UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

August 5, 2013

Mr. Mark Schimmel
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company, Minnesota
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT NRC INTEGRATED INSPECTION REPORT AND POWER UPRATE REVIEW INSPECTION REPORT 05000263/2013003

Dear Mr. Schimmel:

On June 30, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Monticello Nuclear Generating Plant. The enclosed report documents the inspection findings, which were discussed on July 10, 2013, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Two self-revealed findings of very low safety significance were identified during this inspection.

Both of these findings were determined to involve violations of NRC requirements. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Monticello Nuclear Generating Plant. In addition, if you disagree with a cross-cutting aspect assigned to 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 III, and the NRC Resident Inspector at the Monticello Nuclear Generating Plant.

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 System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Kenneth Riemer, Chief
Branch 2
Division of Reactor Projects

Docket No. 50-263
License No. DPR-22

Enclosure: Inspection Report 05000263/2013003;
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-263
License No:	DPR-22
Report No:	05000263/2013003
Licensee:	Northern States Power Company, Minnesota
Facility:	Monticello Nuclear Generating Plant
Location:	Monticello, MN
Dates:	April 1 through June 30, 2013
Inspectors:	S. Thomas, Senior Resident Inspector P. Zurawski, Senior Resident Inspector P. Voss, Resident Inspector J. Tapp, Health Physicist M. Ziolkowski, Reactor Engineer S. Bell, Health Physicist I. Hafeez, Reactor Engineer
Approved by:	K. Riemer, Branch Chief Branch 2 Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

Inspection Report (IR) 05000263/2013003; 04/01/2013 – 06/30/2013; Monticello Nuclear Generating Plant. Maintenance Risk Assessments; Emergent Work Control; and Event Follow up.

This report covers a three-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Two Green findings were identified by the inspectors. The findings were considered non-cited violations (NCVs) of NRC regulations. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using IMC 0609, "Significance Determination Process" dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross Cutting Areas" dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated January 28, 2013. 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-Revealed Findings

Cornerstone: Initiating Events

- Green. A finding of very low safety significance and an associated non-citied violation was self-revealed for the site's failure to implement the requirements of FP-OP-SC-01, "Status Control," when, on April 23, 2013, a valve in the instrument air system was mispositioned as a result of site personnel's' failure to review high traffic scaffold access points for equipment bump hazards. Specifically, scaffold plan reviewers failed to ensure that components susceptible to inadvertent mispositioning were identified and protected in accordance with FP-OP-SC-01 and TS 5.4.1, "Procedures." As a result, an instrument air valve located near a scaffold ladder was inadvertently bumped, which led to the loss of instrument air to the reactor and turbine buildings, and the loss of the spent fuel pool cooling system, a system being used to provide cooling to the fully offloaded core in the spent fuel pool. Corrective actions included restoration of instrument air, installation of protective barriers for the affected instrument air valve, and revision of the site scaffold control procedure to ensure scaffold positioning would be reviewed post-construction by operations for bump hazards.

  The inspectors determined that the issue was more than minor because it impacted the configuration control "shutdown equipment lineup" attribute of the Initiating Events Cornerstone and affected the cornerstone's objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. In addition, it impacted the Barrier Integrity attribute of configuration control to "maintain functionality of the spent fuel pool cooling system" and affected the cornerstone's objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Using IMC 0609 Appendix G for shutdown operations, the inspectors determined that the finding had very low safety significance because it did not adversely affect core heat removal, inventory control, power availability, containment control, or reactivity guidelines. The inspectors determined that this finding was cross-cutting in the Human Performance, work control area, and involved aspects associated with planning work activities by incorporating risk insights and jobsite conditions [H.3(a)]. (Section 1R13)

Cornerstone: Barrier Integrity

- Green. A finding of very low safety significance and non-cited violation of Technical Specification (TS) 3.3.6.3, "Low-Low Set (LLS) Instrumentation," was self-revealed when the licensee discovered during the performance of an unrelated surveillance test that an isolation valve, which impacts the operation of two differential pressure switches, associated with the 'E' LLS safety relief valve (SRV) was found closed. Specifically, valve MS-44-2B, the root valve for the 'E' SRV tailpipe pressure sensing line was discovered closed between June 28, 2011 and April 12, 2013. The licensee took corrective actions to restore MS-44-2B to its required open position. Additional corrective actions included plans to revise a standing SRV maintenance procedure which provided incorrect restoration guidance, post-maintenance, for four of the eight SRVs.

  The inspectors determined that this issue was more than minor because it impacted the configuration control attribute of the Barrier Integrity Cornerstone and affected the cornerstone's objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. The inspectors applied IMC 0609, Appendix A to this finding and evaluated the issue under the Barrier Integrity Cornerstone, utilizing Exhibit 3, "Barrier Integrity Screening Questions," to screen the finding. The inspectors answered "No" to both Reactor Containment screening questions, and determined the finding to be of very low safety significance. The inspectors determined that this finding was cross-cutting in the Human Performance, resources area, and involved aspects associated with having complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components to assure nuclear safety [H.2(c)]. (Section 4OA3.1)

REPORT DETAILS

Summary of Plant Status

Monticello was shut down for Refueling Outage (RFO) 26 at the beginning of the inspection period. The plant remained shut down for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness of Offsite and Alternate AC Power Systems

a. Inspection Scope

The inspectors verified that plant features and procedures for operation and continued availability of offsite and alternate alternating current (AC) power systems during adverse weather were appropriate. The inspectors reviewed the licensee's procedures affecting these areas and the communications protocols between the transmission system operator (TSO) and the plant to verify that the appropriate information was being exchanged when issues arose that could impact the offsite power system. Examples of aspects considered in the inspectors' review included:

- The coordination between the TSO and the plant during off-normal or emergency events;
- The explanations for the events;
- The estimates of when the offsite power system would be returned to a normal state; and
- The notifications from the TSO to the plant when the offsite power system was returned to normal.

The inspectors also verified that plant procedures addressed measures to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power system prior to or during adverse weather conditions. Specifically, the inspectors verified that the procedures addressed the following:

- The actions to be taken when notified by the TSO that the post-trip voltage of the offsite power system at the plant would not be acceptable to assure the continued operation of the safety-related loads without transferring to the onsite power supply;
- The compensatory actions identified to be performed if it would not be possible to predict the post-trip voltage at the plant for the current grid conditions;
- A re-assessment of plant risk based on maintenance activities which could affect grid reliability, or the ability of the transmission system to provide offsite power; and
- The communications between the plant and the TSO when changes at the plant could impact the transmission system, or when the capability of the transmission system to provide adequate offsite power was challenged.

