Flow Control Valve Malfunctioned.
50-410/2000-009	LER	Violation of Technical Specification due to Design Deficiency of Off Gas Grab Sample System.
50-410/2001-003	LER	Methodology Error Results in Inoperable Oscillation Power Range Monitors (OPRMs).