April 30, 2004

Mr. James Spina
Vice President Nine Mile Point
Nine Mile Point Nuclear Station, LLC
P. O. Box 63
Lycoming, NY 13093

SUBJECT: NINE MILE POINT NUCLEAR STATION - SUPPLEMENTAL INSPECTION FOR WHITE PERFORMANCE INDICATOR REPORT 05000410/2004006

Dear Mr. Spina:

On March 18, 2004, the NRC completed a supplemental inspection at the Nine Mile Point Nuclear Station (NMPNS) that included both onsite (March 8 to 12) and in-office (March 15 to 18) inspection activities. The enclosed report documents the results of the inspection, which were discussed with you and other members of your staff via telephone conference on March 18, 2004, and during a subsequent telephone call with Mr. G. Homna on April 28, 2004.

The NRC performed this supplemental inspection to assess your activities to address the NMPNS Unit 2 unplanned scrams performance indicator (PI) crossing the Green-White threshold in the third quarter of 2003. The NMPNS Unit 2 Unplanned scrams PI last crossed the Green-White threshold in the fourth quarter of 2001. The purpose of this inspection was to assure that the causes of the performance issues associated with this PI crossing the Green-White threshold were understood, the extent of condition had been identified, and that corrective actions were sufficient to prevent recurrence. Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," was used as guidance for the inspection.

Based on the results of this inspection, no findings of significance were identified. Therefore, consistent with NRC Inspection Manual Chapter (IMC) 305, the performance indicator was removed from consideration in the assessment process as of January 2004, when the calculated indicator returned to a Green characterization.

Notwithstanding, the inspectors identified several weaknesses in NMPNS's review regarding inadequacies in the root cause evaluation, the extent of condition review, and the corrective actions. Also, the inspectors determined that, although a cause evaluation was conducted and predominant contributing causes were identified, your cause evaluation was not sufficiently thorough or detailed to explain or address why the NMPNS Unit 2 unplanned scram PI had again crossed the Green-White threshold. We plan to review your actions to address these weaknesses during a subsequent inspection.

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 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/

Lawrence T. Doerflein, Chief
Systems Branch
Division of Reactor Safety

Docket No. 50-410
License No. NPF-69

Enclosure: Inspection Report No. 05000410/2004006
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos:	50-410
License Nos:	NPF-69
Report No:	05000410/2004006
Licensee:	Nine Mile Point Nuclear Station, LLC (NMPNS)
Facility:	Nine Mile Point Units 1 and 2
Location:	P.O. Box 63 Lycoming, New York 13093
Dates:	March 8 - 18, 2004
Inspectors:	F. Bower, Sr. Reactor Inspector, DRS J. O'Hara, Resident Inspector, DRP
Approved by:	Lawrence T. Doerflein, Chief Systems Branch Division of Reactor Safety

ENCLOSURE

SUMMARY OF FINDINGS

IR 05000410/2004-006, on 3/8-18/04, Nine Mile Point Unit 2; Supplemental Inspection of unplanned reactor scrams. Inspection Procedure 95001, Inspection for One or Two White inputs in a Strategic Performance Area.

This inspection was conducted by one regional inspector and one resident inspector and included one week of onsite inspection and a second week of in-office inspection. Two unresolved items were identified. 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.

Findings for the Initiating Events Cornerstone :

The NRC performed this supplemental inspection to assess NMPNS evaluation of the White PI associated with the Unit 2 scrams. This supplemental inspection assessed NMPNS's problem identification, cause evaluation and corrective actions associated with the Unit 2 unplanned scram performance indicator (PI). Based on the results of this inspection, no findings of significance were identified. Therefore, consistent with IMC 0305, the PI was removed from consideration in the assessment process as of January 2004, when the calculated indicator returned to a Green characterization.

Overall, the inspectors concluded that NMPNS adequately addressed the problem identification attributes of IP 95001. Regarding the cause evaluation, NMPNS used systematic evaluation methods to identify and validate the common cause affinity categories. Notwithstanding, the inspectors identified several weaknesses in NMPNS's review of the issue. In particular, the NMPNS cause evaluation did not: (1) fully develop of the human performance evaluation; (2) thoroughly evaluate why the recurring trend of Unit 2 unplanned scrams was not identified for evaluation at a precursor level; (3) thoroughly evaluate why the 2002 corrective actions were untimely and ineffective to prevent recurrence of the adverse trend of the Unit 2 unplanned reactor scrams PI; and, (4) thoroughly evaluate the identified causes collectively for indications of higher level problems. The current trending program was too new for the inspectors to determine that it would be meaningful to correlate and validate if the predominant causes identified were indicative of higher level problems or a site-wide trend.