The inspectors also reviewed corrective action program (CAP) items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures. The inspectors reviewed outstanding work orders (WOs) to evaluate their effect on equipment operability. The inspectors also performed a walkdown of the licensee's switchyard to examine the material condition of the offsite power sources. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one readiness of offsite and alternate AC power systems sample as defined in Inspection Procedure (IP) 71111.01-05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- 12 Emergency Diesel Generator (EDG);
- Division I Residual Heat Removal (RHR) system during Division II work window;
- 'B' RHR during 'A' RHR work window; and
- 11 Core Spray following work window and pump rebuild.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Updated Safety Analysis Report (USAR), Technical Specification (TS) requirements, outstanding WOs, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These activities constituted four partial system walkdown samples as defined in IP 71111.04-05.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown (71111.04S)

a. Inspection Scope

On June 21 and June 24, 2013, the inspectors performed a complete system alignment inspection of the control rod drive system to verify the functional capability of the system. This system was selected because it was considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors walked down the system to review mechanical and electrical equipment lineups; electrical power availability; system pressure and temperature indications, as appropriate; component labeling; component lubrication; component and equipment cooling; hangers and supports; operability of support systems; and to ensure that ancillary equipment or debris did not interfere with equipment operation. A review of a sample of past and outstanding WOs was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the CAP database to ensure that system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment to this report.

These activities constituted one complete system walkdown sample as defined in IP 71111.04-05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- Fire Zone A.12-A; Lower 4kV Bus Area (13 and 15);
- Fire Zone A.3-08; Cable Spreading;
- Fire Zone A.3-07C; Division II Battery Room;
- Fire Zone A.3-09; Control Room; and
- Fire Zone A.3-D; Reactor Building Closed-Cooling Water (RBCCW) pump area.

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant; effectively maintained fire detection and suppression capability; maintained passive fire protection features in good material condition; and implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan.
The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event.

Using the documents listed in the Attachment to this report, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP.

These activities constituted five quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On May 2, 2013, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification training to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator requalification program simulator sample as defined in IP 71111.11.

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

On May 26, 2013, the inspectors observed operators performing a reactor coolant system (RCS) drain down of the refueling cavity to the reactor pressure vessel (RPV) flange. This was an activity that required heightened awareness or was related to increased risk. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of procedures;
- control board and equipment manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions.

The performance in these areas was compared to pre-established operator action expectations, procedural compliance and task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations (71111.12Q)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- D11 battery work and ground issue; and
- 13.8 kV system/2R transformer loss of normal offsite power issue.

The inspectors reviewed events such as where ineffective equipment maintenance had resulted in valid or invalid automatic actuations of engineered safeguards systems and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b) of the Maintenance Rule;
- characterizing system reliability issues for performance;

- charging unavailability for performance;
- trending key parameters for condition monitoring;
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- verifying appropriate performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2), or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two quarterly maintenance effectiveness samples as defined in IP 71111.12-05.

b. Findings

No findings were identified.

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

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- 11 EDG work window and 24 month test;
- Standby Gas Treatment (SBGT) trains 'A' and 'B' declared inoperable and unavailable following core reload;
- Broken yoke on MO-2399;
- Unplanned loss of spent fuel pool cooling; and
- Fuel bundle re-channeling activities.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Specific documents reviewed during this inspection are listed in the Attachment to this report.

These maintenance risk assessments and emergent work control activities constituted five samples as defined in IP 71111.13-05.

b. Findings

Introduction

A finding of very low safety significance and an associated non-cited violation (NCV) was self-revealed for the site's failure to implement the requirements of FP-OP-SC-01, "Status Control," when a valve in the instrument air system was mispositioned as a result of site personnel's' failure to review high traffic scaffold access points for equipment bump hazards. Specifically, scaffold plan reviewers failed to ensure that components susceptible to inadvertent mispositioning were identified and protected. As a result, an instrument air valve located near a scaffold ladder was inadvertently bumped, which led to the loss of instrument air to the reactor and turbine buildings, and the loss of the spent fuel pool cooling system, a system being used to provide cooling to the fully offloaded core in the spent fuel pool.

Description

On April 22, 2013, the plant experienced a loss of instrument air to the turbine and reactor buildings. This resulted in a loss of spent fuel pool cooling, and a loss of various other plant systems and indications, including the station's heating boiler, reactor building and radwaste ventilation equipment, and normal level indication in the standby liquid control tank. This condition existed for just over an hour, until alternate spent fuel pool cooling was placed in service and subsequently normal fuel pool cooling lineups were restored.

During investigation immediately after the event, the licensee discovered that AI-1116, PS-1469 air supply header isolation, was found nearly closed. This valve served as a manual isolation for PS-1469, a pressure switch whose function is to isolate non-essential equipment supported by the instrument air system in the event of a leak, in response to a decreasing header pressure. The licensee determined that the nearly closed AI-1116 valve had resulted in the pressure switch detecting low pressure in the header. This resulted in the closing of CV-1472, reactor building air isolation control valve, and the isolation of the instrument air flow to nonessential reactor building loads, including the spent fuel pool cooling system. In addition, the low pressure sensed by PS-1469 also caused the closure of control valves providing air to the turbine building, isolating instrument air to those loads. Turbine building instrument air isolation alone did not impact the shutdown critical safety functions.

At the time of the event, the reactor was shut down, and the core was fully offloaded into the spent fuel pool. The spent fuel pool cooling system was providing the primary decay heat removal function for the offloaded fuel at the time of the event. However the inspectors noted that even with the loss of the spent fuel pool cooling system, the plant's shutdown critical safety functions remained Green, because the site had four other systems available to support the decay heat removal function at the time of the event. During the event, the site initiated action to place alternate spent fuel pool cooling in service, in place of the normal spent fuel pool cooling system. Following restoration of the instrument air header, the alternate fuel pool cooling system remained in service and ran in parallel with the spent fuel pool cooling system until conditions were stabilized. The licensee's investigation revealed that AI-1116, the small isolation valve which had initiated the event, was very easy to operate, and showed minimal resistance to movement at the handwheel. The investigation also revealed that the valve was located

within two feet of the access point of a scaffold ladder. The licensee determined that the probable cause of the valve mispositioning was its proximity to the high traffic access point to the scaffolding. The inspectors noted that the area was undergoing significant construction activities, and the site failed to protect equipment susceptible to bump hazards when the nearby scaffolding was constructed.

