



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

May 7, 2009

Mr. Keith J. Polson
Vice President Nine Mile Point
Nine Mile Point Nuclear Station, LLC
P.O. Box 63
Lycoming, NY 13093

**SUBJECT: NINE MILE POINT NUCLEAR STATION - NRC INTEGRATED INSPECTION
REPORT 05000220/2009002 AND 05000410/2009002**

Dear Mr. Polson:

On March 31, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Nine Mile Point Nuclear Station, Units 1 and 2. The enclosed inspection report documents the inspection results which were discussed on April 15, 2009, with Mr. Sam Belcher, Plant General Manager, 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.

This report documents three self-revealing findings of very low safety significance (Green). All of the findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they are entered into your corrective action program (CAP), the NRC is treating these findings as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV noted in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U. S. Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region I; Office of Enforcement; U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Senior Resident Inspector at Nine Mile Point Nuclear Station. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Senior Resident Inspector at Nine Mile Point Nuclear Station. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

K. Polson

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

Sincerely,

/RA/

Glenn T. Dentel, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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

Enclosure: Inspection Report 05000220/2009002 and 05000410/2009002
w/Attachment: Supplemental Information

cc w/encl:

M. Wallace, Vice - Chairman, Constellation Energy
H. Barron, President, CEO & Chief Nuclear Officer, Constellation Energy Nuclear Group
C. Fleming, Esquire, Senior Counsel, Nuclear Generation, Constellation Energy Group, LLC
M. Wetterhahn, Esquire, Winston & Strawn
T. Syrell, Director, Licensing, Nine Mile Point Nuclear Station
F. Murray, President and CEO, New York State Energy Research and Development Authority
A. Peterson, SLO Designee, New York State Energy Research and Development Authority
P. Eddy, New York State Department of Public Service
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
Supervisor, Town of Scriba
P. Church, Oswego County Administrator
T. Judson, Central NY Citizens Awareness Network
D. Katz, Citizens Awareness Network
G. Detter, Manager, Nuclear Safety and Security, Constellation Energy

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-220, 50-410

License No.: DPR-63, NPF-69

Report No.: 05000220/2009002; 05000410/2009002

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

Facility: Nine Mile Point, Units 1 and 2

Location: Oswego, NY

Dates: January 1 through March 31, 2009

Inspectors: E. Knutson, Senior Resident Inspector
D. Dempsey, Resident Inspector
N. Perry, Senior Project Engineer
J. Furia, Senior Health Physicist
S. Shaffer, Senior Resident Inspector
M. Marshfield, Resident Inspector
B. Haagensen, Resident Inspector
J. Hawkins, Project Engineer

Approved By: Glenn T. Dentel, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000220/2009002, 05000410/2009002; 01/01/2009 - 03/31/2009; Nine Mile Point Nuclear Station, Units 1 and 2; Maintenance Risk Assessment and Surveillance Testing.

The report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. Three Green findings, all of which were non-cited violations (NCVs), were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process (SDP)." The cross cutting aspect for each finding was determined using IMC 0305 "Operating Reactor Assessment Program." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. A self-revealing non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified when use of an inadequate maintenance procedure resulted in unanticipated partial closure of Unit 1 main steam isolation valve (MSIV) 01-01. The troubleshooting procedure did not identify that the valve would move in the closed direction when power was reapplied to the control circuit. As immediate corrective action, the control circuit was deenergized to stop further closure of the MSIV and power was reduced to 97 percent. The issue was entered into the corrective action program (CAP) as condition report (CR) 2009-442.

The finding was more than minor because it was similar to example 4.b in Inspection Manual Chapter (IMC) 0612, Appendix E, in that it challenged stability of the plant due to closure of the MSIV and resulted in a power reduction to 97 percent. The finding was associated with the procedure quality attribute of the Initiating Events cornerstone and adversely affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was evaluated in accordance with IMC 0609, Attachment 4, and determined to be of very low safety significance because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not screen as potentially risk significant due to external events. The finding had a cross-cutting aspect in the area of problem identification and resolution because Nine Mile Point Nuclear Station did not implement internal operating experience from 2001, concerning the response of a mid-positioned MSIV to reapplication of control circuit power, in the MSIV troubleshooting procedure (P.2.b per IMC 0305). (Section 1R22)

Cornerstone: Mitigating Systems

- Green. A self-revealing non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified when inadequate instructions for maintenance that had previously been performed on the Unit 2 residual heat removal (RHR) system were found to have allowed the accumulation of voids in the 'C' RHR pump suction line, the combined volume of which could have potentially affected the operability of the pump. As immediate corrective action, the 'C' RHR pump suction line was filled and vented. After the void volume had been sufficiently reduced to allow pump operation, the 'C' RHR pump quarterly surveillance was performed to sweep out the remaining voids. This issue was entered into the corrective action program (CAP) as condition report (CR) 2009-457.

The finding was more than minor because it was similar to example 3.k in Appendix E of Inspection Manual Chapter (IMC) 0612, in that there was a reasonable doubt on the operability of the 'C' RHR system because the as-found condition exceeded the industry standard limit for operability. The finding was associated with the procedure quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was evaluated in accordance with IMC 0609, Attachment 4, and determined to be of very low safety significance because the finding was not a design or qualification deficiency, did not represent a loss of a system/train safety function, and did not screen as potentially risk significant due to external events. This finding had a cross-cutting aspect in the area of problem identification and resolution because the susceptibility of the RHR pump discharge lines to voiding was identified in 1999 and reflected in plant procedures, but this internal operating experience was not incorporated into the 2008 maintenance procedure (P.2.b per IMC 0305). (Section 1R13)

- Green. A self-revealing non-cited violation (NCV) of Technical Specification (TS) 5.4, "Procedures," was identified on January 30, 2009, when operators did not align the Unit 2 Division 2 Standby Liquid Control (SLC) system in accordance with the surveillance procedure and establish a pump discharge flow path. As a result, following pump start, the pump discharge relief valve lifted due to high system pressure and the valve subsequently required replacement due to excessive seat leakage. As immediate corrective action for this event, the SLC pump was secured and the system was returned to its normal standby alignment to support further testing. The issue was entered into the corrective action program (CAP) as condition report (CR) 2009-548.

The finding was more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance because the finding was not a design or qualification deficiency, did not represent a loss of a system/train safety function, and did not screen as potentially risk significant due to external events. This finding had a cross-cutting aspect in the area of human performance because the operators did not effectively use human error prevention techniques such as pre-job briefing, self and peer checking, and proper documentation of activities (H.4.a per IMC 0305). (Section 1R22)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Nine Mile Point Unit 1 began the inspection period at full rated thermal power (RTP). On January 31, power was reduced to 80 percent for a control rod pattern adjustment. Power was restored to full RTP the following day. On February 25, power was reduced to 42 percent to locate and plug leaking main condenser tubes. Power was restored to full RTP the following day. Unit 1 entered coast down on March 1 and was shutdown to commence refueling outage (RFO) 20 on March 21. Unit 1 remained shutdown for the remainder of the inspection period.

Nine Mile Point Unit 2 began the inspection period at full RTP. On February 7, power was reduced to 50 percent to alternate operating main feedwater pumps and to perform single control rod scram time testing. Power was restored to full RTP the following day. With the exception of planned power reductions for main turbine valve testing, Unit 2 operated at full RTP for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdown (71111.04Q - Six samples)

a. Inspection Scope

The inspectors performed partial system walkdowns to verify risk-significant systems were properly aligned for operation. The inspectors verified the operability and alignment of these risk-significant systems while their redundant trains or systems were inoperable or out of service for maintenance. The inspectors compared system lineups to system operating procedures, system drawings, and the applicable chapters in the updated final safety analysis report (UFSAR). The inspectors verified the operability of critical system components by observing component material condition during the system walkdown.