With regard to corrective actions, the NMPNS cause evaluation did not address the current effectiveness measure trends or the completion status of the existing initiatives intended to address the five predominant causes. Although the planned corrective actions for four of the five predominate causes appeared reasonable, the inspectors concluded that none of the corrective actions were fully developed or implemented and could not be assessed at the time of this inspection. Methods had not been established to validate the effectiveness of the corrective actions required to address the causal factors of the recurring adverse trend of the Unit 2 unplanned reactor scrams PI.

Report Details

01 INSPECTION SCOPE (IP 95001)

The U.S. Nuclear Regulatory Commission (NRC) performed this supplemental inspection in accordance with NRC Inspection Procedure (IP) 95001, Inspection For One or Two White Inputs in a Strategic Performance Area, to assess NMPNS's problem identification, cause evaluation and corrective actions associated with the Unit 2 unplanned scram performance. This performance issue was characterized as "White" in the third quarter 2003 performance indicators after four unplanned scrams occurred at Unit 2 in the previous four quarters while accumulating 8019.5 critical reactor-hours of operation.

02 EVALUATION OF INSPECTION REQUIREMENTS

02.01 Problem Identification

a. Determination of who identified the issue and under what conditions

The White unplanned reactor scrams performance indicator (scrams PI) was self revealing through NMPNS collection of PI data taken in support of the NRC's reactor oversight program (ROP). Each of the four unplanned reactor scrams that caused the PI to cross the Green-White threshold were also self-revealing.

b. Determination of how long the issue existed, and prior opportunities for identification

The inspectors noted that the Licensee Event Reports (LERs) had identified root causes for each of the four most recent unplanned reactor scrams. The Deviation/Event Reports (DERs) documented root and contributing causes, determinations of how long the conditions that led to the reactor trips existed and prior opportunities to identify the conditions for the four unplanned reactor scrams. The LERs and DERs reviewed are listed in Attachment 1.

The inspectors determined that there were prior opportunities for identification. Specifically, the inspectors noted that the Unit 2 unplanned reactor scrams PI previously crossed the Green-White threshold in the fourth quarter of 2001 after four Unit 2 unplanned reactor scrams occurred between May and December 2001. The inspectors noted that some of the causes identified following the 2002 evaluation (DER 2001-5931) were similar to current causes. While evaluating the most recent event (DER 2003-3577), NMPNS concluded that the actions taken to address the causes identified for the first event (DER 2001-5931) were either untimely or had been ineffective. The inspectors noted that the recurring trend of Unit 2 unplanned scrams was not identified in a DER at a precursor level for investigation before the PI was characterized as "White."

c. Determination of the plant-specific risk consequences (as applicable) and compliance concerns associated with the issue

The LER for each reactor scram documented the qualitative or quantitative plant-specific risk significance. The risk associated with the unplanned scrams PI crossing the Green-White threshold was determined to be of low to moderate (White) risk. However, when assessed individually, each reactor scram was of very low risk significance (Green).

The inspectors determined that the LERs for each recent unplanned scram were closed and were dispositioned from an enforcement perspective in NRC Inspection Reports (IR) 50-410/2003-004, 50-410/2003-006 and LER 50-410/2003-002-00 will be closed and dispositioned from an enforcement perspective in IR 50-410/2004-002.

Overall, the inspectors concluded that NMPNS adequately addressed the problem identification attributes of IP 95001; therefore, no further inspection of the problem identification attributes is required.

02.02 Root Cause and Extent of Condition Evaluation

a. Evaluation of method(s) used to identify root cause(s) and contributing cause(s).

To determine the extent of condition and to identify common, underlying problems leading to the Unit 2 unplanned reactor scrams PI crossing the Green-White threshold, NMPNS reviewed the 17 combined unplanned scrams that occurred over the previous five years (from January 1999 to August 2003) at both Unit 1 and Unit 2. The results of this review were evaluated and documented in DER 2003-3577. The inspectors noted that DER 2003-3577 identified contributing causes that were not previously developed in the DERs and LERs for the four most recent unplanned reactor scrams. NMPNS used an "Affinity Analysis" method, to organize and summarize the collective significance of the previously-identified and newly-identified causes of each of the 17 scrams into 11 common cause affinity categories. The 11 identified affinity categories identified were: (1) single point vulnerability resolution; (2) corrective action effectiveness; (3) operating experience use; (4) risk management; (5) change management; (6) technical information use; (7) maintenance work practices; (8) preventive maintenance optimization; (9) parts; (10) grid disturbances; and, (11) foreign material exclusion. NMPNS Administrative Instruction (NAI)-ECA-10, Volume 2 of 3, Attachment 5, Cause Road Map, was used to validate the conclusions of the affinity analysis.

