

July 10, 2000

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 NINE MILE POINT INSPECTION REPORT NOS. 05000220/2000-003
AND 05000410/2000-003

Dear Mr. Mueller:

On June 9, 2000, the NRC completed a team inspection of your Nine Mile Point Nuclear Generating Station Units 1 & 2. The enclosed report presents the results of that inspection. The results were discussed on June 9, 2000, with you, Messrs J. Conway and R. Abbott and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations, and with the conditions of your operating license. Within this area, the inspection involved selected examination of procedures and representative records, observations of plant equipments, and interviews with personnel.

Based on the results of the inspection, the team concluded that, in general, problems were properly identified, evaluated, and resolved. Your staff employed useful tools for managing the resolution of problems in your Deviation/Event (DER) process. For example, the DER screening meetings were effective at ensuring that the proper priorities are assigned and that the initial reviews are appropriate. The Corrective Action Review Board was very detailed and probing and effectively reviewed completed analyses to ensure that the root causes were appropriate to resolve the issues. The resulting evaluations or root cause analyses of the DERs reviewed by the team were of good quality and had the appropriate corrective actions prescribed. Although the team observed instances where the required evaluations for some DERs were delayed, your staff was already aware of these delays and was taking action to correct them.

Nonetheless, the team did identify a vulnerability in your corrective action program associated with the Problem Identification (PID) process. Seven examples were noted where your staff failed to initiate DERs for problems in the PID process that also met the requirement of your DER procedure for initiation of DERs for the evaluation and resolution of the problems. The problems involved plant equipment failures that were not normal wear and tear and therefore would require further evaluation. The failure to initiate the DERs is a violation of your Technical Specifications related to procedure implementation. The violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy, issued May 1, 2000 (65 FR 25368). If you contest this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear

Mr. John H. Mueller

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Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at the Nine Mile Point Facility.

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Sincerely,

/RA by Brian E. Holian for/

Wayne D. Lanning, Director
Division of Reactor Safety

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

Enclosure: NRC Inspection Report Nos. 05000220/2000-003 and 05000410/2000-003

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REGION I

Docket Nos: 05000220, 05000410

License Nos: DPR-63, NPF-69

Report Nos: 05000220/2000-003, 05000410/2000-003

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: May 22 - 26, 2000
June 5 - 9, 2000

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Division of Reactor Safety

SUMMARY OF FINDINGS

Nine Mile Point Generating Station, Units 1 & 2
NRC Inspection Report 05000220/2000-003, 05000410/2000-003

The report covers a two-week on-site team inspection conducted using the guidance contained in NRC Inspection Manual Chapter 2515. The inspection, which was an annual inspection of the effectiveness of the licensee's Problem Identification and Resolution program, covered all seven cornerstones of safety and was accomplished in accordance with NRC inspection procedure 71152, "Identification and Resolution of Problems." (See Attachment 1)

Problem Identification and Resolution

NO COLOR. The licensee was effective at identifying and tracking problems. The team did not identify any issues that were not already being tracked by the licensee. However, the team identified seven examples, involving both units, where issues involving equipment failures documented in the Problem Identification process had work orders to conduct the repairs, but no Deviation/Event Reports (DERs) were written, as required by the DER procedure. The failure to initiate DERs is a violation of the Nine Mile Point, Units 1 and 2 Technical Specifications related to procedure implementation, and is being treated as a Non-Cited Violation. The violation was not assessed using the Significance Determination Process, as it did not impact one of the cornerstones; however, it provides substantive information relative to the cross cutting issue of problem identification and resolution. (Section 40A2.1)

NO COLOR. Based on the sample reviewed, the licensee's resolution of problems was adequate. Items entered into the corrective action program were properly classified and prioritized for resolution. The evaluations and root cause analyses reviewed were of good depth and quality. Although the team found a few instances where the evaluation of some Deviation/Event Reports had not been completed within the specified time, the team did not identify any instance that represented a significant concern. The licensee was already aware of these delays and was taking action to correct the problem. (Section 40A2.2)

NO COLOR. The prescribed corrective actions for the Deviation/Event Reports reviewed, appeared appropriate to correct the problems. The backlog of corrective actions was being managed well and the team did not identify any backlogged action that represented an adverse effect on plant risk. (Section 40A2.3)