The following plant system alignments were reviewed:

- Unit 1 containment spray system 122 while containment spray system 121 was inoperable for planned maintenance;
- Unit 1 emergency diesel generator (EDG) 102 while EDG 103 was inoperable for emergent maintenance to repair a fuel oil system leak;
- Unit 1 reactor building closed loop cooling system in the drywell, based on high risk significance, infrequent access, and historic material condition issues;
- Unit 1 shutdown cooling system during the RFO, due to high shutdown risk significance;
- Unit 2 low pressure core spray (LPCS) system due to increased risk significance while

- the high pressure core spray (HPCS) system was inoperable for maintenance; and
- Unit 2 Division 1 EDG while the Division 2 EDG was inoperable for planned maintenance.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown (71111.04S - One sample)

a. Inspection Scope

The inspectors performed a complete walkdown of the Unit 2 HPCS system to identify discrepancies between the existing equipment configuration and that specified in the design documents. During the walkdown, system drawings and operating procedures were used to determine the proper equipment alignment and operational status. The inspectors reviewed the open maintenance work orders (WOs) that could affect the ability of the system to perform its functions. Documentation associated with temporary modifications, operator workarounds, and items tracked by plant engineering were also reviewed to assess their collective impact on system operation. In addition, the inspectors reviewed the condition report (CR) database to verify that equipment alignment problems were being identified and appropriately resolved.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q - Eleven samples)

a. Inspection Scope

The inspectors toured areas important to reactor safety to evaluate the station's control of transient combustibles and ignition sources, and to examine the material condition, operational status, and operational lineup of fire protection systems including detection, suppression, and fire barriers. The inspectors evaluated fire protection attributes using the criteria contained in Unit 1 UFSAR Appendix 10A, "Fire Hazards Analysis," and Unit 2 procedure N2-FPI-PFP-0201, "Unit 2 Pre-Fire Plans." The areas inspected included:

- Unit 1 cable spreading room, turbine building (TB) 250 foot elevation;
- Unit 1 TB 250 foot elevation;
- Unit 1 main steam isolation valve room, TB elevation 261 foot;
- Unit 1 EDG 102 room;
- Unit 1 reactor building (RB) 237 foot elevation;
- Unit 1 RB 261 foot elevation;
- Unit 1 RB 281 foot elevation;
- Unit 2 RB 175 foot elevation;

- Unit 2 RB 196 foot elevation;
- Unit 2 RB 215 foot elevation; and
- Unit 2 RB 240 foot elevation.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

.1 Annual Heat Sink Performance (71111.07A - Two samples)

a. Inspection Scope

The inspectors reviewed eddy current test reports for the Unit 1 EDG 102 and EDG 103 jacket water heat exchangers, performed in accordance with NDEP-ET-8.0, "Eddy Current Examination of Non-ferromagnetic Heat Exchanger Tubing." The inspectors also reviewed operating performance data to verify that the operation of these heat exchangers was consistent with their design basis as specified in the UFSAR.

The inspectors observed and reviewed the results of performance testing of the Unit 1 loop 12 emergency condensers, performed in accordance with N1-ST-V19, "Heat Removal Capability Test At High Power." The inspectors verified that operation of these heat exchangers was consistent with their design basis as specified in the UFSAR.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11)

.1 Quarterly Review (71111.11Q - Two samples)

a. Inspection Scope

The inspectors evaluated two simulator scenarios in the licensed operator requalification training (LORT) program. The inspectors assessed the clarity and effectiveness of communications, the implementation of appropriate actions in response to alarms, the performance of timely control board operation, and the oversight and direction provided by the shift manager. During the scenario, the inspectors also compared simulator performance with actual plant performance in the control room. The following scenarios were observed:

- On February 10, 2009, the inspectors observed Unit 1 LORT to assess operator and instructor performance during a scenario involving an average power range monitor (APRM) failure, pressure oscillations due to malfunction of the electronic pressure regulator, loss of power board 101 and resultant loss of the 13 reactor recirculation pump, and a failure of the mechanical pressure regulator that resulted in a reactor scram. The inspectors evaluated the performance of risk significant operator actions

including the use of special operating procedures (SOPs) and emergency operating procedures (EOPs).

- On February 12, 2009, the inspectors observed Unit 2 LORT to assess operator and instructor performance during a scenario involving a control rod drifting in the outward direction that led to a stuck control rod, a reactor recirculation flow control valve drifting open, and a main generator trip with a reactor scram and loss of feedwater. The inspectors evaluated the performance of risk significant operator actions including the use of SOPs and EOPs.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12 - Three samples)

a. Inspection Scope

The inspectors reviewed performance-based problems and the performance and condition history of selected systems to assess the effectiveness of the maintenance program. The inspectors reviewed the systems to ensure that the station's review focused on proper maintenance rule scoping in accordance with 10 CFR Part 50.65, characterization of reliability issues, tracking system and component unavailability, and 10 CFR Part 50.65 (a)(1) and (a)(2) classification. In addition, the inspectors reviewed the site's ability to identify and address common cause failures and to trend key parameters. The following maintenance rule inspection samples were reviewed:

- Unit 1 vital 125 volt direct current system based on replacement of batteries 11 and 12 during the RFO;
- Unit 1 core spray system based on degraded performance of two core spray topping pumps; and
- Unit 2 residual heat removal (RHR) system based on keepfill pump reliability issues.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors evaluated the effectiveness of the maintenance risk assessments required by 10 CFR Part 50.65 (a)(4). The inspectors reviewed equipment logs, work schedules, and performed plant tours to verify that actual plant configuration matched the assessed configuration. Additionally, the inspectors verified that risk management actions for both planned and emergent work were consistent with those described in station procedures. The inspectors reviewed risk assessments for the activities listed below.

- Week of January 26, that included liquid poison system quarterly surveillance, emergency service water (SW) system quarterly surveillance, main steam isolation valve partial stroke quarterly surveillance, a power reduction to 80 percent for a control rod pattern adjustment, and emergent maintenance to repair 13 instrument air compressor and a power reduction to 95 percent to support troubleshooting of a main steam isolation valve (MSIV) that failed to reopen during partial stroke testing.
- Week of March 2, that included liquid poison system monthly surveillance, channel 12 recirculation flow loop calibration and flow converter calibration, placement of new reactor fuel in the spent fuel pool, and emergent maintenance to correct tripping of two of three off-gas system chillers, level control oscillations with the 13 feedwater heater string due to an air leak with a level control valve, and a malfunctioning flow instrument for the 112 containment spray raw water system.
- Week of March 9, that included 112 and 122 core spray pump quarterly surveillances, 103 EDG monthly surveillance, installation of a new vent valve in the shutdown cooling system, 11 high pressure coolant injection (HPCI) quarterly surveillance, turbine stop valve closure quarterly surveillance, and emergent issues to address low differential pressure for the 112 and 122 core spray topping pumps.

Unit 2

- Week of January 26, that included HPCS system quarterly surveillance, Division 2 EDG monthly surveillance, installation of a temporary desiccant air dryer in the instrument air system, 'C' RHR system quarterly surveillance, Division 2 standby liquid control (SLC) system quarterly surveillance, and emergent activities to eliminate voiding identified in the 'C' RHR suction line.
- Week of March 9, that included a power reduction to 86 percent for turbine valve/reactor protection system quarterly surveillance, main steam tunnel differential temperature instrument quarterly surveillance, maintenance on the 'B' SW pump and discharge strainer, and emergent issues to eliminate voids that were identified in the 'C' RHR and LPCS pump suction lines and to address the unexpected opening of a turbine bypass valve during turbine valve testing.
- Week of March 16, that included LPCS quarterly surveillance, Division 1 EDG monthly surveillance, calibration of the APRM system using the traversing in-core probe system, redundant reactivity control system quarterly surveillances, Division 1 SLC system quarterly surveillance, and emergent maintenance on the 'B' instrument air compressor (IAC) while the 'A' IAC was in a degraded condition.

b. Findings

Introduction. A self-revealing NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified on January 27, 2009, when inadequate instructions for maintenance that had been performed on the Unit 2 RHR system on December 30, 2008, were found to have allowed the accumulation of voids in

the 'C' RHR pump suction line, the combined volume of which could have potentially affected the operability of the pump.