NMPNS performed a "Gap Analysis" by reviewing the corrective action program (CAP) for ongoing corrective actions that would partly address the common causes identified by the affinity analysis that led to Unit 2 crossing the Green-White threshold for the unplanned reactor scrams PI. NMPNS identified inadequate programs and processes and also identified missing or ineffective corrective actions ("gaps") that required the development of additional corrective actions required to resolve the predominant contributing causes of the unplanned reactor scrams. This information was presented in a matrix (attached to DER 2003-3577) for illustrative purposes. NMPNS concluded that

the following five (5) affinity category common causes were the predominant contributing causes, with gaps in the existing corrective actions and initiatives, which required seven (7) additional actions to fully resolve: (1) single point vulnerability resolution; (2) corrective action effectiveness; (3) operating experience use; (4) risk management; and, (5) change management. NMPNS's analysis concluded, but did not demonstrate, that these five predominant causes subsumed the six remaining common cause affinity categories.

The inspectors concluded that NMPNS used systematic evaluation methods to identify and validate the 11 common cause affinity categories contributing to unplanned scrams over the last five years.

b. Level of detail of the root cause evaluation

The inspectors concluded that sufficient information was gathered to support the affinity analysis process and allowed NMPNS to develop meaningful insights into the underlying causes of the unplanned reactor scrams.

The DER disposition process required by procedure NIP-ECA-01, Deviation/Event Report, directs the evaluation of human performance errors as potential contributing causes. Specific human performance aspects reviewed in DER 2003-3577 included: (1) individual, team or organization induced errors; (2) error drivers; (3) flawed assessment capability; (4) human performance tools; (5) flawed defenses; and, (6) latent organization weaknesses. Causes and cause codes were identified in each of these areas. In all, 14 unique cause codes were identified to facilitate trending. Initially, the causal analysis in DER 2003-3577 was not sufficiently detailed to document the reasoning for determining which identified causes were elevated to predominant contributing causes requiring corrective actions and why other identified causes, in particular, human error related causes were not elevated to the predominant causes requiring corrective actions.

During this inspection, DER 2003-3577 was revised to document NMPNS's conclusion that the corrective actions identified to resolve the five predominant causal factors were anticipated to address the human performance issues identified during the DER disposition process; however, no basis for this conclusion was provided. The inspectors reviewed meeting minutes from a Corrective Action Review Team (CART) meeting where an earlier revision of the disposition of DER 2003-3577 was reviewed. The CART concluded that the human performance evaluation was not developed. The inspectors concluded that the human performance evaluation in the current disposition and NMPNS's conclusion that existing corrective actions will address outstanding human performance problems had not been not fully developed. This issue is addressed further in the unresolved item documented in Section 02.02.d.

c. Consideration of prior occurrences of the problem and knowledge of prior operating experience

The NMPNS Unit 2 unplanned reactor scrams PI last crossed the Green-White threshold in the fourth quarter of 2001. An inspection of that event was conducted in accordance with NRC Inspection Procedure 95001 and was documented in IR 50-410/2002-009. The inspection concluded that the RCA was acceptable and the planned CAs were adequate but not implemented. DER 2003-3577 recognized this previous occurrence and noted that the event had been evaluated in DER 2-2001-5931. The inspectors noted that some of the causes for the fourth quarter 2001 and the third quarter 2003 White PI events were similar. At the beginning of this onsite inspection period, an effectiveness review of DER 2-2001-5931 had not been completed as required by NIP-ECA-01. The effectiveness review completed on March 9, 2004, concluded that the corrective actions identified in DER 2-2001-5931 were untimely and ineffective to prevent recurrence of crossing the Green-White threshold for the unplanned reactor scrams PI for Unit 2. This was consistent with the cause evaluation documented in DER 2003-3577. The inspectors verified the issues associated with the untimely effectiveness reviews and ineffective and untimely corrective actions were documented in DER 2004-896 and DER 2004-891 and entered into the CAP.

The inspectors observed that the cause evaluation in DER 2003-3577 did not explain why the corrective action program and the previous corrective actions specified to preclude the recurrence of the Unit 2 unplanned reactor scrams crossing the Green-White threshold were ineffective. The inspectors noted that DER 2003-3577 was also not sufficiently detailed to explain why the recurring trend of Unit 2 unplanned scrams (3 scrams in 7000 hrs) was not identified at a precursor level for evaluation before the PI was characterized as “White” following the August 14, 2003, loss of grid event. The evaluation also did not explain why the current planned and ongoing corrective actions were expected to prevent future recurrence. Discussions with site personnel indicated that NMPNS was relying on the current management team to ensure that ongoing and planned initiatives to address recurrent unplanned scrams at Unit 2 were effective and completed in a timely manner.

The inspectors also noted that the ineffective use of operational experience was identified as one of the five predominant contributing causes for unplanned reactor trips. In particular, the evaluation noted that operating experience had suggested that the industry has effectively used the implementation of scram reduction committees to reduce scram vulnerabilities. DER 2003-3577 stated that the implementation of a scram reduction committee at NMPNS was planned since previous committees lost momentum and dissolved during periods of minimal scrams in the 1997 - 1998 period. The inspectors concluded that the causal analysis in DER 2003-3577 provided an adequate evaluation of recurrent equipment problems and operating experience.

d. Consideration of potential common cause(s) and extent of condition of the problem

Based on their evaluations, NMPNS determined that there were multiple predominant contributing causes for the 17 unplanned reactor scrams over the previous five years.