Fleet Procedure, FP-OP-SC-01, "Status Control," Section 5.4, "Sensitive Plant Equipment," states in Step 5.4.1, "The Status Control Committee should identify components that are susceptible to inadvertent mispositioning ("bumps") and initiate action to prevent inadvertent operation. This determination SHALL also consider high traffic areas during normal operations and areas that become high traffic if temporary equipment/scaffolding is to be installed." Section 5.4.1 also states, "Maintenance and construction personnel SHALL be mindful of the surrounding equipment in their work areas and also take measures to protect those components susceptible to inadvertent mispositioning as well."

The inspectors noted that the licensee's procedure 8146, "Scaffold Control," that establishes requirements and reviews for control of scaffolding construction, did not contain specific guidance to ensure that sensitive equipment susceptible to bump hazards and in the path of the scaffold access points was identified and protected. The inspectors also noted that the procedure did not include a requirement for a representative from the Operations Department to review the scaffold plan to identify equipment susceptible to bump hazards post construction. The inspectors also noted that in the case of this scaffolding installation, the scaffold plan did not receive an operations review, because the area in question had not been identified as an area which contained sensitive equipment. The inspectors determined that the requirements of FP-OP-SC-01, "Status Control," to protect against scaffolding related bump hazards had not been incorporated into the site procedure for scaffold construction control, and that site personnel did not perform adequate reviews of the scaffolding installation to ensure that all necessary equipment was identified and protected.

Analysis

The inspectors determined that the licensee's failure to review high traffic scaffold access points for equipment bump hazards was a performance deficiency, because it was the result of the failure to meet the requirements of FP-OP-SC-01, "Status Control;" the cause was reasonably within the licensee's ability to foresee and correct; and should have been prevented. The inspectors determined that the contributing cause that provided the most insight into the performance deficiency was associated with the cross-cutting area of Human Performance, having work control components, and involving aspects associated with planning work activities by incorporating risk insights and jobsite conditions [H.3(a)]. Specifically, the inspectors noted that while the scaffold control procedure did not explicitly implement the requirements of the status control procedure to ensure sensitive equipment was protected in high traffic areas created by scaffold, the scaffold control process included reviews and walkdowns that directed staff to evaluate protection of sensitive equipment during scaffold building activities. The inspectors determined that the work planning process should have considered these risks and jobsite conditions as part of the walkdowns and reviews for the work.

The inspectors screened the performance deficiency per Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, dated September 7, 2012,

and determined that the issue was more than minor because, it impacted the configuration control "shutdown equipment lineup" attribute of the Initiating Events Cornerstone and affected the cornerstone's objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. In addition, it impacted the Barrier Integrity attribute of configuration control to "maintain functionality of the spent fuel pool cooling system" and affected the cornerstone's objective to provide reasonable assurance that physical design barriers (fuel cladding, RCS, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the performance deficiency resulted in a loss of the spent fuel pool cooling system, which was being used to remove decay heat from the spent fuel pool at the time of the event, and was one of five systems being credited toward the decay heat removal shutdown critical safety function. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012. Because the reactor was shut down at the time of the event and the core was fully offloaded into the spent fuel pool, the inspectors utilized Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, "Phase 1 Operational Checklists for Both PWRs and BWRs," dated May 25, 2004. Because the plant was flooded up with over 23 feet of water above the flange at the time of the event, the inspectors used Checklist 7. The inspectors determined that the finding had very low safety significance because it did not adversely affect core heat removal, inventory control, power availability, containment control, or reactivity guidelines (Green).

Enforcement

Technical Specification 5.4.1 states, "Written procedures shall be established, implemented, and maintained covering the following activities: (a) The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978." NRC Regulatory Guide 1.33, Appendix A, Section 1 addresses "Administrative Procedures" and Section 1.c addresses "Equipment Control." On April 22, 2013, the licensee failed to implement the requirements of FP-OP-SC-01, "Status Control," when a valve in the instrument air system was mispositioned as a result of a failure to review high traffic scaffold access points for equipment bump hazards. Initial action taken by the licensee included the restoration of the instrument air system, spent fuel pool cooling, and other equipment impacted by the loss of instrument air, and initiation of the temporary alternate spent fuel pool cooling system. The licensee entered the inadvertent mispositioning of the instrument air valve into the corrective action program as CAP 1379814. Longer term corrective actions included installation of protective barriers for the affected instrument air valve, and revision of procedure 8146, "Scaffold Control," to ensure scaffold positioning would be reviewed for equipment bump hazards. Because the violation was of very low safety significance and was entered into the licensee's corrective action program this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy.
(**NCV 05000263/2013003-01; Inadvertent Mispositioning of Instrument Air Valve and Loss of Spent Fuel Pool Cooling**)

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- Control rod drift during hydraulic control unit (HCU) isolation; and
- RCS level instrumentation vessel flood up and temporary indicator.

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and USAR to the licensee's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two operability samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following post-maintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- Automatic Depressurization System (ADS) system timer bypass timer test;
- 'A' RHR leakage test;
- 13 RHR pump preservice test;
- CV-1728 PM testing;
- RPV pressurized leakage test;
- 11 EDG air start system following work window;
- 0084 reactor protection system (RPS) time response testing following RPS relay replacements;
- 2R transformer replacement;

- Condensate/Feedwater flush (Part A);
- Condensate/Feedwater flush (Part B); and
- Condensate/Feedwater flush (Part C).

These activities were selected based upon the SSCs ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the USAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with PM tests to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the Attachment to this report.

This inspection constituted eleven post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors continued to review activities associated with RFO 26 which began during the first quarter 2013. During second quarter RFO activities, the inspectors monitored licensee controls over the outage activities listed below:

- licensee configuration management, including maintenance of defense-in-depth commensurate with the OSP for key safety functions and compliance with the applicable TS when taking equipment out of service;
- implementation of clearance activities and confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing;
- installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication, accounting for instrument error;
- controls over the status and configuration of electrical systems to ensure that TS and OSP requirements were met, and controls over switchyard activities;
- monitoring of decay heat removal processes, systems, and components;
- controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system;

- reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss;
- controls over activities that could affect reactivity;
- maintenance of secondary containment as required by TS;
- licensee fatigue management, as required by 10 CFR 26, Subpart I;
- licensee identification and resolution of problems related to RFO activities.