NO COLOR. Issues identified in the Quality Assurance Audits and Self Assessment Reports reviewed had been properly entered into the Deviation/Event Report process. Some assessment findings resulted in recommendations and identification of issues not previously included in the DER process. Based upon a review of a sample of meeting minutes of the Station Oversight Review Committee and the Corrective Action Review Board (CARB), and observation of some CARB meetings, the team found that the committees provided good oversight of the Corrective Action Program. (Section 40A2.4)

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Report Details

4. OTHER ACTIVITIES (OA)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Occupational Radiation Safety, Public Radiation Safety, and Physical Protection.

4OA1 Problem Identification and Resolution (IP 71152)

.1 Problem Identification

a. Inspection Scope

The team reviewed items selected from various processes and activities to determine if the licensee was properly characterizing and entering problems into the corrective action program (CAP) for evaluation and resolution. In preparation for the inspection, the team obtained and reviewed the following licensee documents to understand the process for implementing the program at Nine Mile Point (NMP):

- NIP-ECA-01, Deviation/Event Report, Revision 18
- NIP-ECA-02, Root Cause Evaluations, Revision 04
- NIP-ECA-05, Self Assessment, Revision 01
- NDD-ECA, Evaluations and Corrective Actions, Revision 10
- QAP-ASU-18.10, Nuclear Audit Program, Revision 11
- S-SAP-14.0, Reporting of Safeguards Events, Revision 16

In the cornerstones of Initiating Events, Mitigating Systems and Barrier Integrity, the team examined: control room logs; control room deficiencies; operability determinations and engineering supporting analyses; temporary modifications; system health reports; and problem identification (work orders). In the Occupational and Public Radiation Safety cornerstones, the team examined: contamination occurrence reports (CORs); exposure evaluation reports (EERs); radiation work observations; and supervisory walk-down reports. In the Emergency Preparedness (EP) and Physical Security cornerstones, the team reviewed: EP drill/exercise critique forms; EP drill/exercise reports; EP task tracking system (EPTTS); security operations logs; safeguards event report (SER,24-Hour Loggable); and commitment to excellence program (CEP) database.

The team also conducted plant walkdowns and interviewed plant personnel to identify and review other processes that may exist where problems or issues could be identified.

b. Issues and Findings

The team noted that some departments had additional tracking mechanisms for issues that were considered not to meet the threshold for initiating a Deviation/Event Report (DER), but did represent an element of the licensee's 10 CFR 50, Appendix B, Corrective Action Program. For example, some equipment problems that resulted from normal wear and tear were deemed acceptable to be repaired within the Problem Identification (PID) process with Work Orders. Also, issues that did not meet the DER or SER threshold within EP and Security were tracked within the EPTTS or CEP, respectively. The team reviewed these additional tracking systems to ascertain that issues that needed to be converted into DERs were.

With a few exceptions, issues identified through the other processes that met the threshold for DERs were entered into the corrective action program as DERs. The team identified seven examples involving issues being tracked in the PID process that should have also been entered into the corrective action program as DERs but were not. One issue involved Work Order 00-05622 for an Intermediate Range Monitor in Unit 2 that had been observed to be spiking during the reactor startup in April 2000. A second issue involved Work Order 00-04828 for troubleshooting and repairing an observed ½ rpm oscillation during startup of emergency diesel generator 2EGS-EG1. The third issue involved Work Order 98-08835 for a reactor water cleanup valve (2WCS-V122) that was leaking. None of these issues affected the function of the affected system. The other four issues involved Work Orders 99-02441, 99-02944, 99-02792 and 00-04949 for various issues with valves in the non-safety related feedwater system in Unit 1. However, the system was a risk significant system. The licensee acknowledged that DERs should have been generated for the seven issues, but had not been due to oversights during the PID screening process. The licensee generated DERs 2-2000-2036, 2-2000-2037, 2-2000-2038, 1-2000-2047, 1-2000-2048, 1-2000-2049 and 1-2000-2050, respectively, to address these issues. The licensee also generated DER C-2000-2051 to address, on a broader scope, the failure to document hardware failures in the corrective maintenance backlog that were deemed not to be normal wear and tear. Further reviews by the licensee did not reveal additional examples.