The evaluation limited the extent-of-condition review to the DERs for the 17 scrams. However, the evaluation concluded that the causes of this adverse PI trend affected the site. DER 2003-3577 also identified that the evaluation (DER 2003-0235) of an adverse trend in the number of scrams with a loss of normal heat removal and a site-wide performance-based focused self-assessment (FSA-2003-59) conducted by NMP and industry personnel from September 22 to October 3, 2004, identified similar areas in need of improvement. The evaluation assumed that, except for the corrective actions specified by DER 2003-3577 to address corrective action gaps, existing site improvement initiatives would address the affinity category common causes and obviate the need for additional corrective actions to address site-wide problems. The inspectors concluded that the evaluation did not adequately explain why the current planned and ongoing corrective actions were expected to resolve the adverse site trends resulting from the predominant contributing causes of unplanned reactor scrams.

As described above, NMPNS's DER disposition process drives the identification of cause codes to facilitate trending. The DER process is managed through the use of an electronic system. Administrative Instruction (NAI)-ECA-10, Volume 2 of 3, Attachment 5, Cause Road Map, was used to identify cause codes and link the codes to each of the identified predominant contributing causes to enable future trending. The inspectors noted that the software for the electronic corrective action program (e-CAP) is limited to accepting three cause trend codes. The inspectors observed that DER 2003-3577 initially had only one cause code entered to facilitate future site-wide trending. The DER was revised during the inspection and three of the 14 identified cause codes were entered into the e-CAP. The inspectors observed that the scope of the review was limited to scrams; therefore, the inspectors could not determine that the evaluation collectively reviewed all causes for indications of higher level problems. After reviewing trend data reports and discussing them with site personnel, the inspectors concluded that the current site trending program was too new to provide data that would be meaningful to correlate and validate if the predominant causes identified in DER 2003-3577 were indicative of higher level problems or a site-wide trend.

The scope of the cause evaluation was limited to unplanned scrams; therefore, the inspectors could not determine that the evaluation collectively reviewed all causes for indications of higher level problems. The inspectors concluded that the evaluation did not adequately explain why the current planned and ongoing corrective actions were expected to resolve the adverse site trends resulting from the predominant contributing causes of unplanned reactor scrams. The inspectors concluded that the current trending program was too new to independently provide data that would be meaningful to correlate and validate if the predominant causes identified in DER 2003-3577 were indicative of higher level problems or a site-wide trend.

The inspectors concluded that NMPNS used systematic evaluation methods to identify and validate the 11 affinity categories contributing to unplanned scrams over the last five years. Nonetheless, the inspectors determined that the cause evaluation did not: (1) fully develop of the human performance evaluation; (2) thoroughly evaluate why the recurring trend of Unit 2 unplanned scrams was not identified for evaluation at a precursor level; (3) thoroughly evaluate why the 2002 corrective actions were untimely

and ineffective to prevent recurrence of the adverse trend of the Unit 2 unplanned reactor scrams PI; and, (4) thoroughly evaluate the identified causes collectively for indications of higher level problems. Pending further NMPNS evaluation and NRC reinspection to assess their adequacy, these issues will remain unresolved **(URI 05000410/2004006-01)**.

02.03 Corrective Actions

a. Appropriateness of corrective action(s)

Corrective actions were identified for each of the four most recent scrams and were evaluated during the closure of the LER associated with each of the four unplanned reactor scrams.

As described in Report Section 02.02.a, NMPNS used an affinity analysis method, to organize and summarize the collective significance of the identified causes for the 17 unplanned scrams that occurred over the last five years into 11 common cause affinity categories. NMPNS reviewed the CAP to identify gaps in ongoing performance improvement initiatives and corrective actions that needed to be addressed with additional actions to correct the five (5) predominant contributing causes:

- single point vulnerability resolution;
- corrective action effectiveness;
- operating experience use;
- risk management; and,
- change management.

NMPNS concluded that sufficient ongoing initiatives and corrective actions were in place to resolve the remaining six of 11 affinity categories of common causes or these common causes would be addressed by the seven planned CAs documented in the gap analysis (DER 2003-3577).

Based on the results of their gap analysis, NMPNS identified seven (7) new corrective actions, in DER 2003-3577, which were required to fill the gaps and provide resolution to prevent recurrence of the five predominant contributing causes. The evaluation identified the ties between the five predominant contributing causes and the seven corrective actions to fill the gaps. The existing and ongoing corrective actions that would partly address these contributing causes were not initially identified or included in DER 2003-3577. During the inspection, DER 2003-3577 was revised to identify the following ongoing initiatives previously developed to address the five predominant causes:

- single point vulnerability study;
- corrective action program improvement;
- risk management; and,
- change management.