Documents reviewed during the inspection are listed in the Attachment to this report.

Inspection activities this quarter did not constitute a RFO sample, as defined in IP 71111.20-05, since the sample had been accounted for as part of NRC Inspection Report 05000263/2013002.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- Safeguards Bus No. 15 loss of voltage protection relay unit test and calibration (routine);
- RHR and Core Spray sequence timer test (routine);
- 125 Vdc battery capacity test (0198-01); (routine);
- RHR loop 'A' quarterly pump and valve test (inservice test (IST));
- OSP-ECC-0566 emergency core cooling system (ECCS) auto start/loss of off-site power (LOOP) test--low pressure ECCS RX low level auto-start (routine); and
- OSP-ECC-0566 ECCS auto start/LOOP test (WO 452665)-- LOOP/loss-of-coolant accident (LOCA) auto-start (routine).

The inspectors observed in-plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur;
- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the USAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;

- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;
- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;
- where applicable for IST activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted five routine surveillance testing samples, and one inservice testing sample, as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Safety

2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03)

This inspection constituted one complete sample as defined in IP 71124.03-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the plant Final Safety Analysis Report (FSAR) to identify areas of the plant designed as potential airborne radiation areas and any associated ventilation systems or airborne monitoring instrumentation. Instrumentation review included continuous air monitors (continuous air monitors and particulate-iodine-noble-gas-type instruments) used to identify changing airborne radiological conditions such that actions

to prevent an overexposure may be taken. The review included an overview of the respiratory protection program and a description of the types of devices used. The inspectors reviewed FSAR, TSs, and emergency planning documents to identify location and quantity of respiratory protection devices stored for emergency use.

Inspectors reviewed the licensee's procedures for maintenance, inspection, and use of respiratory protection equipment including self-contained breathing apparatus, as well as procedures for air quality maintenance.

The inspectors reviewed reported performance indicators (PIs) to identify any related to unintended dose resulting from intakes of radioactive material.

b. Findings

No findings were identified.

.2 Engineering Controls (02.02)

a. Inspection Scope

The inspectors reviewed the licensee's use of permanent and temporary ventilation to determine whether the licensee uses ventilation systems as part of its engineering controls (in lieu of respiratory protection devices) to control airborne radioactivity. The inspectors reviewed procedural guidance for use of installed plant systems, such as containment purge, spent fuel pool ventilation, and auxiliary building ventilation, and assessed whether the systems are used to the extent practicable, during high-risk activities (e.g., using containment purge during cavity floodup).

The inspectors selected installed ventilation systems used to mitigate the potential for airborne radioactivity, and evaluated whether the ventilation airflow capacity, flow path (including the alignment of the suction and discharges), and filter/charcoal unit efficiencies, as appropriate, were consistent with maintaining concentrations of airborne radioactivity in work areas below the concentrations of an airborne area to the extent practicable.

The inspectors selected temporary ventilation system setups (high-efficiency particulate air/charcoal negative pressure units, down draft tables, tents, metal "Kelly buildings," and other enclosures) used to support work in contaminated areas. The inspectors assessed whether the use of these systems is consistent with licensee procedural guidance and as-low-as-is-reasonably-achievable concept.

The inspectors reviewed airborne monitoring protocols by selecting installed systems used to monitor and warn of changing airborne concentrations in the plant and evaluated whether the alarms and setpoints were sufficient to prompt licensee/worker action to ensure that doses are maintained within the limits of 10 CFR Part 20 and the as-low-as-is-reasonably-achievable concept.

The inspectors assessed whether the licensee had established trigger points (e.g., the Electric Power Research Institute's "Alpha Monitoring Guidelines for Operating Nuclear Power Stations") for evaluating levels of airborne beta-emitting (e.g., plutonium-241) and alpha-emitting radionuclides.

b. Findings

No findings were identified.

.3 Use of Respiratory Protection Devices (02.03)

a. Inspection Scope

For those situations where it is impractical to employ engineering controls to minimize airborne radioactivity, the inspectors assessed whether the licensee provided respiratory protective devices such that occupational doses are as-low-as-is-reasonably-achievable. The inspectors selected work activities where respiratory protection devices were used to limit the intake of radioactive materials, and assessed whether the licensee performed an evaluation concluding that further engineering controls were not practical and that the use of respirators is as-low-as-is-reasonably-achievable. The inspectors also evaluated whether the licensee had established means (such as routine bioassay) to determine if the level of protection (protection factor) provided by the respiratory protection devices during use was at least as good as that assumed in the licensee's work controls and dose assessment.

The inspectors assessed whether respiratory protection devices used to limit the intake of radioactive materials were certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration or have been approved by the NRC per 10 CFR 20.1703(b). The inspectors selected work activities where respiratory protection devices were used. The inspectors evaluated whether the devices were used consistent with their National Institute for Occupational Safety and Health/Mine Safety and Health Administration certification or any conditions of their NRC-approval.

The inspectors reviewed records of air testing for supplied-air devices and self-contained breathing apparatus bottles to assess whether the air used in these devices meets or exceeds Grade D quality. The inspectors reviewed plant breathing air supply systems to determine whether they meet the minimum pressure and airflow requirements for the devices in use.

The inspectors selected several individuals qualified to use respiratory protection devices, and assessed whether they have been deemed fit to use the devices by a physician.

The inspectors selected several individuals assigned to wear a respiratory protection device and observed them donning, doffing, and functionally checking the device as appropriate. Through interviews with these individuals, the inspectors evaluated whether they knew how to safely use the device and how to properly respond to any device malfunction or unusual occurrence (loss of power, loss of air, etc.).

The inspectors chose multiple respiratory protection devices staged and ready for use in the plant or stocked for issuance for use. The inspectors assessed the physical condition of the device components (mask or hood, harnesses, air lines, regulators, air bottles, etc.) and reviewed records of routine inspection for each. The inspectors selected several of the devices and reviewed records of maintenance on the vital components (e.g., pressure regulators, inhalation/exhalation valves, hose couplings).

The inspectors reviewed the Respirator Vital Components Maintenance Program to ensure that the repairs of vital components were performed by a qualified vendor.

b. Findings

No findings were identified.

