October 25, 2001

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: NINE MILE POINT NUCLEAR STATION - NRC INSPECTION REPORT 50-220/01-07, 50-410/01-07

Dear Mr. Mueller:

On September 29, 2001, the NRC completed an inspection of your Nine Mile Point Nuclear Station, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on October 12, 2001, with Mr. J. Conway 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.

Since September 11, 2001, Nine Mile Point has assumed a heightened level of security based on a series of threat advisories issued by the NRC. Although the NRC is not aware of any specific threat against nuclear facilities, the heightened level of security was recommended for all nuclear power plants and is being maintained due to the uncertainty about the possibility of additional terrorist attacks. The steps recommended by the NRC include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with local law enforcement and military authorities, and limited access of personnel and vehicles to the site.

The NRC continues to interact with the Intelligence Community and to communicate information to Niagara Mohawk Power Corporation. In addition, the NRC has monitored maintenance and other activities which could relate to the site's security posture.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publically Available Records (PARS) component of NRC's document management system (ADAMS). ADAMS is accessible from the NRC web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

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 50-220/01-07, 50-410/01-07

Attachment 1 - Supplemental Information

cc w/encl:
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REGION I

Docket Nos: 50-220, 50-410

License Nos: DPR-63, NPF-69

Report No: 50-220/01-07, 50-410/01-07

Licensee: Niagara Mohawk Power Corporation (NMPC)

Facility: Nine Mile Point, Units 1 and 2

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

Dates: August 12, 2001 - September 29, 2001

Inspectors: G. Hunegs, Senior Resident Inspector
B. Fuller, Resident Inspector
R. Fernandes, Resident Inspector
J. Noggle, Senior Health Physicist

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

Summary of Findings

IR 05000220-01-07, IR 05000410-01-07, on 08/12-09/29/2001; Niagara Mohawk Power Corporation; 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 htpp://www.nrc.gov/NRR/OVERSIGHT/index.html.

A. Inspector Identified Findings

No findings of significance were identified.

B. Licensee Identified Violations

None

Report Details

SUMMARY OF PLANT STATUS

Nine Mile Point Unit 1 (Unit 1) began the inspection period at 100 percent power. On August 22, Unit 1 scrammed following a generator load reject. Unit 1 was started up on August 27 and returned to full power on August 29. On September 19, power was reduced to 48 percent to repair a condenser tube leak. Unit 1 was returned to full power on September 20 and remained at 100 percent power through the end of the inspection period.

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

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R04 Equipment Alignment

c. Inspection Scope

The inspector selected the Unit 1 core spray system train No. 12 when the train No. 11 system was declared inoperable, due to problems with the core spray topping pump bearing oiler which resulted in an unplanned limiting condition for operation (LCO) entry. The walkdown included a control room switch line-up verification and system field walkdown, review of open work orders, deviation and event reports (DERs), Technical Specifications (TS) and the equipment status log (ESL).

The inspector selected the Unit 1 115 kV distribution system due to an identified vulnerability of Line No. 4. The Line No. 4 concern involved the capacity of the circuit to maintain voltage during a loss of coolant accident (LOCA) with Line No. 1 out-of-service. This concern required an unplanned LCO entry to resolve. The walkdown included a control room switch line-up verification, review of TSs and DERs, and a review of the modification package.

The inspector selected the Nos. 102 and 103 emergency diesel generators due to the potential reliance on these emergency power supplies during the transformer tap changer work, required to resolve the under voltage issue associated with 115 kV Line No. 4. The walkdown included a control room switch lineup verification and system field walkdown.

The inspector selected the Unit 2 service water system due to a number of outstanding deficiencies. The walkdown included a partial system walkdown and a review of DERs and TS.

d. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors conducted walkdowns of the 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. The following plant areas were inspected:

- Service water pipe tunnels (Unit 2).
- Turbine building 361 foot elevation fire area No. 55 (Unit 2).
- Reactor Building emergency core cooling system corner rooms (Unit 1).
- Reactor Building 237 foot elevation (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 following DERs were reviewed:

- DER Nos. 2-2000-2735 and 2408, "Radiation monitoring for the service water system cabinets 146 A and B failed following zebra muscle treatment (Unit 2)."
- DER No. 2-2000-1124, "2SWP*MOV19B failed to stay closed (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:

- 115 kV Transformer No. 101 North and South load tap changes (Unit 1).
- Down reduction and power ascension for condenser tube plugging (Unit 1).

b. Findings

No findings of significance were identified.

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

.1 Reactor Scram Due to Generator Protection Relay Failure (Unit 1)

a. Inspection Scope

On August 22, 2001, at 5:08 a.m., Unit 1 automatically scrammed from 100 percent core thermal power. The cause was due to a generator load reject resulting from a turbine trip which was actuated by the failure of the negative phase sequence current relay in the generator protection logic. All control rods fully inserted. After the initial transient, reactor vessel level and pressure were restored to the normal band. The inspectors responded to the control room and observed operator actions during the recovery. The inspectors reviewed operator logs and observed the station operations review committee meetings. The licensee's corrective actions were documented in DER No. 1-2001-4036. The event was determined to not have been risk significant.

b. Findings

No findings of significance were identified.