The above issues were determined to be very low risk significance, did not effect any cornerstone, but represented human performance cross-cutting issue (i.e. no color) in accordance with NRC Manual Chapter 0610^{*}, Appendix E. Although the equipment was degraded, the systems were capable of performing their function or were not required for the current plant condition. Nevertheless, procedure NIP-ECA-01 Revision 18, "Deviation/Event Report," Section 1.1.1 requires that a DER be initiated for conditions or abnormal occurrences having an adverse or potentially adverse effect on activities important to nuclear safety, industrial safety, plant reliability, or human performance. The NMP Technical Specifications, Section 6.8.1, states that written procedures shall be established and implemented. Although the issues were of very low risk significance, the failure to initiate a DER is a violation of the NMP Technical Specifications. This violation is being treated as a Non-Cited Violation (NCV), in accordance with Section VI.A of the NRC's Enforcement Policy. **(NCV 050000220&050000410/2000-003-001)**

The team also observed an instance where issues from EP drills conducted in 1999 were not properly captured into the EPTTS. Although there was no procedural violation, the EP Department expectations and good practices were not followed. The licensee subsequently generated DER C-2000-1861 to address this issue.

c. Conclusion

The team did not identify any issue that was not already identified by the licensee. In general, the licensee was effective at identifying and tracking problems. However, the team identified seven issues tracked in the Problem Identification process for which the licensee had failed to initiate DERs. This finding, although of very low risk significance, was contrary to the requirements of procedure NIP-ECA-01, Deviation/Event Report, and as such a violation of the Nine Mile Point Units 1 and 2 Technical Specifications relative to procedure implementation. The violation is being treated as a Non-Cited Violation, consistent with Section VI.A of the Enforcement Policy.

.2 Problem Resolution

a. Inspection Scope

The team reviewed items selected from the licensee's corrective action program to determine the appropriateness of the resolution, including the depth and scope of the root cause analysis (or apparent cause evaluation), and the specified corrective actions. The team focused on DERs initiated since the last NRC inspection of the corrective action program implementation in November 1999. The team also reviewed the backlog of corrective actions to determine if there were any items that individually or collectively could present an adverse effect on plant risk significance or an adverse trend in the implementation of the corrective action program.

The team's sample selection included items from all seven cornerstones. The team reviewed the Performance Summary Report for the first quarter of year 2000 as an aid in selecting issues within the cornerstones. Using factors such as the plant risk insights derived from Nine Mile Point individual plant evaluation and systems' maintenance rule significance as the selection criteria, the following samples of items were reviewed:

- 12 Category 1 DERs (DERs for significant events that warrant prompt attention and require root cause analysis)
- 49 Category 2 DERs (DERs that require routine processing, including Station Oversight Review Committee and Plant Manager's reviews)
- 37 Category 3 DERs (DERs that require less urgent reviews)
- DERs associated with 16 Non-Cited Violations (NCVs)
- DERs associated with 6 Licensee Event Reports (LERs)

The team examined the appropriateness of the root cause evaluations (where warranted), the assigned corrective and preventive actions, and the associated engineering supporting analyses and operability determinations. The team also reviewed selected corrective action effectiveness reviews (CAERs) which were performed periodically by each branch in accordance with the Self Assessment process.

b. Issues and Findings

There were no findings identified during this inspection. The evaluations and root cause analyses reviewed were of good quality and reflected proper consideration for common cause and extent of condition. Although the team noted some instances where there were delays associated with the evaluations for some DERs, the team did not find any instance that represented a significant concern. The licensee was also aware of these delays and was taking actions to correct the issues.

In the area of overall trending of DERs issues, the team noted that NMPC trend analysis was limited, but licensee identified adverse trends and a few repetitive problems were appropriately documented in DERs.

c. Conclusion

The team concluded that the licensee's resolution of problems was adequate. Based on the sample reviewed, items entered into the corrective action program were properly classified and prioritized for resolution. The evaluations and root cause analyses reviewed were of good depth and quality. Although there were delays associated with the evaluation of some DERs, the team did not identify any instance that represented a significant concern. The licensee was also aware of this observation and was taking actions to correct the problem.