.4 Self-Contained Breathing Apparatus for Emergency Use (02.04)

a. Inspection Scope

Based on the FSAR, TSs, and emergency operating procedure requirements, the inspectors reviewed the status and surveillance records of self-contained breathing apparatuses staged in-plant for use during emergencies. The inspectors reviewed the licensee's capability for refilling and transporting self-contained breathing apparatus air bottles to and from the control room and operations support center during emergency conditions.

The inspectors selected several individuals on control room shift crews and from designated departments currently assigned to emergency duties (e.g., onsite search and rescue duties) to assess whether control room operators and other emergency response and radiation protection personnel (assigned in-plant search and rescue duties or as required by emergency operating procedures or the emergency plan) were trained and qualified in the use of self-contained breathing apparatuses (including personal bottle changeout). The inspectors evaluated whether personnel assigned to refill bottles were trained and qualified for that task.

The inspectors determined whether appropriate mask sizes and types are available for use (i.e., in-field mask size and type match what was used in fit-testing). The inspectors determined whether on-shift operators had no facial hair that would interfere with the sealing of the mask to the face and whether vision correction (e.g., glasses inserts or corrected lenses) was available as appropriate.

The inspectors reviewed the past two years of maintenance records for select self-contained breathing apparatus units used to support operator activities during accident conditions and designated as "ready for service" to assess whether any maintenance or repairs on any self-contained breathing apparatus unit's vital components were performed by an individual, or individuals, certified by the manufacturer of the device to perform the work. The vital components typically are the pressure-demand air regulator and the low-pressure alarm. The inspectors reviewed the onsite maintenance procedures governing vital component work to determine any inconsistencies with the self-contained breathing apparatus manufacturer's recommended practices. For those self-contained breathing apparatuses designated as "ready for service," the inspectors determined whether the required, periodic air cylinder hydrostatic testing was documented and up to date, and the retest air cylinder markings required by the U.S. Department of Transportation were in place.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.05)

a. Inspection Scope

The inspectors evaluated whether problems associated with the control and mitigation of in-plant airborne radioactivity were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee CAP. The inspectors assessed whether the corrective actions were appropriate for a selected sample of problems involving airborne radioactivity and were appropriately documented by the licensee.

b. Findings

No findings were identified.

2RS4 Occupational Dose Assessment (71124.04)

This inspection constituted one complete sample as defined in IP 71124.04-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the results of Radiation Protection Program audits related to internal and external dosimetry (e.g., licensee's quality assurance audits, self-assessments, or other independent audits) to gain insights into overall licensee performance in the area of dose assessment and focus the inspection activities consistent with the principle of "smart sampling."

The inspectors reviewed the most recent National Voluntary Laboratory Accreditation Program accreditation report on the vendor's most recent results to determine the status of the contractor's accreditation.

A review was conducted of the licensee procedures associated with dosimetry operations, including issuance/use of external dosimetry (routine, multibadging, extremity, neutron, etc.), assessment of internal dose (operation of whole body counter, assignment of dose based on derived air concentration-hours, urinalysis, etc.), and evaluation of and dose assessment for radiological incidents (distributed contamination, hot particles, loss of dosimetry, etc.).

The inspectors evaluated whether the licensee had established procedural requirements for determining when external and internal dosimetry is required.

b. Findings

No findings were identified.

.2 External Dosimetry (02.02)

a. Inspection Scope

The inspectors evaluated whether the licensee's dosimetry vendor is National Voluntary Laboratory Accreditation Program accredited and if the approved irradiation test

categories for each type of personnel dosimeter used are consistent with the types and energies of the radiation present and the way the dosimeter is being used (e.g., to measure deep dose equivalent, shallow dose equivalent, or lens dose equivalent).

The inspectors evaluated the onsite storage of dosimeters before their issuance, during use, and before processing/reading. The inspectors also reviewed the guidance provided to rad-workers with respect to care and storage of dosimeters.

The inspectors assessed whether non-National Voluntary Laboratory Accreditation Program accredited passive dosimeters (e.g., direct ion storage sight read dosimeters) were used according to licensee procedures that provide for periodic calibration, application of calibration factors, usage, reading (dose assessment) and zeroing.

The inspectors assessed the use of active dosimeters (electronic personal dosimeters) to determine if the licensee uses a “correction factor” to address the response of the electronic personal dosimeter as compared to the passive dosimeter for situations when the electronic personal dosimeter must be used to assign dose. The inspectors also assessed whether the correction factor is based on sound technical principles.

The inspectors reviewed dosimetry occurrence reports or CAP documents for adverse trends related to electronic personal dosimeters, such as interference from electromagnetic frequency, dropping or bumping, failure to hear alarms, etc. The inspectors assessed whether the licensee had identified any trends and implemented appropriate corrective actions.

b. Findings

No findings were identified.

.3 Internal Dosimetry (02.03)

Routine Bioassay (In Vivo)

a. Inspection Scope

The inspectors reviewed procedures used to assess the dose from internally deposited nuclides using whole body counting equipment. The inspectors evaluated whether the procedures addressed methods for differentiating between internal and external contamination, the release of contaminated individuals, the route of intake and the assignment of dose.

The inspectors reviewed the whole body count process to determine if the frequency of measurements was consistent with the biological half-life of the nuclides available for intake.

The inspectors reviewed the licensee's evaluation for use of its portal radiation monitors as a passive monitoring system to determine if instrument minimum detectable activities were adequate to determine the potential for internally deposited radionuclides sufficient to prompt additional investigation.

The inspectors selected several whole body counts and evaluated whether the counting system used had sufficient counting time/low background to ensure appropriate

sensitivity for the potential radionuclides of interest. The inspectors reviewed the radionuclide library used for the count system to determine its appropriateness. The inspectors evaluated whether any anomalous count peaks/nuclides indicated in each output spectra received appropriate disposition. The inspector's reviewed the licensee's 10 CFR Part 61 data analyses to determine whether the nuclide libraries included appropriate gamma-emitting nuclides. The inspectors evaluated how the licensee accounts for hard-to-detect nuclides in the dose assessment.

b, Findings

No findings were identified.

Special Bioassay (In Vitro)

a. Inspection Scope

There were no internal dose assessments obtained using in vitro monitoring for the inspectors to review. The inspectors reviewed and assessed the adequacy of the licensee's program for in vitro monitoring (i.e., urinalysis and fecal analysis) of radionuclides (tritium, fission products, and activation products), including collection and storage of samples.

The inspectors reviewed the vendor laboratory quality assurance program and assessed whether the laboratory participated in an industry recognized cross-check program, including whether out-of-tolerance results were resolved appropriately.

b. Findings

No findings were identified.