Description. In 1993, NMPNS removed the internals from check valves in the RHR pump minimum flow return lines to the suppression pool. The minimum flow lines return water to the suppression pool via divisionally common full flow test return lines. Portions of these lines are physically above the normal water level of the suppression pool. In 1999, NMPNS identified that this piping configuration, along with the check valve modification and the normally open position of the minimum flow valves, resulted in a system configuration that could allow a portion of the pump discharge lines to drain to the suppression pool under some conditions. Specifically, if one of the full flow test return valves was opened while both of the associated divisional RHR pumps were secured (as is done during periodic valve testing), water in the portion of the full flow test return line that was above the level of the suppression pool would drain back to the suppression pool through the associated minimum flow line and idle RHR pump. To prevent this from occurring, NMPNS established procedural controls to shut the minimum flow valves prior to opening the full flow test return valves under no flow conditions.

On December 30, 2008, maintenance was performed on the 'B' RHR full flow test return valve, 2RHS*FV38B, which included cycling the valve open and closed. The documents that controlled this activity did not require that the associated minimum flow valve, 2RHS*MOV4B, be closed during the maintenance. This allowed a void to form in the 'B' RHR pump discharge line. On January 2, 2009, the 'B' RHR pump was run for a quarterly surveillance, which caused a portion of the void to be transferred to the 'C' RHR pump suction line via the minimum flow line.

On January 27, 2009, while performing ultrasonic examinations of emergency core cooling system suction lines as follow-up to actions taken in accordance with NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," NMPNS identified voids in the 'C' RHR pump suction line. The total void volume was 12.34 cubic feet. The current industry standard for allowable voiding without a case-specific analysis is a 10 percent void fraction, which in this case, translates to approximately eight cubic feet.

The 'C' RHR system was declared inoperable. As immediate corrective action, the 'C' RHR pump suction line was filled and vented. After the void volume had been sufficiently reduced to allow pump operation, the 'C' RHR pump quarterly surveillance was performed to sweep out the remaining voids. This issue was entered into the CAP as CR 2009-457. A subsequent case-specific analysis demonstrated that the 'C' RHR system had been operable while the 12.34 cubic foot void was present.

Analysis. The performance deficiency associated with this event was that NMPNS did not provide adequate instructions for performance of maintenance on the 'B' RHR full flow test return valve to preclude void formation in the system. Specifically, the work package did not require closure of the 'B' RHR pump minimum flow valve prior to operation of the 'B' RHR full flow test return valve. The finding was more than minor because it was similar to example 3.k in IMC 0612, Appendix E, in that there was a reasonable doubt on the operability of the 'C' RHR system because the as found condition exceeded the industry standard limit for operability. The finding was associated with the procedure quality

attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was evaluated in accordance with IMC 0609, Attachment 4, and determined to be of very low safety significance (Green) per the SDP Phase one determination because the finding was not a design or qualification deficiency, did not represent a loss of a system/train safety function, and did not screen as potentially risk significant due to external events.

The finding had a cross-cutting aspect in the area of problem identification and resolution because the susceptibility of the RHR pump discharge lines to voiding was identified in 1999 and reflected in plant procedures, but this internal operating experience was not incorporated into the 2008 maintenance procedure (P.2.b per IMC 0305).

Enforcement. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances . . ." Contrary to the above, on December 30, 2008, instructions for maintenance on the 'B' RHR full flow test return valve, 2RHS*FV38B, were not appropriate to the circumstances, in that the instructions did not direct closure of the associated RHR pump minimum flow valve, 2RHS*MOV4B prior to the maintenance activity, thereby allowing the formation of a void in the 'B' RHR system. Some portion of this void was subsequently transferred to the 'C' RHR pump suction line by operation of the 'B' RHR pump, and resulted in a condition that challenged the operability of the 'C' RHR pump. Because this violation was of very low safety significance and was entered into the CAP as CR 2009-457, this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. **(NCV 05000410/2009002-01, Inadequate Maintenance Instructions Result in Residual Heat Removal System Voiding)**

1R15 Operability Evaluations (71111.15 - Seven samples)

a. Inspection Scope

The inspectors evaluated the acceptability of operability evaluations, the use and control of compensatory measures, and compliance with technical specifications (TSs). The evaluations were reviewed using criteria specified in NRC Regulatory Issue Summary 2005-20, "Revision to Guidance Formerly Contained in NRC Generic Letter 91-18, 'Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability'," and Inspection Manual Part 9900, "Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety." The inspectors' review included verification that the operability determinations were made as specified by Procedure CNG-OP-1.01-1002, "Conduct of Operability Determinations / Functionality Assessments." The technical adequacy of the determinations was reviewed and compared to the TSs, UFSAR, and associated design basis documents (DBDs). The following evaluations were reviewed:

- CR 2009-326 concerning low raw water outlet pressure for the Unit 1 containment spray heat exchanger 112 during the performance of N1-ST-Q6C, "Containment Spray System Loop 112 Quarterly Operability Test;"

- CR 2009-442 concerning the operability of Unit 1 MSIV 01-01 after it failed to reopen during partial stroke testing;
- CR 2009-1240 concerning continued operability of Unit 1 core spray topping pump 112 after the pump differential pressure was found to be in the required action range low;
- CR 2009-1296 concerning the effect of through-wall pipe leakage downstream of Unit 1 feedwater heater relief valve PSV-30-04G on HPCS system operability;
- CR 2009-457 concerning voids in the Unit 2 'C' RHR pump suction line;
- CR 2009-1271 concerning a void in the Unit 2 LPCS pump suction line; and
- CR 2009-1317 concerning operability of the Unit 2 main turbine bypass system after a turbine bypass valve opened in response to closure of a turbine control valve during the performance of surveillance procedure N2-OSP-RPS-Q001, "RPS Turbine Stop Valve Closure Logic Control Valve Fast Closure Scram Functional Tests and Turbine Valve Cycling."

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18 - Two samples)

.1 Temporary Modifications

a. Inspection Scope

The inspectors reviewed one Unit 2 temporary modification, engineering change package supplement EC 20080024-001, "Install a Temporary Air Dryer in the Instrument Air System." The air dryer was installed to allow continued system operation while a permanent modification was installed to replace the original refrigerant air dryers with updated desiccant air dryers. The plant remained at power during the installation of the permanent modification, which was the fundamental requirement for temporary modification to maintain the air system operational during the transition. The inspectors reviewed the 10 CFR Part 50.59 screening against the system design bases documentation to verify that the modification did not affect system operability. The inspectors reviewed the vendor manual modification package and vendor specifications for the temporary air dryer and its planned operation to verify that the modification would not adversely impact plant operations and maintained UFSAR required system operating parameters.

b. Findings

No findings of significance were identified.

.2 Permanent Modifications

a. Inspection Scope

The inspectors reviewed one Unit 1 permanent plant modification, Design Change N1-08-025, "Installation of Sand Separator Pressure Gages." The purpose of this change was to optimize the air tightness of the service water pump seals by installing new sand

separators with pressure gages to monitor separator effectiveness. The inspectors reviewed the associated 10 CFR Part 50.59 screening against service water system design basis information, including the UFSAR and TS. The inspectors verified that post installation tests were adequate and that NMPNS controlled the modification in accordance with station procedures.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19 - Ten samples)

a. Inspection Scope

The inspectors reviewed the post maintenance tests (PMTs) listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure were consistent with information in the applicable licensing basis and/or design basis documents (DBDs), and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data, to verify that the test results adequately demonstrated restoration of the affected safety functions.

- Unit 1, WO 09-04381-00 that replaced shutdown cooling system return line check valve 38-12. The PMT was to perform a leak rate test in accordance with N1-ST-C13, "Reactor Shutdown Cooling System Valve Leakage Test."
- Unit 1, WO 09-03769-00 that removed biological fouling from the casing and suction of containment spray raw water pump 121. The PMT was to demonstrate operability through performance of N1-ST-Q6B, "Containment Spray System Loop 121 Quarterly Operability Test."
- Unit 1, WO 09-04216-00 that cleaned the internals of containment spray raw water/core spray intertie check valve 93-62 after the valve failed a reverse flow test. The PMT was to demonstrate operability through performance of N1-ST-Q28, "Containment Spray Raw Water Inter Tie Check Valve Quarterly Operability Test."
- Unit 1, WO 08-10421-00 that refurbished 12 emergency service water pump. The PMT was to demonstrate operability through performance of N1-ST-V14, "Service Water Check Valve and Emergency Service Water Pump and Check Valve Test."
- Unit 2, WO 08-18271-00 that replaced the motor operated potentiometer for the Division III EDG. The PMT was to confirm the time to rated speed and to demonstrate stable volt-amperes reactive in accordance with N2-OSP-EGS-M@002, "Diesel Generator and Diesel Air Start Valve Operability Test - Division III."
- Unit 2, WO 06-22384-00 that replaced the full core display logic power supply. During this maintenance, the rod select matrix was deenergized, thereby making a reactor

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scram the only means available to move control rods; additionally, the control rod drive scram accumulator trouble alarms and the rod block monitor were inoperable. The PMT was to measure the direct current output voltage and alternating current ripple, measure the output current, and verify that power was restored to the rod block monitor, in accordance with the WO step text.