.3 Effectiveness of Corrective Actions

a. Inspection Scope

The team reviewed selected DERs to determine if appropriate corrective actions were prescribed and, where appropriate, implemented by the licensee. The review was conducted on the same sample of DERs selected in Section 4OA1.2 above and was based on factors such as plant risk and maintenance rule significance. The team also reviewed the list of open corrective actions for DERs, and work orders to assess the effectiveness of the licensee at managing the backlog of risk and safety-related items.

In addition, the team reviewed the lists of open corrective maintenance and DERs for the emergency diesel generators (Units 1&2), high pressure coolant injection (Unit 1), reactor core isolation coolant (Unit 2), residual heat removal (Unit 2), and automatic depressurization system (Unit 1) to determine if there were any issues that represented an adverse effect on plant risk.

b. Issues and Findings

There were no findings identified during this inspection. The prescribed corrective actions for the DERs reviewed, appeared appropriate to correct the problems. Although the DER database system still lacks real time DER corrective action tracking and trending, the various departments track their own corrective actions. The team did not identify any item in the backlogs reviewed that represented an adverse effect on plant risk. The backlog of corrective actions appeared to be appropriately managed.

c. Conclusion

The prescribed corrective actions for the DERs reviewed, appeared appropriate to correct the problems. The backlog of corrective actions was being properly managed and the team did not identify any item in the backlog that represented an adverse impact on plant risk.

.4 Effectiveness of Self-Assessments

a. Inspection Scope

The team reviewed twelve Quality Assurance (QA) assessments and seventeen self-assessments completed by various departments to determine the following: (1) if problems and issues identified in the assessments were properly entered into the corrective action program via DERs, when required; (2) if the licensee's assessment of performance in the Problem Identification and Resolution area reflected that problems that exist within the program were understood; and (3) if the licensee's assessment of performance in the corrective action program area was comparable to the NRC's assessment results.

In addition to other assessments, the team reviewed QA Audit Report 99016, Evaluation and Corrective Action, Training department's February 23, 2000 Self Assessment of the Corrective Action Program, and Technical Support (Unit 2) DER Effectiveness Review, dated January 2000. The Technical Support effectiveness review was to review all closed Unit 2 Technical Support Category 1 and 2 DERs with root cause analyses performed, initiated, or dispositioned after January 1, 1998.

The team also reviewed the minutes of several Corrective Action Review Board (CARB) and SORC meetings conducted in the year 2000, to determine if issues identified by the oversight committees were entered into the Corrective Action Process, as appropriate. The CARB was established in late 1999 as an Improvement Plan initiative.

b. Issues and Findings

There were no findings identified during this inspection. The assessments reviewed reflected that the licensee was aware of the existing issues with the corrective action program such as the delays associated with evaluations and was taking actions to correct the issues. The assessments provided recommendations for improvement in the

areas assessed, and when appropriate, DERs were initiated to address audit identified deficiencies (adverse findings). However, the team identified two instances where the required departmental self assessments had not been completed. In one instance, Nuclear Security Department did not submit a self assessment in the area of Training Effectiveness in 1999, as expected. In the other instance, Unit 2 Chemistry Department completed only one of the two expected self assessments in 1999. The team found that although the issues were of low safety and regulatory concern, they were not in accordance with the expectations of the licensee for implementing the Corrective Action Program. The licensee generated DERs (C-2000-1857 and 2-2000-1857) to address the issues.

The oversight committee minutes reviewed reflected that the committees were detailed and probing as evidenced by the enhancements and additional reviews of DERs usually required by the CARB.

c. Conclusion

Quality Assurance and Self Assessments reviewed were generally good. Issues identified in those assessments had been properly entered into the DER process. Some assessment findings resulted in recommendations and identification of issues not previously included in the DER process. Committees, such as the Station Oversight Review Committee and Corrective Action Review Board, provided good oversight of the Corrective Action Program.