Internal Dose Assessment – Airborne Monitoring

a. Inspection Scope

The inspectors reviewed the licensee's program for airborne radioactivity assessment and dose assessment, as applicable, based on airborne monitoring and calculations of derived air concentration. The inspectors determined whether flow rates and collection times for air sampling equipment were adequate to allow lower limits of detection to be obtained. The inspectors also reviewed the adequacy of procedural guidance to assess internal dose if respiratory protection was used.

b. Findings

No findings were identified.

Internal Dose Assessment – Whole Body Count Analyses

a. Inspection Scope

The inspectors reviewed several dose assessments performed by the licensee using the results of whole body count analyses. The inspectors determined whether affected personnel were properly monitored with calibrated equipment and that internal exposures were assessed consistent with the licensee's procedures.

b. Findings

No findings were identified.

.4 Special Dosimetric Situations (02.04)

Declared Pregnant Workers

a. Inspection Scope

The inspectors assessed whether the licensee informs workers, as appropriate, of the risks of radiation exposure to the embryo/fetus, the regulatory aspects of declaring a pregnancy, and the specific process to be used for (voluntarily) declaring a pregnancy.

The inspectors selected individuals who had declared pregnancy during the current assessment period and evaluated whether the licensee's Radiological Monitoring Program (internal and external) for declared pregnant workers is technically adequate to assess the dose to the embryo/fetus. The inspectors reviewed exposure results and monitoring controls employed by the licensee and with respect to the requirements of 10 CFR Part 20.

b. Findings

No findings were identified.

Dosimeter Placement and Assessment of Effective Dose Equivalent for External Exposures

a. Inspection Scope

The inspectors reviewed the licensee's methodology for monitoring external dose in non-uniform radiation fields or where large dose gradients exist. The inspectors evaluated the licensee's criteria for determining when alternate monitoring, such as use of multi-badging, was to be implemented.

The inspectors reviewed dose assessments performed using multi-badging to evaluate whether the assessment was performed consistently with licensee procedures and dosimetric standards.

b. Findings

No findings were identified.

Shallow Dose Equivalent

a. Inspection Scope

The inspectors reviewed shallow dose equivalent dose assessments for adequacy. The inspectors evaluated the licensee's method (e.g., VARSKIN or similar code) for calculating shallow dose equivalent from distributed skin contamination or discrete radioactive particles.

b. Findings

No findings were identified.

Neutron Dose Assessment

a. Inspection Scope

The inspectors evaluated the licensee's neutron dosimetry program, including dosimeter types and/or survey instrumentation.

The inspectors reviewed neutron exposure situations (e.g., independent spent fuel storage installation operations or at-power containment entries) and assessed whether (a) dosimetry and/or instrumentation was appropriate for the expected neutron spectra; (b) there was sufficient sensitivity for low dose and/or dose rate measurement; and (c) neutron dosimetry was properly calibrated. The inspectors also assessed whether interference by gamma radiation had been accounted for in the calibration and whether time and motion evaluations were representative of actual neutron exposure events, as applicable.

b. Findings

No findings were identified.

Assigning Dose of Record

a. Inspection Scope

For the special dosimetric situations reviewed in this section, the inspectors assessed how the licensee assigns dose of record for total effective dose equivalent, shallow dose equivalent, and lens dose equivalent. This included an assessment of external and internal monitoring results, supplementary information on individual exposures (e.g., radiation incident investigation reports and skin contamination reports), and radiation surveys and/or air monitoring results when dosimetry was based on these techniques.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.05)

a. Inspection Scope

The inspectors assessed whether problems associated with occupational dose assessment are being identified by the licensee at an appropriate threshold and are properly addressed for resolution in the licensee CAP. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee involving occupational dose assessment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

4OA1 Performance Indicator Verification (71151)

.1 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures PI for the period from the second quarter 2012 through the first quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73" definitions and guidance, were used. The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance work orders, issue reports, event reports and NRC Integrated Inspection Reports for the period given above to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one safety system functional failures sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Reactor Coolant System Leakage

a. Inspection Scope

The inspectors sampled licensee submittals for the RCS Leakage PI for the period from the second quarter 2012 through the first quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, were used. The inspectors reviewed the licensee's operator logs, RCS leakage tracking data, issue reports, event reports and NRC Integrated Inspection Reports for the period given above to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one RCS leakage sample as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

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

.1 Routine Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's CAP at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Attributes reviewed included: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's CAP as a result of the inspectors' observations are included in the Attachment to this report.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This review was accomplished through inspection of the station's daily condition report packages.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings were identified.

.3 Annual Sample: Review of Operator Workarounds

a. Inspection Scope

The inspectors evaluated the licensee's implementation of their process used to identify, document, track, and resolve operational challenges. Inspection activities included, but were not limited to, a review of the cumulative effects of the operator workarounds (OWAs) on system availability and the potential for improper operation of the system, for potential impacts on multiple systems, and on the ability of operators to respond to plant transients or accidents.

The inspectors performed a review of the cumulative effects of OWAs. The documents listed in the Attachment to this report were reviewed to accomplish the objectives of the inspection procedure. The inspectors reviewed both current and historical operational challenge records to determine whether the licensee was identifying operator challenges at an appropriate threshold, had entered them into their CAP and proposed or implemented appropriate and timely corrective actions which addressed each issue. Reviews were conducted to determine if any operator challenge could increase the possibility of an Initiating Event, if the challenge was contrary to training, required a change from long-standing operational practices, or created the potential for inappropriate compensatory actions. Additionally, all temporary modifications were reviewed to identify any potential effect on the functionality of Mitigating Systems, impaired access to equipment, or required equipment uses for which the equipment was not designed. Daily plant and equipment status logs, degraded instrument logs, and operator aids or tools being used to compensate for material deficiencies were also assessed to identify any potential sources of unidentified OWAs.

This review constituted one OWA inspection sample as defined in IP 71152-05.

b. Findings

No findings were identified.

.4 Selected Issue Follow-Up Inspection: Emergency Diesel Generator Air Intake Protection

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized a corrective action item documenting concerns about blockage of both EDG air intake lines. The inspectors noted that materials associated with modification activities taking place on the EDG building roof had been stored inappropriately and had caused blockage of one of the EDG air intakes. This issue revealed itself during a routine EDG surveillance run, and resulted in the opening of an air damper on the EDG within the EDG room. This damper served as an alternate air intake point for the EDG, and allowed the EDG to continue operating with the normal air intake blocked at the time of the test. Inspectors reviewed concerns associated with ensuring that the affected EDG was still able to receive the necessary amount of air in the configuration discovered

during the testing. Inspectors also reviewed the impact on room temperatures that this configuration would have if the EDG needed to run for its credited mission time.