- Unit 2 troubleshooting plan to eliminate voids in the 'C' RHR suction line, as discussed in CR 2009-457. The PMT was to demonstrate system operability through performance of the quarterly surveillance, N2-OSP-RHS-Q@006, "RHR System Loop C Pump and Valve Operability Test and System Integrity Test."
- Unit 2, WO 08-03513-00 that cleaned the internals of the Division 1 control building chiller condensing water pump discharge check valve, 2SWP*V240A. The PMT was to demonstrate operability in accordance with N2-OSP-SWP-Q@001, "Division 1 Service Water Operability Test."
- Unit 2, WO 09-02513-00 that replaced the Division 2 SLC pump discharge relief valve, 2SLS*V2B. The PMT was to demonstrate seat tightness at design operating pressure through performance of N2-OSP-SLS-Q001, "Standby Liquid Control Pump, Check Valve, Relief Valve Operability Test and ASME XI Pressure Test."
- Unit 2, WO 08-00944-00 that replaced the worm and worm gear in the motor actuator of test return to suppression pool valve 2RHS*V38B. The PMT consisted of a diagnostic test performed in accordance with S-EPM-GEN-063, "Limitorque MOV Testing."

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20)

.1 Unit 1 Refueling Outage

a. Inspection Scope

The inspectors observed and/or reviewed the following Unit 1 RFO activities to verify that operability requirements were met and that risk, industry experience, and previous site-specific problems were considered. The RFO was in progress at the end of the inspection period.

- The inspectors reviewed the outage schedule and procedures, and verified that TS-required safety system availability was maintained and shutdown risk was minimized. The inspectors verified that, when specified by NMPNS procedure NIP-OUT-01, "Shutdown Safety," contingency plans existed for restoring key safety functions.
- The inspectors observed portions of the plant shutdown and cooldown on March 21, and verified that the TS cooldown rate limits were satisfied.

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- Through plant tours, the inspectors verified that NMPNS maintained and adequately protected electrical power supplies to safety-related equipment and that TS requirements were met.
- The inspectors verified proper alignment and operation of shutdown cooling and other decay heat removal systems. The verification also included reactor cavity and fuel pool makeup paths and water sources, and administrative control of drain down paths.
- The inspectors verified that requirements for refueling operations were met through refuel bridge observations, control room panel walkdowns, and discussions with Operations Department personnel.
- The inspectors performed an “as-found” walkdown of the drywell to identify evidence of reactor coolant system (RCS) leakage and assess the condition of drywell structures, piping, and supports.

These activities constituted a portion of one sample as defined by Inspection Procedure 71111.20, with completion to be documented in inspection report 05000220/2009003 and 05000410/2009003.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - Ten samples)

a. Inspection Scope

The inspectors witnessed performance of and/or reviewed test data for risk-significant surveillance tests (STs) to assess whether the components and systems tested satisfied design and licensing basis requirements. The inspectors verified that test acceptance criteria were clear, demonstrated operational readiness and were consistent with the DBDs; that test instrumentation had current calibrations and the range and accuracy for the application; and that tests were performed, as written, with applicable prerequisites satisfied. Upon test completion, the inspectors verified that equipment was returned to the status specified to perform its safety function.

The following STs were reviewed:

- N1-ST-Q26, "Feedwater and Main Steam Line Power Operated Isolation Valves Partial Exercise Test and Associated Functional Testing of Reactor Protection System Trip Logic;"
- N1-ST-Q1B, "CS [core spray] 121 Pump, Valve and SDC Water Seal Check Valve Operability Test;"
- N1-ISP-LRT-TYC, "Type 'C' Containment Isolation Valve Leak Rate Test," for MSIV 01-03;

- N1-ISP-LRT-TYC, "Type 'C' Containment Isolation Valve Leak Rate Test," for torus vacuum relief valves 68-07 and 68-10;
- N1-ST-Q6C, "Containment Spray System Loop 112 Quarterly Operability Test;"
- N1-ISP-032-008, "Reactor Recirculation Flow Loop Calibration;"
- N1-ST-M1A, "Liquid Poison Pump 11 Operability Test;"
- N2-OSP-SWP-Q@001, "Division 1 SW Operability Test;"
- N2-OSP-RHS-Q@004, "RHR System Loop A Pump and Valve Operability Test and System Integrity Test and ASME XI Pressure Test;" and
- N2-OSP-SLS-Q001, "SLC Pump, Check Valve, Relief Valve Operability Test and ASME XI Pressure Test."

This represented a total of ten inspection samples, of which three were Routine Surveillance, five were In-Service Testing, and two were Leak Rate Testing as defined by Inspection Procedure 71111.22.

b. Findings

.1 Inadequate Procedure for Main Steam Isolation Valve Troubleshooting

Introduction. A self-revealing Green NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified on January 26, 2009, when use of an inadequate maintenance procedure resulted in unanticipated partial closure of Unit 1 main steam isolation valve (MSIV) 01-01 and required operators to reduce power to 97 percent. The troubleshooting procedure did not identify that the valve would move in the closed direction when power was reapplied to the control circuit. As immediate corrective action, the control circuit was deenergized to stop further closure of the MSIV.

Description. On January 26, 2009, control room operators were attempting to perform surveillance procedure N1-ST-Q26, "Feedwater and Main Steam Line Power Operated Isolation Valves Partial Exercise Test and Associated Functional Testing of Reactor Protection System Trip Logic," Revision 06. To perform the MSIV partial exercise, operators utilize a test feature which is installed in the valve control circuit. When the test switch is placed in the test position for a given MSIV, and the MSIV control switch is taken to the close position, the valve closes by seven percent and then automatically returns to the full open position. When this portion of the test was attempted on MSIV 01-01, the valve closed to the seven percent closed position, but failed to automatically reopen. Operators attempted to fully open the valve using the control switch, but this was not successful. When the valve had closed to the seven percent position, reactor pressure increased by three pounds per square inch (psi), which was still within the normal operating band.

Investigation revealed that the power lead to the coil for the open contactor had become disconnected. This prevented the coil from energizing to reopen the valve. A plan was developed to reattach the power lead; this involved deenergizing the control circuit by opening its supply breaker, reconnecting the power lead, and then re-closing the supply breaker. After the power lead to the opening contactor coil had been reconnected, an operator established communications with the technician at the valve control circuit and closed the supply breaker. Although no system response had been anticipated with the restoration of power, the technician observed that the MSIV close coil had energized and

the MSIV began to close. As immediate corrective action, the control circuit was deenergized to stop further closure of the MSIV. The additional MSIV closure that occurred during this period caused reactor pressure to increase by an additional 5 psi. In response, control room operators reduced reactor power to 97 percent, thereby reducing reactor pressure back to within the normal operating band. Power was subsequently reduced to 95 percent to provide additional margin during further MSIV troubleshooting.

Subsequent investigation revealed that closure of a mid-positioned MSIV due to the reapplication of power to its control circuit had been identified as an expected system response in CR 2001-1420. The troubleshooting plan was revised to allow power to be restored to the valve control circuit and the valve to be reopened. The issue was entered into the corrective action program (CAP) as CR 2009-442.