DER 2003-3577 did not address the current status or effectiveness trends of these initiatives.

DER 2003-3577 was also revised to identify the following ongoing initiatives previously developed to address the remaining 6 of 11 common causes identified by the affinity analysis but not identified as predominant contributing causes:

- maintenance improvement;
- configuration management; and,
- preventive maintenance optimization.

The inspectors observed that DER 2003-3577 did not address the completion status of these initiatives or the current trends of the effectiveness measures for these initiatives. Since NMPNS did not consider that these initiatives were corrective actions for the predominant contributing causes identified in DER 2003-3577, the inspectors did not review these initiatives.

The corrective action section of DER 2003-3577 identified a plan to form a Scram Prevention Team (SPT) with a goal of achieving improved performance within two years as measured by objective indicators. The SPT was identified as an "enhancement." DER 1-2004-591 documented that the scram prevention effort had identified that human performance was a significant cross-cutting weakness contributing to scrams and precursor events that occurred at NMPNS. Since the activity was not identified as a required corrective action and insufficient information had been developed, the inspectors did not assess the planned SPT enhancement. The inspectors' review of the actions identified to correct the five predominant causal factors identified in DER 2003-3577 is documented below:

(1) Contributing Cause: Single point vulnerabilities (SPVs) have not been identified and resolved (65 percent of scrams).

Corrective Action: In DERs 2003-4321 and 2003-3577, NMPNS identified actions to: (a) conduct a single point vulnerability assessment; (b) define criteria for selecting the best intervention (modification, preventive maintenance, procedure revisions, etc.) to address identified SPVs; (c) compile the SPV process in a NMP Single Point Vulnerability document; and (d) Implement the corrective actions resolve the vulnerabilities identified by the SPV study or and minimize the risk of the vulnerabilities.

Status: The due dates for the identified actions are: (a) January 30, 2005; (b and c) April 1, 2004; and, (d) April 30, 2007.

Assessment: The inspectors concluded that these planned corrective actions were reasonable and adequate to address the SPV predominant contributing cause.

(2) Contributing cause: The true causes of events have not been adequately identified leading to corrective actions that did not prevent recurrence (50 percent of scrams). Numerous assessments over the years have concluded that the NMPNS CAP has been marginally effective and repeated attempts have not fully resolved the problem.

Corrective Action: In DERs 2003-2463 and 2003-3577, NMPNS identified actions to: (a) implement the Assessment and Corrective Action Improvement Plan (ACAIP); and, (b) provide general supervisors and senior managers training on Critical Thinking and Kempner-Tregoe techniques.

Status: The due dates for the identified actions are: (a) September 30, 2004; and, (b) July 30, 2004.

Assessment: The inspectors observed that the ACAIP references actions in over 12 DERs dating back to 2001. The many of these actions were reported complete in 2003, with a planned self-assessment of the trending tools used at the station being the last action due in September 2004. The training for general supervisors and senior managers was intended to ensure organizational alignment on a common site-wide problem solving process and to enforce its consistent use. The inspectors noted that this corrective action was similar to action item 5 evaluated in IR 2003-009. The inspectors concluded that the broad long-term planned corrective action to implement the ACAIP was a reasonable approach to the ineffective corrective actions predominant contributing cause; however, since the actions were not complete their adequacy could not be assessed.

(3) Contributing cause: The use of Operational Experience has not been effective (40 percent of scrams). The Operational Experience program does not require identification the potential risk significance of incoming OE, which results in all the OE getting a common classification and standard evaluation due date.

Corrective Action: In DER 2003-3577, NMPNS identified actions to: (a) develop a process and procedure for a graded approach to OE categorization based upon probability and consequence.

Status: Corrective actions are scheduled to be completed by May 28, 2004.

Assessment: During a review of the corrective actions for DER 2002-5314 and LER 50-410/2002-006-00, the inspectors observed that adding LERs to the OE review process was one identified corrective action. The inspectors reviewed NDD-ECA, Evaluation and Corrective Action, and NIP-ECA-06, Operational Experience Program, to verify that the corrective action had been proceduralized. The inspectors identified that although the corrective action was reported as complete, the required review of LERs for OE had not been proceduralized. The inspectors concluded that the corrective action was ineffectively implemented and incomplete. NMPNS initiated procedure

enhancement requests to have these changes made. Overall, the inspectors concluded that NMPNS's planned corrective actions to develop a process and procedure for a graded approach to OE categorization based upon probability and consequence were reasonable and adequately addressed the ineffective use of operational experience predominant contributing cause.

(4) Contributing cause: The management of risk has not been adequately applied at all appropriate levels (35 percent of the scrams).