.2 Review of Licensee Event Reports

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 sation 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. The following LERs were reviewed by the inspectors:

LER 50-410/2001-01, " Reactor Scram Due to Relay Failure in Electro Hydraulic Control System." On May 16, 2001, Unit 2 automatically scrammed from 90 percent power due to turbine stop valve closure. The cause of the combined intercept valve and stop valve closure was a failure of the electro hydraulic control system (EHC) hydraulic trip pressure relay, KT106. All control rods inserted on the scram and the event was considered not risk significant. The event was documented in the licensee's corrective action program under DER 2-2001-2253. The relay was replaced per WO 01-05458-00.

NMPC noted that in 1997, General Electric (GE) had issued Technical Information Letter (TIL) 1212-2, "Plant Scram Frequency Reduction Features for BWR and PWR Nuclear Turbines with MK I or MK II EHC Controls," which included recommendations to address potential problems associated with relay KT106. NMPC determined that a contributing cause was that the GE TIL recommendations were not effectively evaluated and implemented in 1997. This LER is closed.

LER 50-220/1996-13, Supplement 2, "Potential Over-Pressurization of Containment Penetrations Due to Thermal Expansion." Supplement 2, dated June 28, 2000, reported two additional penetrations in the reactor water cleanup system that were identified as being susceptible to over-pressurization. These penetrations were identified on February 6, 1997, and reported in the licensee's response letter to Generic Letter 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Bases Accident Conditions." The LER reporting oversight did not effect the licensee's implementation of corrective actions described in their 1997 response to Generic Letter 96-06. The original LER and Supplement 1 were reviewed in NRC Inspection Report Nos. 50-220/97-01 and 97-02, respectively. Supplement 2 to this LER is closed.

LER 50-410/1999-03, Supplement 1, "Automatic Depressurization System (ADS) Nitrogen Leakage in Excess of Unit 2 Technical Specifications Surveillance Limits." The details of this event and the original LER were discussed in NRC Inspection Report No. 50-410/99-04. This supplement, dated January 7, 2000, provided additional details and revised the reporting requirements. Supplement 1 to this LER is closed.

LER 50-410/1999-10, Supplement 1, "Unit 2 Reactor Trip due to a Feedwater Master Controller Failure." The details of this event and the original LER were discussed in NRC Inspection Report No. 50-410/99-06. The original LER had listed as a corrective

action the installation of an electronic dampening circuit modification to the reactor core isolation cooling (RCIC) system flow transmitter. Supplement 1, dated March 7, 2000, reported that this corrective action was not implemented because the licensee subsequently determined that this modification would not have corrected or prevented this RCIC system failure. During the transient, operators noted RCIC system flow oscillations while the flow controller was in automatic and documented that a dampening circuit modification would be installed to address the problem. Subsequent reevaluation showed that the cause of the RCIC system flow oscillations was water hammer from void formation in the discharge pipe. The inspector reviewed the corrective actions described in DER 2000-07015, which included the installation of a modification to address the water hammer. Supplement 1 to this LER is closed.

b. Findings

No findings of significance were identified.

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. The following licensee documents were reviewed:

- DER No. 2-2000-4205, “Reverse flow test method flawed for 2CSL-V9 (Unit 2).”
- DER No. 1-2001-3251, “Potential non-compliance with Technical Specification 3.6.3/4.6.3 Bases (Unit 1).”

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

Unit 1 DER No. 2001-3251 identified that, under certain conditions, the 115 kV line No. 4 lacked the voltage capability to support loss of coolant accident (LOCA) loads. The Power Control staff’s state estimator program (computer software) was utilized to determine Line No. 4 post-contingency voltage and to assess the ability of the Power Control operators to maintain adequate voltage to the Unit 1 115 kV bus. The state estimator program showed that Line No. 4 could not provide sufficient voltage to support accident loads, independent of Line No. 1, without actuating degraded voltage relays.

The licensee initiated a modification to bring Line No. 4 into conformance with the design bases. This modification changed the tap settings on the reserve station service transformers (Nos. 101 North and South) and the Unit 1 operating and power control procedures were revised.

The inspector reviewed design document change (DDC) No. 1E00798. The change was implemented in order to increase the operating margin between the 115 kV system's normal operating range and the minimum 115kV switchyard voltage at which the 115 kV offsite power source would be declared inoperable. The change consisted of adjusting the transformer tap changer settings for the reserve station service transformers. The inspector reviewed operating and power control procedures changes which were implemented. The inspector verified that, upon implementation of DDC No. 1E00798 and associated procedure revisions, the Unit 1 115 kV line offsite power supply has sufficient capacity to supply safety related loads.