Following this issue, inspectors observed additional materials located on the EDG building roof stored improperly, which could again affect the performance of the affected EDGs. During a tour of the EDG building roof, inspectors also observed a large temporary scaffolding installation that was positioned directly over both of the EDG air intakes. Inspectors questioned whether the scaffolding installation had been evaluated against the EDG building roof weight loading limit. Inspectors also questioned whether the scaffolding installation should have been reviewed for seismic concerns and impact on the safety related equipment below the temporary structure. Inspectors noted that the scaffolding evaluation performed had only addressed the roof weight limit, and had failed to address the seismic considerations. Following identification of these issues, CAPs 1381636, 1381810, and 1382418 were initiated. Licensee staff took actions to remove the improperly stored materials, evaluate the impact of the EDGs, perform a seismic evaluation for the scaffolding, and change the scaffolding control procedure to ensure that scaffolding built on the EDG building roof would be evaluated for seismic concerns in the future. The inspectors also noted that at the time of the EDG blockage, the core was fully offloaded into the spent fuel pool, and the EDGs were not required to be operable, but they were maintained as available.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Findings

No findings were identified.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) Licensee Event Report (LER) 05000263/2013-001-00: E SRV Low-Low Set Tailpipe DP Root Valve Found Closed

Introduction

A finding of very low safety significance and NCV of TS 3.3.6.3, “Low-Low Set (LLS) Instrumentation,” was self-revealed when the licensee discovered during the performance of an unrelated surveillance test that an isolation valve, which impacts the operation of two differential pressure switches associated with the ‘E’ LLS relief valve, was found closed. Specifically, valve MS-44-2B, the root valve for the ‘E’ safety relief valve (SRV) tailpipe pressure sensing line was discovered closed. The isolation of this pressure sensing line directly impacted the proper operation of the inhibit timer associated with ‘E’ SRV.

Description

The licensee made the following report to the Agency. “On April 12, 2013, at 2200, investigation into the ability to complete a SRV discharge line excess flow check valve test determined that a relief valve discharge monitoring instrument valve had been inappropriately closed since late June, 2011. The closed valve isolated two differential pressure switches that impact the operation of ‘E’ LLS Valve. The LLS logic and instrumentation were affected by the loss of the two ‘E’ SRV tailpipe discharge pressure

switches which indicate SRV open status and start two inhibit timers which prevent plant operators of the LLS SRV logic from immediately re-opening the valve to allow the water leg in the SRV discharge line to recede. The LLS logic and instrumentation is designed to mitigate the effects of postulated thrust loads on the SRV discharge lines by preventing subsequent actuations with an elevated water leg in the SRV discharge line. It also mitigates the effects of postulated pressure loads on the torus shell or suppression pool by preventing multiple actuations in rapid succession of the SRVs subsequent to the 'E' SRV LLS function being aligned contrary to its design configuration and as such is being reported as an unanalyzed condition as defined by 10 CFR 50.72(b)(3)(ii)(B)."

Following the 2011 Spring RFO, 'E' SRV tailpipe temperatures were elevated. On June 25, 2011, after a period of increasing tailpipe temperatures, the licensee decided to replace the 'E' SRV main stage body valve and pilot assembly. This work was performed in accordance with 4280-PM, "SRV Change-Out," Revision 41. Since the SRV's tailpipe temperature was abnormally high, prerequisite step G.13.1 was checked "Yes." Later in the procedure, since step G.13.1 was checked "Yes," step H.1.h provided guidance to open vent valve MS-44-2B [for 'E' SRV]. Upon completion of the work and restoration of the valve per step H.2.z.aa, the procedure directed that the vent valve opened in step H.1.h be closed. At this time, MS-44-2B was closed, effectively isolating the tailpipe pressure sensing line for 'E' SRV.

The licensee's evaluation of the event identified that there are two different types of tailpipe vent cap configurations for the eight SRVs. One configuration, for SRVs A, B, C, and, D, has an isolation valve in series with the vent cap. The second configuration, for SRVs E, F, G, H, does not have an isolation valve in series with the vent cap. Procedure 4280-PM did not account for the fact that the vent configuration was not the same for all eight SRVs and treated all the tailpipe vents as if they had an isolation valve in series with the vent cap. On June 28, 2011, Procedure 0112, "Safety Relief Valve Operability Check," was performed as part of the post-maintenance test (PMT) for the 'E' SRV replacement. With the SRV open, the Division II tailpipe pressure amber indicating light did not illuminate. The licensee incorrectly attributed this condition to an existing low reactor pressure (150 psig) not reaching the trip setpoint of the applicable pressure switch. The actual cause of the unexpected indication was due to MS-44-2B being closed.

The licensee entered this issue into their corrective action system as CAP 1378744. The immediate corrective action taken by the licensee was to restore valve MS-44-2B to its correct position (open). Additional corrective actions to be taken by the licensee include revising procedure 4280-PM to incorporate the differences in SRV tailpipe vent cap configurations.

Analysis

The inspectors determined that the licensee's failure to adequately maintain the configuration of the 'E' SRV pressure sensing line isolation valve to support the operability of the 'E' SRV was a performance deficiency, because it was the result of the failure to meet the requirements of TSs; the cause was reasonably within the licensee's ability to foresee and correct; and should have been prevented. The inspectors determined that the contributing cause that provided the most insight into the performance deficiency was associated with the cross-cutting area of Human

Performance, having resources components, and involving aspects associated with having complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components to assure nuclear safety [H.2(c)].

The inspectors screened the performance deficiency per IMC 0612, "Power Reactor Inspection Reports," Appendix B, and determined that the issue was more than minor because it impacted the configuration control attribute of the Barrier Integrity Cornerstone and affected the cornerstone's objective to provide reasonable assurance that physical design barriers (fuel cladding, RCS, and containment) protect the public from radionuclide releases caused by accidents or events. In this instance, the performance deficiency directly resulted in the inoperability of the 'E' SRV for a time period in excess of its TS allowed outage time. The inspectors applied IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," to this finding. The inspectors evaluated the issue under the Barrier Integrity Cornerstone, and utilized Exhibit 3, "Barrier Integrity Screening Questions," to screen the finding. The inspectors answered "No" to both Reactor Containment screening questions, and determined the finding to be of very low safety significance (Green).