Corrective Action: In DER 2003-3577, NMPNS identified actions to: (a) develop and implement a risk management process for decision making during station activities, other than maintenance, to include OE and DER screening, DER dispositions, budget process, RFO scope control, PM deferrals, etc.; and, (b) develop and implement a guideline for the use in the maintenance risk management procedure (GAP-OPS-117) that includes suggested compensatory actions and OE review. During this inspection period, action (a) was revised to specify development and implementation of a risk management process for decision making during station activities, other than maintenance, to include OE review, budget process, RFO scope control, PM deferrals, System Health Report development, etc. During discussions, NMPNS stated that the risk management of DER screening and dispositions would be addressed by the actions specified to address cause 2, above.

Status: Both of these corrective actions are scheduled to be completed by May 30, 2004.

Assessment: The scope and intent of the planned CAs were not clearly defined. Therefore, the inspectors concluded that these planned corrective actions were not sufficiently developed nor implemented and the adequacy of the actions could not be assessed during this inspection period.

(5) Contributing cause: Change management has been inadequate (25 percent of scrams).

Corrective Action: In DERs 2003-4307 and 2003-3577, NMPNS identified actions to: (a) develop and implement a more detailed change management process similar to processes used by industry peers; (b) ensure that ownership and accountability are established; and, (c) ensure the change management process is implemented as a requirement for all site changes including organizational changes.

Status: Corrective actions are scheduled to be completed by May 30, 2004.

Assessment: The inspectors observed that a change management process previously existed at NMPNS as a recommendation institutionalized in an administrative instruction. NMPNS plans to establish the change management process as a procedure requirement for all site changes, including organizational

changes. The inspectors concluded that the planned corrective actions were reasonable and adequate to address the inadequate change management predominant contributing cause; however, since the action was not fully developed nor implemented, the action could not be fully assessed.

b. Prioritization of corrective actions

Based on discussions with NMPNS personnel, the inspectors determined that the NMPNS CAP does not individually prioritize the corrective actions identified. The corrective actions are prioritized at the same significance level as the DER. DER 2003-3577 was prioritized as Category 1, the most significant level for issues that are considered safety significant or a significant condition adverse to quality. The inspectors concluded that this categorization was appropriate.

c. Establishment of a schedule for implementing and completing the corrective actions

The inspectors noted that no immediate corrective actions were specified. The inspectors verified that the seven (7) new planned corrective actions identified in DER 2003-3577 were assigned to appropriate individuals or organizations to ensure that the actions were taken in a timely manner. No significant concerns were identified regarding the schedule established for implementing the corrective actions for the five predominate contributing causes.

d. Establishment of quantitative or qualitative measures of success for determining the effectiveness of the corrective actions to prevent recurrence

The inspectors observed that the corrective actions, in the revised version of DER 2003-3577 provided to the inspectors on March 15, were modified to include sub-actions requiring the development of methods to assess the effectiveness of the actions specified to correct each of the predominant contributing causes. The inspectors concluded that the methods had not been established to measure and validate the effectiveness of the corrective actions or the overall corrective action plan; therefore, these effectiveness measures could not be assessed during this inspection period.

The inspectors observed that DER 2003-3577 did not address the current effectiveness measure trends or the completion status of the existing initiatives intended to address the five predominant causes. The inspectors concluded that the planned corrective actions appeared reasonable to address four of the five predominant contributing causes. The scope and intent of the CAs to address the risk management cause required further development. Nonetheless, the inspectors concluded that none of the corrective actions were fully developed or implemented and the adequacy of corrective action implementation could not be fully assessed. The inspectors concluded that the methods had not been established to measure and validate the effectiveness of the corrective actions or the overall corrective action plan required to address the causal factors of the recurring adverse trend of the Unit 2 unplanned reactor scrams PI.

Pending further NMPNS evaluation and NRC reinspection to assess their adequacy, these issues will remain unresolved **(URI 05000410/2004006-02)**.

03 MANAGEMENT MEETINGS

Exit Meeting Summary

The interim results of this inspection were discussed at an inspection debrief conducted at the end of the onsite inspection period on March 12, 2004, with Mr. L. Hopkins and other members of the NMPNS staff. The preliminary results of this inspection were discussed at an exit meeting conducted via telephone at the end of the in-office inspection period on March 18, 2004, with Mr. J. Spina and other members of the NMPNS staff. A subsequent telephone call was conducted on April 28, 2004, with Mr. Homna to discuss the changes to the preliminary results of the inspection. No proprietary information was received as part of this inspection.