Analysis. The inspectors determined that NMPNS's failure to identify that reapplication of control circuit power would result in closure of MSIV 01-01 was a performance deficiency. The finding was more than minor because it was similar to example 4.b in IMC 0612, Appendix E, in that it challenged stability of the plant due to closure of the MSIV and resulted in a power reduction to 97 percent. The finding was associated with the procedure quality attribute of the Initiating Events cornerstone and adversely affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was evaluated in accordance with IMC 0609, Attachment 4, and determined to be of very low safety significance (Green) per the SDP Phase one determination because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, and did not screen as potentially risk significant due to external events. The finding had a cross-cutting aspect in the area of problem identification and resolution because NMPNS did not implement internal operating experience from 2001, concerning the response of a mid-positioned MSIV to reapplication of control circuit power, in the MSIV troubleshooting procedure (P.2.b per IMC 0305).

Enforcement. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances . . ." Contrary to the above, on January 26, 2009, the procedure that was developed by NMPNS for troubleshooting the failure of MSIV 01-01 to automatically return to the fully open position during the conduct of surveillance procedure N1-ST-Q26, "Feedwater and Main Steam Line Power Operated Isolation Valves Partial Exercise Test and Associated Functional Testing of Reactor Protection System Trip Logic," Revision 06, was not appropriate to the circumstances, in that it did not account for MSIV motion in the closed direction that would occur when power was restored to the valve control circuit. This resulted in unexpected additional valve closure and subsequent operator actions to reduce reactor power. Because this violation was of very low safety significance and was entered into the CAP as CR 2009-442, this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. **(NCV 05000220/2009002-02, Inadequate Procedure for Main Steam Isolation Valve Troubleshooting)**

.2 Failure to Properly Perform Standby Liquid Control System Surveillance

Introduction. A self-revealing Green NCV of TS 5.4, "Procedures," was identified on January 30, 2009, when operators did not align the Unit 2 Division 2 SLC system in accordance with the surveillance procedure and establish a pump discharge flow path. As a result, following pump start, the pump discharge relief valve lifted due to high system pressure and the valve subsequently required replacement due to excessive seat leakage.

Description. On January 30, 2009, operators were attempting to perform surveillance N2-OSP-SLS-Q001, "SLC Pump, Check Valve, Relief Valve Operability Test and ASME XI Pressure Test," Revision 00900, for the Division 2 SLC pump. When the pump was started, operators observed that the discharge pressure was abnormally high, and noted that the pump was making abnormal noises. After approximately 45 seconds, the pump was stopped.

Investigation revealed that the system alignment as specified by the surveillance procedure had not been established prior to starting the pump, and that the pump had no discharge flow path. As a result, the pump discharge relief valve had lifted and was directing flow back to the pump suction. The cause of the improper system alignment was that incorrect portions of the procedure had been marked as "not applicable" when the procedure had been prepared to test only the Division 2 portion of the system. The procedure had been prepared by a previous shift and had not been verified by the shift that performed the test.

Following system restoration, the surveillance test was performed at design system pressure to verify that the pump discharge relief valve had not been damaged. The test results indicated that the pump discharge relief valve was leaking by its seat. The valve was replaced and the surveillance test was completed satisfactorily. The issue was entered into the CAP as CR 2009-548.

Analysis. The inspectors determined that NMPNS's failure to operate of the Division 2 SLC system in accordance with the applicable surveillance procedure was a performance deficiency. The finding was more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely affected the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was evaluated in accordance with IMC 0609, Attachment 4, and determined to be of very low safety significance (Green) per the SDP Phase one determination because the finding was not a design or qualification deficiency, did not represent a loss of a system/train safety function, and did not screen as potentially risk significant due to external events.

The finding had a cross-cutting aspect in the area of human performance because the operators did not effectively use human error prevention techniques such as pre-job briefing, self and peer checking, and proper documentation of activities (H.4.a per IMC 0305).

Enforcement. TS 5.4, "Procedures," states, in part, "Written procedures shall be established, implemented, and maintained covering . . . the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978 . . ." Regulatory Guide 1.33, Revision 2, Appendix A, February 1978, states, in part, ". . .

implementing procedures are required for each ST, inspection, or calibration listed in the TSs," and lists 'liquid poison system' (also referred to therein as 'SLC system') tests under applicable tests. Contrary to the above, on January 30, 2009, the Division 2 SLC system was not operated in accordance with surveillance procedure N2-OSP-SLS-Q001, "SLC Pump, Check Valve, Relief Valve Operability Test and ASME XI Pressure Test," Revision 00900, in that the system alignment as specified by the surveillance procedure was not established prior to starting the pump, such that the only discharge flow path that was available was through the discharge relief valve. Because this violation was of very low safety significance and was entered into the CAP as CR 2009-548, this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. **(NCV 05000410/2009002-03, Failure to Properly Perform Standby Liquid Control System Surveillance)**

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 - One sample)

a. Inspection Scope

The inspectors observed simulator and technical support center activities associated with the Unit 1 emergency planning drill on February 26, 2008. The scenario consisted of a seized reactor recirculation pump which resulted in core damage, a failure to scram, failure of the loop 11 emergency condensers, and a non-isolable tube rupture in an operating emergency condenser. The inspectors verified that emergency classification declarations and notifications were completed in accordance with 10 CFR Part 50.72, 10 CFR Part 50, Appendix E, and the Nine Mile Point emergency plan implementing procedures.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

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

a. Inspection Scope

The inspectors identified exposure significant work areas within radiation areas, high radiation areas, or airborne radioactivity areas in the plant and reviewed associated licensee controls and surveys of these areas to determine if controls (e.g., surveys, postings, barricades) were acceptable.

With a survey instrument, the inspectors walked down these areas or their perimeters to determine whether prescribed radiation work permits, procedure, and engineering controls were in place, whether licensee surveys and postings were complete and accurate, and whether air samplers were properly located.

The inspectors reviewed radiation work permits used to access these and other high radiation areas and identified what work control instructions or control barriers had been specified. The inspectors used plant-specific TS high radiation area requirements as the standard for the necessary barriers. The inspectors reviewed electronic personal dosimeter alarm set points (both integrated dose and dose rate) for conformity with survey indications and plant policy. The inspectors verified that workers knew what actions were required when their electronic personal dosimeter noticeably malfunctioned or alarmed.

Based on the licensee's schedule of work activities, the inspectors select three jobs being performed in radiation areas, airborne radioactivity areas, or high radiation areas for observation (reactor disassembly, N2 nozzle in-service inspection and drywell permanent shielding). The inspectors reviewed all radiological job requirements (radiation work permit requirements and work procedure requirements). The inspectors observed job performance with respect to these requirements. The inspectors evaluated whether radiological conditions in the work area were adequately communicated to workers through briefings and postings.

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

For high radiation work areas with significant dose rate gradients (factor of five or more), the inspectors reviewed the application of dosimetry to effectively monitor exposure to personnel.

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

During job performance observations, the inspectors observed radiation protection technician performance with respect to all radiation protection work requirements. The inspectors evaluated whether they were aware of the radiological conditions in their workplace and the radiation work permit controls/limits, and that their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

The inspector evaluated licensee performance against the requirements contained in 10 CFR Part 20, and Unit 1 TS 6.7.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed as low as reasonably achievable (ALARA) work activity evaluations, exposure estimates, and exposure mitigation requirements. The inspectors determined that the licensee had established procedures, engineering and work controls, based on sound radiation protection principles, to achieve occupational exposures that were ALARA. The inspectors determined that the licensee had reasonably grouped the radiological work into work activities, based on historical precedence, industry norms, and/or special circumstances.

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

Based on scheduled work activities and associated exposure estimates, the inspectors selected three work activities in radiation areas, airborne radioactivity areas, or high radiation areas for observation (as listed in Section 2OA1 above). The inspectors concentrated on work activities that present the greatest radiological risk to workers. The inspectors evaluated the licensee's use of ALARA controls for these work activities by evaluating the licensee's use of engineering controls to achieve dose reductions.

The inspectors observed radiation worker and RP technician performance during work activities being performed in radiation areas, airborne radioactivity areas, or high radiation areas. The inspectors concentrated on work activities that present the greatest radiological risk to workers. The inspectors evaluated whether workers demonstrated the ALARA philosophy and whether there were procedure compliance issues. The inspectors observed radiation worker performance and evaluated whether the training/skill level was sufficient with respect to the radiological hazards and the work involved.