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 tests and activities were reviewed:

- WO 00-06536-00, "Replace plunger and packing on the standby liquid control pump SLS*P1A (Unit 2)."
- N1-ST-M2, "Emergency condenser level control valve exercising after replacement of a faulty power supply (Unit 1)."

c. 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:

- ISP-ADS-Q003, "Quarterly Functional Test and Calibration of Automatic Depressurization System Logic Timer Initiation Circuit (Unit 2)."
- N2-ISP-RHS-R114, Rev. 2, "Operating Cycle Calibration of Low Pressure Cooling Injection Discharge Pressure High Automatic Depressurization System Permissive Instrument Channels (Unit 2)."
- N2-OSP-ISC-M@002, "Drywell Vacuum Breaker Operability Test (Unit 2)."
- N1-ST-Q1D, "Core Spray System Loop No. 122 Pump and Valve Operability Test (Unit 1)."
- N1-ST-Q6B, "Containment Spray System Loop No. 121 Quarterly Operability Test (Unit 1)."

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety, Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation

a. Inspection Scope (71122.02)

Plant walkdowns were conducted of the liquid and solid radwaste processing systems of both Units 1 and 2. These reviews were with respect to UFSAR radwaste processing descriptions and Process Control Program (PCP) specifications. Additionally, the plant walkdowns were performed to verify liquid and solid waste storage tank integrity and onsite radwaste storage stockpiles.

The most recent radio-chemical radioactive waste stream analyses were reviewed for appropriate use in classifying waste shipments for transport in accordance with 10 CFR 61.55, which included: Unit 1 condensate resins, Unit 1 cleanup resins, Unit 1 filter sludge, Unit 1 dry active waste, Unit 2 evaporator bottoms, Unit 2 waste cleanup system, Unit 2 bead resin, and Unit 2 dry active waste.

On August 14, 2001, the final loading, radiation surveys, vehicle inspection, placarding, and marking of radioactive laundry shipment No. 01-2063 was observed, with respect to the requirements of 10 CFR Parts 20, 61, and 71 and 49 CFR Parts 170-189.

The following radioactive shipment records were reviewed for compliance with 10 CFR Parts 20, 61, and 71 and 49 CFR Parts 170-189.

Unit 1

Shipment Nos.	01-1031	Cleanup resin	shipped 3/19/01
	01-1086	Bead resin	shipped 5/2/01
	01-1097	Torus sludge	shipped 5/14/01
	01-1102	Condenser pump	shipped 6/1/01
	01-1107	Scrap metal	shipped 6/15/01
	01-1109	Condensate resin	shipped 7/19/01

Unit 2

Shipment Nos.	2WS-1961	Irradiated reactor hardware	shipped 2/21/01
	2WS-1897	Cleanup sludge	shipped 5/11/01
	2WS-2016	Scrap metal	shipped 6/22/01
	2WS-2024	Bead resin	shipped 7/18/01
	2WS-2035	Laundry	shipped 8/14/01

Licensee oversight of the radwaste transportation program was reviewed through the review of a quality assurance audit and quality inspection reports associated with selectively sampled radioactive waste shipment records. The quality assurance audit No. 00013, dated 12/27/00, entitled, "Radioactive Effluents Program (REP), Radioactive Materials Processing (RMP), Environmental Protection Program (Radiological)(ENV)," fulfilled the biennial audit requirement of the radwaste transportation program, as specified in the PCP.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA6 Management Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Conway, Vice President, Nuclear Generation, and other members of licensee management at the conclusion of the inspection on October 12, 2001. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT 1

a. Key Points of Contact

Licensee

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

NRC

A. Blamey, Reactor Engineer

b. List of Items Opened, Closed and Discussed

Closed:

50-410/2001-01	LER	Reactor Scram Due to Relay Failure in Electro Hydraulic Control System.
50-220/1996-13, Supplement 2	LER	Potential Over pressurization of Containment Penetrations Due to Thermal Expansion.
50-410/1999-03, Supplement 1	LER	Automatic Depressurization System (ADS) Nitrogen Leakage in Excess of Unit 2 Technical Specifications Surveillance Limits.
50-410/1999-10, Supplement 1	LER	Unit 2 Reactor Trip due to a Feedwater Master Controller Failure.

c. List of Acronyms

ADS	Automatic Depressurization System
CFR	Code of Federal Regulations
DDC	Design Document Change
DER	Deficiency/Event Report
EHC	Electro Hydraulic Control
ENV	Environmental Protection Program (Radiological)
ESL	Equipment Status Log
GE	General Electric
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LOCA	Loss of Coolant Accident
NMPC	Niagara Mohawk Power Corporation

NRC	Nuclear Regulatory Commission
PCP	Process Control Program
PMT	Post Maintenance Test
REP	Radioactive Effluent Program
RCIC	Reactor Core Isolation Cooling
RMP	Radioactive Material Processing
SDP	Significance Determination Process
SSC	Structures, Systems, and Components
TIC	Technical Information Letter
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
Unit 1	Nine Mile Point Unit 1
Unit 2	Nine Mile Point Unit 2
WO	Work Order