ATTACHMENT 1
SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Nine Mile Point Nuclear Station

J. Spina, Site Vice President
L. Hopkins, Plant General Manager
R. Abbott, Technical Advisor\SORC Chairman
R. Godley, Operations Manager
T. Maund, Manager - Work Control/Outage Management
D. Topley, Manager - Assessment & Corrective Action
B. Randall, Assistant to Manager - Engineering Services
W. Holston, Manager - Engineering Services
K. Picciott, Manager - Performance Improvement
S. Leonard, General Supervisor - Licensing
D. Vandeputte, Licensing Engineer
S. Naron, Control Room Supervisor (SPV)
P. Chabot, Consultant (Scram Reduction)
P. Doran, General Supervisor - Systems Engineering
E. Zumwalt, Engineering Services

Nuclear Regulatory Commission

J. Trapp, Chief, Projects Branch 1
G. Hunegs, Sr. Resident Inspector
B. Fuller, Resident Inspector
E. Knutson, Resident Inspector
V. Rodriguez, Reactor Engineer

LIST OF ITEMS OPENED AND CLOSED

Opened and Closed

50-410/04-06-01	URI	The assessment of the adequacy of NMPNS's cause evaluation will remain unresolved pending reinspection to verify: (1) full development of the human performance evaluation; (2) thorough evaluation of why the recurring trend of Unit 2 unplanned scrams was not identified for evaluation at a precursor level; (3) thorough evaluation of why the 2002 corrective actions were untimely and ineffective to prevent recurrence of the adverse trend of the Unit 2 unplanned reactor scrams PI; and, (4) thorough that identified causes were collectively reviewed for indications of higher level problems. (Section 02.02)
50-410/04-06-02	URI	The assessment of the adequacy of NMPNS's corrective actions will remain unresolved pending reinspection to verify the

adequacy of the development of corrective actions and measures of effectiveness the corrective actions required to address the causal factors of the recurring adverse trend of the Unit 2 unplanned reactor scrams PI. (Section 02.03)

LIST OF ACRONYMS

ACAIP	Assessment and Corrective Action Improvement Plan
CAP	Corrective Action Program
CART	Corrective Action Review Team
CFR	Code of Federal Regulations
DERs	Deviation/Event Reports
e-CAP	electronic corrective action program
FSA	Focused Self-Assessment
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	NRC Inspection Report
LER	Licensee Event Report
NAI	NMPNS Administrative Instruction
NDD	Nuclear Division Directive
NIP	NMPNS Nuclear Interface Procedure
NMPNS	Nine Mile Point Nuclear Station
NRC	Nuclear Regulatory Commission
OE	Operational Experience
PARS	Publicly Available Records
PDR	NRC Public Document Room
PI	Performance Indicator
PM	Preventive Maintenance
RCA	Root Cause Analysis
RFO	Refueling Outage
ROP	NRC's Reactor Oversight Program
Scrams PI	Unplanned Reactor Scrams Performance Indicator
SDP	Significance Determination Process
SPT	Scram Prevention Team
SPV	Single Point Vulnerability

DOCUMENTS REVIEWED

Licensee Event Reports

LER 02-04, Reactor Trip Due to Main Steam Isolation Valve Failure, January 7, 2003
LER 02-06, Reactor Scram Due to Loss of Generator Stator Cooling, February 14, 2003
LER 03-01, Oscillation Power Range Scram due to Power and Flow Perturbations Resulting from Power Supply Failure, September 22, 2003
LER 03-02, Reactor Scram due to Electric Grid Disturbance, October 14, 2003

Deficiency/Event Reports

DER 2003-3577, Unit 2 Unplanned Scrams Performance Indicator Will Become White, August 14, 2003
Attachment, Affinity Analysis Matrix
Attachment, Affinity Analysis Summary
Attachment, Affinity Analysis of DERs
DER 2002-4811, Reactor Scram Due to MSIV Isolation\Failure, November 11, 2002
DER 2002-5314, Reactor Scram Due High Stator Water Temperature, December 16, 2002
DER 2003-3227, Oscillation Power Range Monitor (OPRM) Scram due to Feedwater Power Supply Failure, July 24, 2003
DER 2003-3520, Reactor Scram due to Offsite Grid Instabilities, August 15, 2003
DER 2003-0235, Adverse Trend in Loss of Normal Heat Removal Scrams, November 11, 2002
DER 2-2001-5931, Unit 2 Unplanned Scrams Performance Indicator Will Become White, December 17, 2001
Attachment: Category 2 RCA, Collective Significance Analysis of Nine Mile Point Unit 2 Scrams (1995-2001), July 9, 2002
Attachment: Marathon Consulting Group Inc., Nine Mile Point Unit 2, Scram Rate Performance Report
DER 2004-891, Corrective Action Effectiveness Review for DER 2-2001-5931 Determined that the DER was Ineffective in Preventing a Recurrence of the NRC Indicator for Unplanned Scrams going White, March 9, 2004 *****
DER 1-2004-591, Review of DER 2003-2174, Unexpected Half Scram, by Scram Prevention Team Identified that Human Performance Issues were Not Addressed which Resulted in the Half Scram Receipt, February 13, 2004
DER 2003-4325, Inconsistent Compliance with Design and Configuration Requirements for Emergent Issues, October 3, 2003
DER 2004-896, Corrective Action Effectiveness Reviews Not Completed in a Timely Manner, March 9, 2004 *****
DER 3-2004-831, Corrective Action Effectiveness Review for DER 2001-4830 Determined that Implementation of Corrective Actions for MSIV Isolation Due to Performance of N2-ISP-MSS-R102 were Inadequate, March 3, 2004
DER 2003-87, New Area of Improvement in Operating Experience Management, January 9, 2003
DER 2003-4321, New Area of Improvement Identified During Focus Self-assessment, in the Area of Vulnerabilities to Long-term Reliability and Availability of Important Plant Equipment, October 3, 2003