The inspector evaluated licensee performance against the requirements contained in 10 CFR Part 20.1101.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation (71121.03 - One sample)

a. Inspection Scope

The inspectors verified the calibration expiration and source response check on radiation detection instruments staged for use. The inspectors observed radiation protection technicians for appropriate instrument selection and self-verification of instruments operability prior to use.

The inspector evaluated licensee performance against the requirements contained in 10 CFR Part 20.1501, 10 CFR Part 20.1703 and 10 CFR Part 20.1704.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (71122.01 - Three samples)

a. Inspection Scope

The inspectors reviewed appropriate program documents, procedures, and evaluations from NMPNS related to the radiological effluent controls program. These included: Offsite dose calculation manual (ODCM) revisions and associated technical justifications for ODCM changes; new or applicable procedures for the effluent programs; source terms and Part 61 analyses; evaluations of abnormal effluent discharges; 10 CFR Part 50.59 reviews; CAP and CRs; licensee event reports (LER), or special reports; and, self assessments and quality assurance audits.

The inspectors verified that each of the Radiological Effluent Controls Program requirements were being implemented as described in Radiological Effluent Technical Specifications (RETS).

For selected system modification, the inspectors reviewed changes to the liquid or gaseous radioactive waste system design, procedures, or operation as described in the UFSAR and plant procedures. Recently the licensee replaced several channels in the Unit 2 gaseous radiation monitoring system, which the inspectors verified as operable.

The inspectors reviewed changes to the ODCM made by the licensee since the last inspection. The inspectors reviewed changes to ensure consistency is maintained with respect to guidance in NUREG-1301, 1302 and 0133, and Regulatory Guides 1.109, 1.21 and 4.1.

The inspectors reviewed the Radiological Effluent Release Reports (one each for Units 1 and 2) since the last inspection. The inspectors independently assessed selected offsite dose calculations.

The inspectors reviewed the plant's correlation between the effluent release reports and the environmental monitoring results.

The inspectors walked-down selected components of the gaseous and liquid discharge systems.

The inspectors reviewed current system configuration with respect to the description in the UFSAR, temporary waste processing activities, system modifications and the equipment material condition. For equipment or areas that were not readily accessible, the inspectors reviewed the licensee's material condition surveillance records. The inspectors verified that any changes made to the liquid or gaseous waste systems were effective and maintained effluent releases ALARA.

The inspectors walked-down and reviewed selected point of discharge effluent radiation monitoring systems and flow measurement devices. The inspectors reviewed effluent radiation monitor alarm set point values for agreement with RETS/ODCM requirements. For changes to effluent radiation monitor set-point calculation methodology, the inspectors evaluated the basis for the changes to ensure an adequate justification.

The inspectors observed selected portions of the routine processing and discharge of radioactive gaseous effluent (including sample collection and analysis). The inspectors verified that appropriate treatment equipment was used and that the radioactive gaseous effluent was processed and discharged in accordance with RETS/ODCM requirements. The inspectors reviewed several radioactive gaseous effluent discharge permits, including the projected doses to members of the public.

The inspectors observed the routine processing and discharge of effluents (including sample collection and analysis).

The inspectors verified that appropriate effluent treatment equipment was being used and that radioactive liquid waste was being processed and discharged in accordance with procedure requirements. The inspectors observed the sampling and compositing of liquid effluent samples. The inspectors reviewed several radioactive liquid waste discharge permits, including a review of the projected doses to members of the public.

The inspectors reviewed a sample of effluent discharges made with effluent radiation monitors. The inspectors determined if appropriate compensatory sampling and radiological analyses were being conducted at the required frequency specified in the RETS/ODCM. For compensatory sampling methods, the inspectors verified that representative samples were being obtained. The inspectors determined that the facility was not routinely relying on the use of compensatory sampling in lieu of adequate system maintenance or calibration. The inspectors reviewed ST results on non-safety related ventilation and gaseous discharge systems. The inspectors reviewed the methodology the licensee uses to determine the stack and vent flow rates. The inspectors verified that the flow rates were consistent with RETS/ODCM or UFSAR values.

The inspectors determined that the licensee had not identified any non-radioactive systems that had become contaminated.

The inspectors reviewed instrument maintenance and calibration records associated with effluent monitoring equipment. The inspector reviewed quality control records for the radiation measurement instruments.

The inspectors evaluated the methods used to determine the isotopes that were included in the source term to ensure all applicable radionuclides were included, within detectability, in the source term, as appropriate.

The inspectors reviewed a selection of monthly, quarterly, and annual dose calculations to ensure that the licensee had properly demonstrated compliance with 10 CFR Part 50, Appendix I, and TS dose criteria.

The inspectors reviewed the records of any abnormal gaseous or liquid tank discharges, and determined that none had been made.

The inspectors verified that the licensee was maintaining adequate effluent sampling records.

The inspectors verified that problems identified by the licensee through audits, self assessments, and monitoring results were entered into the CAP. The inspectors evaluated whether the licensee implemented immediate and long term corrective actions to address the cause(s) for each identified issue.

The inspectors interviewed licensee staff and reviewed documents to determine if the follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk:

- Initial problem identification, including characterization and tracking;
- Disposition of operability/reportability issues;
- Evaluation of safety significance/risk and priority for resolution;
- Identification of repetitive problems;
- Identification of contributing causes;
- Identification and implementation of effective corrective actions;
- Resolution of NCVs tracked in the CAP;
- Implementation/consideration of risk significant operational experience feedback; and
- Emphasis should be placed on ensuring problems are identified, characterized, prioritized, entered into a corrective action, and resolved including.

The inspectors evaluated the licensee's performance against the requirements contained in: Unit 1 TS 6.5.3; Unit 2 TSs 3/4.11, 6.9.1.8, and 6.14; and 10 CFR 50.36a and 10 CFR Part 50, Appendix I, section IV.B.1.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope (71152 - Six samples)

The inspectors sampled NMPNS submittals for the performance indicators (PIs) listed below. To confirm the accuracy of the PI data reported during that period, the PI definition guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, was used to verify the basis in reporting for each data element.

Cornerstone: Initiating Events

The inspectors reviewed LERs and operator logs to determine whether NMPNS accurately reported the number of unplanned scrams and unplanned power changes at Unit 1 and Unit 2 from January 2008 to December 2008.

- Unit 1 unplanned scrams per 7000 critical hours;
- Unit 1 unplanned power changes per 7000 critical hours;
- Unit 1 unplanned scrams with complications;
- Unit 2 unplanned scrams per 7000 critical hours;
- Unit 2 unplanned power changes per 7000 critical hours; and
- Unit 2 unplanned scrams with complications.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152 - One sample)

.1 Review of Items Entered into the CAP

a. Inspection Scope

As specified by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into NMPNS's CAP. In accordance with the baseline inspection procedures, the inspectors also identified selected CAP items across the initiating events, mitigating systems, and barrier integrity cornerstones for additional follow-up and review. The inspectors assessed the threshold for problem identification, the adequacy of the cause analyses, extent of condition review, operability determinations, and the timeliness of the specified corrective actions.

b. Findings

No findings of significance were identified.

4OA3 Followup of Events and Notices of Enforcement Discretion (71153 - Two samples)

.1 (Closed) LER 05000220/2008-002-00, Manual Reactor Scram Due to Loss of Reactor Pressure Control

On October 23, 2008, a reactor pressure regulator malfunction occurred at Unit 1. When operators were unable to transfer pressure control from the malfunctioning electronic pressure regulator (EPR) to the backup mechanical pressure regulator (MPR), a manual reactor scram was inserted. After the scram, the EPR malfunction caused all of the turbine bypass valves to fail open. Operators closed the main steam isolation valves (MSIVs) to control reactor pressure and limit the reactor cooldown rate. Shortly after this was done, the EPR disengaged and pressure control transferred to the MPR. Operators then reopened the MSIVs and performed a normal plant cooldown using the turbine bypass valves.

This event was discussed in Section 4OA3 of Inspection Report 05000220/2008005. The inspectors reviewed this LER and no findings of significance were identified. This LER is closed.