.5 Safety Conscious Work Environment

a. Inspection Scope

The team reviewed the licensee's Safety Conscious Work Environment program (NIP-ECA-04, Quality First Program) to determine if conditions existed that would challenge the establishment of a safety conscious work environment at Nine Mile Point. The team interviewed the program manager, several plant personnel, and reviewed the records of concerns raised by plant personnel.

b. Issues and Findings

There were no findings identified during this inspection. The plant personnel interviewed were familiar with and did not feel reluctant to use the processes that existed for raising safety issues. The environment at Nine Mile Point appeared conducive to raising safety concerns.

40A4 Other

- .1 (Closed) LER 05000410/2000-002: Manual Reactor Trip Due to an External Steam Leak on the Reactor Feedwater Pump and Automatic Trip of the Reactor Core Isolation Cooling System. The event was previously addressed in NRC inspection report 05000410/2000-001, Section O1.2. The licensee's analysis of the event, root cause evaluation, and associated preventive and corrective actions were appropriate. This LER is closed.

4OA5 Management Meetings

.1 Exit Meeting Summary

The team presented the inspection results to Messrs. J.Mueller, J. Conway and R. Abbott and other members of the Niagara Mohawk staff during an exit meeting on June 9, 2000. The licensee acknowledged the finding presented. No information examined or reviewed during the inspection was considered to be proprietary.

PARTIAL LIST OF PERSONS CONTACTED

R. Abbott	Vice President, Nuclear Engineering
D. Baker	Executive Assistant
D. Bonnic	Acting Unit 2 Plant Manager
J. Burton	Nuclear engineer
J. R. Cole	Unit 2 Alara
W. Connelly	Supervisor, Quality Assurance
J. Conway	Vice President, Nuclear Generation
R. Dean	Manager, technical Support, Unit 2
S. Doty	Maintenance Manager, Unit 1
G. Doyle	Director, Assessment and Corrective action
K. Englemann	Assistant to VP, Nuclear Generation
R. Fraussen	General supervisor, Nuclear security
P. Mazzaferro	Unit 1 Technical Support Manager
D. Wolniak	Manager, Licensing
J. Mueller	Chief Nuclear Officer
J. McElwain	Improvement Officer
R. Randall	Engineering Manager, unit 1
M. Schimmel	Unit 2 Manager - Work Control/Outage
V. Schuman	Radiation Protection Manager, Unit 1
C. Skinner	Licensing Engineer
D. Topley	Acting Unit 1 Plant Manager

INSPECTION PROCEDURE USED

71152 Identification and resolution of problems

ITEMS OPENED, CLOSED, AND UPDATED

Opened and Closed

05000220&05000410/2000-003-001 NCV	Failure to follow procedure to initiate Deviation/Event Reports. (Section 4OA1.1)
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Closed

05000410/2000-002	LER	Manual Reactor Trip (Section 4OA4.1)
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LIST OF ACRONYMS USED

CAP	Corrective Action Program
CARB	Corrective Action Review Board
CARE	Corrective Action Effectiveness Review
CEP	Commitment To Excellence
COR	Contamination Occurrence Report
DER	Deviation/Event Report
EER	Exposure Evaluation Report
EP	Emergency Preparedness
EPTTS	EP Task Tracking System
LER	Licensee event Report
NCV	Non-Cited Violation
NMP	Nine Mile Point
NRC	Nuclear Regulatory Commission
PID	Problem Identification
QA	Quality Assurance
RVDT	Rotary Variable Differential Transformer
SER	Safeguards Event Report

LIST OF LICENSEE PROGRAM DOCUMENTS REVIEWED

NIP-ECA-01, Deviation/Event Report, Revision 18
 NIP-ECA-02, Root Cause Evaluations, Revision 04
 NIP-ECA-05, Self-Assessment, Revision 01
 NDD-ECA, Evaluation and Corrective Action, Revision 10
 NIP-ECA-04, Quality First program, Revision 03
 QAP-ASU-18.10, Nuclear Audit Program, Revision 11
 GAP-PSH-01, Work Control, Revision 21
 Administrative Guide on Work Control PID Screening Evaluation Process
 GAP-MAI-05, Preventive Maintenance Program, Revision 07
 S-SAP-16.0, Commitment To Excellence Program, Revision 05

ATTACHMENT 1

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety

- Occupational
- Public

Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.