DER 2003-2463, Focus Self-Assessment "Nuclear Safety Culture" Identified an Opportunity for Improvement in the Area of Timely and Effective Implementation of Corrective Actions, May 22, 2003
Future Procedure Enhancement Request for NDD-ECA, Evaluation and Corrective Action, to Include Applicability Reviews of Industry LERs, March 10, 2004 ***** [NIP-PRO-04, Attachment 4]
Future Procedure Enhancement Request for NIP-ECA-06, Operational Experience Program, to Include Applicability Reviews of Industry LERs, March 10, 2004 ***** [NIP-PRO-04, Attachment 4]

Note: " ***** " Indicates DER was generated as part of the inspection process.

Corrective Action Effectiveness Reviews

Corrective Action Effectiveness Review (CAER) for DER 2002-4811, March 8, 2004
CAER for DER 2-2001-5931, March 9, 2004

NMPNS Procedures (Technical Specifications Required)

Nuclear Interface Procedure (NIP)-ECA-01, Deviation/Event Report, Revision 32, February 26, 2004

NMPNS Instructions and Guidelines

NIP-ECA-02, Root Cause Evaluations, Revision 5, June 19, 2002
Nuclear Division Directive (NDD)-ECA, Rev. 13, August 23, 2003
NMPNS Administrative Instruction (NAI)-ECA-10, Vol. 1 of 3, Dispositioning Deviation/Event Reports, Revision 02, October 1, 2002
NAI-ECA-10, Vol. 2 of 3, Cause Evaluations, Rev. 01, February 24, 2004
NAI-ECA-06, Corrective Action Effectiveness Reviews, Rev. 00, August 2, 2000
NAI-ECA-04, Performance Improvement Review Board, Rev. 09, January 15, 2004
NAI-ECA-05, DER Screening Committee, Revision 08, November 3, 2003
Generation Administrative Procedure (GAP)-OPS-117, Integrated Risk Management, Revision 00, August 25, 2003
Administrative Instruction NAI-ECA-12, Trending, Revision 1, June 23, 2003

Performance Indicators

NMP Level 1 Significant Events PI for January 2004
NMP Significant Human Performance Events PI for January 2004
NMP Significant Equipment Events PI for January 2004
NMP Significant Events Near Misses PI for January 2004
NMP Site Scorecard DER Backlog Review PI for January 2004
NMP Site Scorecard Timeliness Completion of Cat I Issues PI for January 2004
NMP Unit 2 NRC Performance Indicator for Unplanned Scrams, 4th quarter 2003,
NMP Unit 1 and 2 Single Point Vulnerability System Review Performance, February 2004, (PI measures SPV reviews started and completed per Unit)

Miscellaneous NMPNS Documents

Functional Self-Assessment (FSA)-2003-59, Nine Mile Point Industry Style Self-Assessment, September 22 - October 3, 2003
Executive Summary
Area for Improvement (AFI) CM.2-1, Configuration Management
AFI PI.1-2, Performance Improvement
AFI PI.2-1, Performance Improvement
AFI OR.3-1, Organizational Effectiveness
AFI OR.2-2, Organizational Effectiveness

Single Point Vulnerabilities Study (Associated with DER NM-2003-4321)

Assessment and Corrective Action Improvement Plan, Revision 8, March 1, 2004

Minutes of the Corrective Action Review Team (CART) held on September 18, 2003, to review the Cause Analysis for DER 2003-3577, Unit 2 Unplanned Scrams Performance Indicator Will Become White, August 14, 2003

Minutes of the Corrective Action Review Team (CART) held on July 15, 2003, to review the Cause Analysis for DER 2003-0235, Adverse Trend in Loss of Normal Heat Removal Scrams, November 11, 2002

Minutes of the Corrective Action Review Team (CART) held on July 9, 2002, to review the Cause Analysis for DER 2-2001-5931, Unit 2 Unplanned Scrams Performance Indicator Will Become White, December 17, 2001

NRC Documents

NRC Inspection Report (IR) 50-410/02-009, Supplemental Inspection for White Performance Indicator, October 7, 2002

Inspection Procedure (IP) 95001, Inspection For One or Two White Inputs in a Strategic Performance Area, May 23, 2003