.2 (Closed) LER 05000220/2008-003-00, Power Supplies for Drywell Pressure Indication not Qualified for Required Post-Accident Operation Duration

During environmental qualification validation activities, NMPNS determined that both channels of Unit 1 accident monitoring instrumentation for drywell pressure were not qualified for the required 100-day post-loss of coolant accident integrated dose. Consequently, on November 7, 2008, these two instrument channels were declared inoperable. Per TS 3.6.11, "Accident Monitoring Instrumentation," an alternate method of monitoring drywell pressure was initiated. This issue was determined to be reportable because, prior to November 7, 2008, the drywell pressure instrumentation had been inoperable, but the TS-required actions had not been implemented. Design modifications to provide the affected instrument channels with the required level of environmental qualification are being evaluated by NMPNS.

The inspectors reviewed this LER and no findings of significance were identified. The failure to implement the TS-required actions for the inoperable drywell pressure instrument channels prior to November 7, 2008, constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy. This LER is closed.

4OA5 Other Activities

Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with NMPNS's security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. Sam Belcher and other members of
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licensee management at the conclusion of the inspection on April 15, 2009. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION**KEY POINTS OF CONTACT**Licensee Personnel

K. Polson, Vice President
 J. April, Unit 1 General Supervisor Operations
 P. Bartolini, Supervisor, Mechanical Engineering
 S. Belcher, Plant General Manager
 W. Byrne, Manager, Director, Nuclear Safety and Security
 M. Faivus, General Supervisor, Chemistry
 D. Jermyn, Chemistry
 J. Kaminski, Manager, Emergency Preparedness
 J. Krakuszeski, Manager, Operations
 C. Nielsen, Supervisor, Engineering
 S. Sova, Manager, Radiation Protection
 G. Stinson, Chemistry
 H. Strahley, Unit 2 General Supervisor Operations
 T. Syrell, Director, Licensing

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSEDOpened

None.

Opened and Closed

05000410/2009002-01	NCV	Inadequate Maintenance Instructions Result in Residual Heat Removal System Voiding
05000220/2009002-02	NCV	Inadequate Procedure for Main Steam Isolation Valve Troubleshooting
05000410/2009002-03	NCV	Failure to Properly Perform Standby Liquid Control System Surveillance
<u>Closed</u>		
05000220/2008-002-00	LER	Manual Reactor Scram Due to Loss of Reactor Pressure Control
05000220/2008-003-00	LER	Power Supplies for Drywell Pressure Indication not Qualified for Required

Discussed

None.

LIST OF DOCUMENTS REVIEWED**Section 1R04: Equipment Alignment**

N1-OP-14, "Containment Spray System," Revision 04301
N1-OP-45, "Emergency Diesel Generators," Revision 02700
N1-OP-11, "Reactor Building Closed Loop Cooling System," Revision 02300
N1-OP-4, "Shutdown Cooling System," Revision 02801
N1-VALU-01, "Valve Lineup and Valve Operations," Revision 02
N2-OP-32, "Low Pressure Core Spray," Revision 06
N2-VALU-01, "Walkdown Order Valve Lineup and Valve Operations," Revision 00, Attachment
32, "N2-OP-32 Walkdown Valve Lineup"
N2-OP-100A, "Standby Diesel Generators," Revision 09
N2-VALU-01, "Walkdown Order Valve Lineup and Valve Operations," Revision 00, Attachment
100A, "N2-OP-100A Walkdown Valve Lineup"
N2-OP-33, "HPCS System," Revision 07
N2-VALU-01, "Walkdown Order Valve Lineup and Valve Operations," Revision 00, Attachment
33, "N2-OP-33 Walkdown Valve Lineup"
Unit 2 Operator Workarounds List
P&ID 33A, HPCS System
P&ID 33B, HPCS System

Section 1R05: Fire Protection

Unit 1 UFSAR, Appendix 10A, "Fire Hazards Analysis"
Unit 2 UFSAR, Appendix 9A, "Degree of Compliance with Branch Technical Position
CMEB 9.5-1"
Unit 2 UFSAR, Appendix 9B, "Safe Shutdown Evaluation"
N2-FPI-PFP-0201, "Unit 2 Pre-Fire Plans," Revision 0

Section 1R07: Heat Sink Performance

NDE Report 2-8.00-08-0019, "Diesel Water Jacket Cooler - 1A (2EGS*E1A)"
NDE Report 2-8.00-08-0020, "Diesel Water Jacket Cooler - 1B (2EGS*E1B)"
NDE Report 2-8.00-08-0021, "Diesel Water Jacket Cooler - 2A (2EGS*E2A)"
NDE Report 2-8.00-08-0022, "Diesel Water Jacket Cooler - 2B (2EGS*E2B)"

Section 1R11: Licensed Operator Requalification Program

Unit 1 Simulator Guide (1102-OPS001S15)
Unit 2 Simulator Guide (2102-OPS001S12)
CNG-OP-1.01-1000 "Conduct of Operations" Revision 00201

N1-SOP-1, "Reactor Scram," Revision 01900
N1-EOP-2, "Reactor Pressure Vessel (RPV) Control," Revision 01400
N1-SOP-1.3 "Loss of Recirculation Pump," Revision 01
N1-SOP-1.5 "Reactor Power", Revision 04
N1-SOP-31.2, "EHC Pressure Regulator Failure," Revision 05
N2-SOP-101D "Rapid Power Reduction" Revision 6
N2-SOP-101C, "Reactor Scram," Revision 03
N2-SOP-8 "Unplanned Power Change" Revision 5
N2-OP-30, "Control Rod Drive," Revision 14
N2-OP-36A, "Standby Liquid Control System," Revision 06
N2-EOP-RPV "RPV Control" Revision 01200

Section 1R12: Maintenance Effectiveness

S-MRM-REL-0101, "Maintenance Rule," Revision 18
S-MRM-REL-0104, "Maintenance Rule Scope," Revision 01
S-MRM-REL-0105, "Maintenance Rule Performance Criteria," Revision 01
Unit 1 DC Electric Power and UPS System Health Report for First Quarter 2009
Unit 1 Core Spray System Health Report for First Quarter 2009
Unit 2 Residual Heat Removal System Health Report for First Quarter 2009

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

CNG-OP-4.01-1000, "Integrated Risk Management," Revision 00200
CNG-MN-4.01-1004, "On-Line T-Week Process," Revision 00000
CNG-MN-4.01-1006, "Online Schedule Management," Revision 00001

Section 1R15: Operability Evaluations

CNG-OP-1.01-1002, "Conduct of Operability Determinations / Functionality Assessments,"
Revision 0000

Section 1R18: Plant Modifications

CNG-FES-015, "Design Engineering And Configuration Management Forms," Revision 000
ECP 20080024, "Replacement of Unit 2 Instrument Air (IA) Refrigeration Air Dryers and
Associated Filters," Revision 000
ECP Supplement EC20080024-000, "Engineering Service Request for Installation of an
Improved Air Dryer in the Instrument Air System," Revision 0000
ECP Supplement EC20080024-001, "Install a Temporary Air Dryer in the Instrument Air
System," Revision 0000
10 CFR 50.59 Screening Form for ECP 20080024, "Replacement of Unit 2 Instrument Air (IA)
Refrigeration Air Dryers and Associated Filters," Revision 000

Section 1R19: Post Maintenance Testing

GAP-SAT-02, "Pre/Post Maintenance Test Requirements," Revision 28

S14-93-F003, "IST Approved Pump Curves - Containment Spray Raw Water," Revision 2
S14-93-F007, "Containment Spray Raw Water Required Pressure and TDH," Revision 3

Section 1R20: Refueling and Other Outage Activities

N1-OP-43C, "Plant Shutdown," Revision 00400
N1-OP-4, "Shutdown Cooling System," Revision 02801
Shutdown Safety Review Report for Unit 1 Outage N1R20
NIP-OUT-01, "Shutdown Safety," Revision 02500
N1-FHP-25, "General Description of Fuel Moves," Revision 02100
N1-FHP-27C, "Core Shuffle," Revision 00300
CNG-MN-1.01-1001, "Foreign Material Exclusion," Revision 00300

Section 1R22: Surveillance Testing

GAP-SAT-01, "ST Program," Revision 16
CNG-HU-1.01-1000, "Human Performance," Revision 00300
CNG-HU-1.01-1001, "Human Performance Tools and Verification Practices," Revision 00400
CNG-HU-1.01-1002, "Pre-Job Briefings and Post-Job Critiques," Revision 00300
CNG-OP-4.01-1000, "Integrated Risk Management," Revision 00200

Section 2OS2: ALARA Planning and Controls

NMP Unit 1 RFO20 Radiation Protection Pre-Outage Report

Section 2PS1: Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

Nine Mile Point Nuclear Station Unit No. 1 Radioactive Effluent Release Report, January -
December 2007
Nine Mile Point Nuclear Station Unit No. 2 Radioactive Effluent Release Report, January -
December 2007
Nine Mile Point Unit 1 Off-Site Dose Calculation Manual (ODCM), Revision 29
Nine Mile Point Unit 2 Off-Site Dose Calculation Manual (ODCM), Revision 31
N2-CSP-LWS-@201, "Radioactive Liquid Release Analysis and Documentation," Permit No.
08-04-12
N2-CSP-CMS-@341, "Containment Purge Evaluation," July 28, 2008
N1-CSP-M204, "Liquid Release Dose Calculations," December 2008
N1-CSP-M350, "Noble Gas Dose Calculations," December 2008
N1-CSP-M351, "Particulate Iodine and Tritium Dose Calculations," December 2008
N2-CSP-LWS-M203, "Monthly Liquid Release Dose Calculations," November 2008
N2-CSP-RMS-M350, "Noble Gas Dose Rate and Dose Calculations," November 2008
N2-CSP-RMS-M351, "Particulate Iodine and Tritium Dose Calculations," 2nd Quarter 2008
S-CRIP-9, "Canberra Genie Gamma Spectroscopy System Operation," Unit 1 (2/14/08) and
Unit 2 (7/7/08)
Analytic Interlaboratory Comparison Results, 1st Quarter 2008 & 3rd Quarter 2008
Audits: CHE-07-01-N, "Chemistry;" CHE-07-02-N, "Chemistry - Off Site Dose Calculation

Manuals”

Quality & Performance Assessment Reports: 08-053, “Tritium Analysis Frequencies;” 08-073, “Chemistry Technician Training Program Effectiveness;” 08-078, “Instrument and Control Technician Training Program Effectiveness”

Focused Self-Assessment Report FSA-2007-07, “RETS”

Self-Assessment AI# FSA 2008-0036-07, “Respiratory Protection, Calibrations and Surveillances, and Control of Radioactive material, Sources, and Contaminations”

Unit 1 Radiation Monitoring Systems

N1-ISP-085-001, “Radwaste Discharge to Tunnel Radiation Monitor Instrument Calibration,” Revision 02

N1-RSP-14A, “Liquid Radwaste Monitor Channel Calibration,” Revision 00402

N1-RSP-11A, “Calibration of the SW Discharge Monitor,” Revision 07

N1-CSP-R327, “RAM-112-08A Range of Energy Calibration Verification,” Revision 00

N1-CSP-R328, “RAM-10A (RE-RN03A) Range of Energy Calibration Verification,” Revision 00

N1-CSP-R329, “RAM-10B (RE-RN03B), Range of Energy Calibration Verification,” Revision 00

N1-RSP-13, “Stack Radiation Monitor Calibration Check and Channel Test,” Revision 00000

N1-ISP-112-001, “Stack Gas Monitor Calibration,” for RAM-112-07 & RAM-112-08

N1-ISP-112-010, “Stack Gas Process Radiation Monitor Channel Calibration,” for RAM-10A & RAM-10B

N1-IMP-999-039, “Process Monitor High Voltage & Discriminator Setting,” for PRM-10A

N1-ISP-112-004, “Off-Gas Radiation Monitor (NUMAC) Instrument Channel Calibration,” Revision 02

N1-RSP-9C, “Instrument Channel Calibration of Emergency Condenser Vent Radiation Monitors,” Revision 06

Unit 1 Flow Rate Measurement

N1-ISP-085-002, “Liquid Radwaste Effluent Line,” Revision 02

N1-CTP-V203, “SW Radiation Monitor Flow Adjustment/Pump Switch/Air Purge/Pump Startup/Shutdown,” Revision 02

N1-ISP-112-005, “Stack Flow Instrument Calibration,” Revision 00400

N1-ISP-112-008, “OGESMS Flow Instrumentation Calibration,” Revision 02

N1-ISP-077-005, “Off Gas Sample/System Flow Instrument Channel Calibration,” Revision 03

Unit 2 Radiation Monitoring Systems

N2-RSP-RMS-R116, “Channel Calibration Test of the Liquid Radwaste Effluent Line Liquid Process Radiation Monitor”

N2-RSP-RMS-R113, “Channel calibration Test of the SW Effluent Line Process Radiation Monitors 2SWP*CAB146A and 2SWP*CAB145B,” Revision 07

N2-RSP-RMS-R112, “Channel Calibration Test of the Cooling Tower Blowdown Line Liquid Process Radiation Monitor,” Revision 05

N2-ISP-RMS-001, “Main Stack Wide Range Gas Monitor System Calibration,” Revision 00400

Unit 2 Flow Rate Measurement Devices

N2-ISP-LWS-R101, “Liquid Radwaste Discharge Flow to Lake Instrument Channel Calibration,” Revision 05

N2-ISP-SWP-R112, "SW Effluent Lines A and B Flow Instrument Channel Calibration,"
Revision 08
N2-ISP-CWS-A101, "Calibration Test of the Circulating Water Cooling Tower Blowdown Line
Flow Instrument Channel," Revision 04
N2-ISP-GEN-@001, "Operating Cycle Channel Calibration of the Flow System on the DRMS
Gaseous/Particulate Process Radiation Monitors"

Air Cleaning Systems

N1-TSP-210-001, "Testing of Unit 1 Control Room Emergency Ventilation System," Revision 00
N1-TSP-202-001, "Testing of Unit 1 RB Emergency Ventilation System #11& #12," Revision 02
N2-TSP-GTS-R@001, "Testing and Analysis of Unit 2 Standby Gas Treatment System FLT1A
& FLT1B," Revision 00
N2-TSP-HVC-R@001, "Testing and Analysis of Unit 2 Control Room Outdoor Air Special Filter
Train System FLT2A & FLT2B," Revision 01

Section 40A2: Identification and Resolution of Problems

Condition Reports

2008-2332	2009-0632	2009-0756
2008-2591	2009-1567	2008-8020
2008-6053	2009-0548	2008-9412
2008-6621	2009-1669	2009-0206
2008-6623	2009-1559	2009-1419
2008-7343	2009-1767	2009-1507
2008-7962	2009-0858	
2008-8190	2009-1154	
2008-8352	2009-0080	
2009-1337	2009-0555	

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
ALARA	as low as reasonably achievable
APRM	average power range monitor
CAP	corrective action program
CFR	Code of Federal Regulations
CR	condition report
DBD	design basis document
EDG	emergency diesel generator
EOP	emergency operating procedure
EPR	electronic pressure regulator
HPCI	high pressure coolant injection
HPCS	high pressure core spray
IAC	instrument air compressor
IMC	inspection manual chapter
LER	licensee event report
LORT	licensed operator requalification training
LPCS	low pressure core spray
MPR	mechanical pressure regulator
MSIV	main steam isolation valve
NCV	non-cited violation
NEI	Nuclear Energy Institute
NMPNS	Nine Mile Point Nuclear Station, LLC
NRC	Nuclear Regulatory Commission
ODCM	offsite dose calculation manual
PARS	Publicly Available Records
PI	performance indicator
PMT	post maintenance test
PSI	pounds per square inch
RB	reactor building
RCS	reactor coolant system
RETS	radiological effluent technical specifications
RFO	refueling outage
RHR	residual heat removal
RP	radiation protection
RPV	reactor pressure vessel
RTP	rated thermal power
SDP	significance determination process
SLC	standby liquid control
SOP	special operating procedure
ST	surveillance test
SW	service water
TB	turbine building
TBV	turbine bypass valve
TS	technical specification
UFSAR	updated final safety analysis report
WO	work order