Enforcement

Technical Specification 3.3.6.3 requires, in part, that four channels, per LLS valve, associated with the SRV tailpipe pressure switches be operable during operation in Modes 1, 2, and 3. Contrary to this requirement, on April 12, 2013, it was discovered that the isolation valve that isolates the tailpipe pressure switches for the 'E' SRV pressure sensing line had been closed since June 2011. As a direct result, this condition prevented the 10 second delay function from detecting a change in tailpipe pressure. Because the violation was of very low safety significance and was entered into the licensee's corrective action program (CAP 1378744), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (**NCV 05000263/2013003-02; Safety Relief Valve Tailpipe Sensing Line Isolation Valve Found Closed)**

Documents reviewed are listed in the Attachment to this report. This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

.2 Loss of Normal Offsite Power Following 13.8kV Switchgear Arc Flash

a. Inspection Scope

The inspectors reviewed the plant's response to a loss of normal offsite power on June 13, 2013. The inspectors were observing control room activities involving the performance of activities associated with testing of the newly installed condensate pumps. The operators performed a bump test of the 12 condensate pump, which involved quickly closing and opening the breaker, to briefly start and stop the motor as part of testing activities. When the 12 condensate pump breaker was reopened, the site experienced a lockout of the 2R transformer, which had been supplying all of the plant safety and non-safety related loads. The other large offsite power transformer, 1R, was out of service for plant upgrades at the time of the event, and as a result, the plant's safety loads automatically transferred onto the 1AR transformer. Because the 1AR transformer is a smaller transformer, which is only rated to carry the safety related loads and a few other necessary loads, the non-safety equipment lost power.

As a result of the event, the site had temporarily lost power to shutdown cooling during the automatic power transfer. In addition, as a result of the temporary power loss during the auto-transfer, the plant had received a containment isolation signal and an automatic start signal for both EDGs. Because the safety related equipment was transferred to the 1AR transformer, the EDGs were not needed and did not load. The site also experienced a loss of the spent fuel pool cooling system and various other systems during the event. The plant entered into orange risk as a result of this event due to the plant's electrical configuration, and the availability of only 1 of the 3 offsite power transformers following the event.

The inspectors observed as the plant control room staff responded to the event. The inspectors reviewed the operators' evaluation of emergency action level criteria, the operators' usage of plant abnormal procedures, operators' review of 50.72 reporting criteria and subsequent reporting actions, and the decision making process for the operations crew. The inspectors noted that the staff appropriately prioritized restoration of the shutdown cooling system, and observed communication and evaluation activities. Operators from the field reported that the 13.8kV switchgear had experienced an arc flash at the 11 bus feeder breaker from the 2R transformer. The licensee assembled a formal troubleshooting team and initiated a root cause investigation in order to review the causal factors that led to the event. Issues identified during and after this event were entered into the CAP for further evaluation. Documents reviewed are listed in the Attachment to this report.

This event follow-up review constituted one sample as defined in IP 71153-05.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 Unit 1 Power Uprate-Related Inspection Activities (71004)

The following baseline inspection samples were also reviewed as part of the inspection of activities associated with the licensee's Extended Power Uprate licensee amendment.

The following samples were reviewed as post-maintenance tests:

- 2R transformer replacement;
- Condensate/Feedwater flush (Part A);
- Condensate/Feedwater flush (Part B); and
- Condensate/Feedwater flush (Part C).

The following sample was reviewed as a Licensee Action for a new or more likely initiating event:

- 13.8 KV system/2R transformer loss of normal offsite power issue.

This inspection documents the completion of five power uprate inspection samples. No concerns were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On July 10, 2013, the inspectors presented the inspection results to Mr. Mark Schimmel, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The inspection results for the areas of in-plant airborne radioactivity control and mitigation; and occupational dose assessment with Mr. Mark Schimmel, Vice President, on May 10, 2013.

The inspectors confirmed that none of the potential report input discussed was considered proprietary. Proprietary material received during the inspection was returned to the licensee.

4OA7 Licensee-Identified Violations

None.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

M. Schimmel, Site Vice President
J. Grubb, Plant Manager
W. Paulhardt, Operations Manager
N. Haskell, Site Engineering Director
K. Jepson, Assistant Plant Manager
S. Mattson, Maintenance Manager
M. Holmes, Chemistry Manager
A. Zelie, Radiation Protection Manager
P. Kissinger, Regulatory Affairs Manager
R. Latham, Radiation Protection General Supervisor

Nuclear Regulatory Commission

K. Riemer, Chief, Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000263/2013003-01	NCV	Inadvertent Mispositioning of Instrument Air Valve and Loss of Spent Fuel Pool Cooling (Section 1R13)
05000263/2013003-02	NCV	Safety Relief Valve Tailpipe Sensing Line Isolation Valve Found Closed (Section 4OA3.1)

Closed

05000263/2013003-01	NCV	Inadvertent Mispositioning of Instrument Air Valve and Loss of Spent Fuel Pool Cooling (Section 1R13)
05000263/2013003-02	NCV	Safety Relief Valve Tailpipe Sensing Line Isolation Valve Found Closed (Section 4OA3.1)
05000263/2013-001-00	LER	E SRV Low-Low Set Tailpipe DP Root Valve Found Closed (Section 4OA3.1)

LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

Section 1R01

1487; Site Housekeeping Quarterly Inspection; Revision 5
CAP 1388725; NRC Questions Surrounding Material in Subyard and Wind
CAP 1387539; 2R Xfmr Lock Out during No. 11 Recirc MG Set Start
Operations Manual C.4-B.09.06.D; Abnormal Procedure—Nonessential Bus Abnormal Phase Voltage; Revision 1
Operations Manual B.09.03-05; 345KV Substation; Revision 34
A.6; Acts of Nature; Revision 46
Operations Manual B.09.05-05; 115 KV Substation—System Operation; Revision 15
FG-E-LPT-01; Large Power Transformers; Revision 1
FP-MA-SWD-01; Control of Switchyard Work Activities; Revision 2
FP-E-SE-02; Component Classification; Revision 10
List of Open WOs for 2RS, 1ARS Transformers; June 28, 2013
List of Open WOs for 1R, 2R, 1AR; June 28, 2013
WO 377723; 1ARS, Replace Radiator Flange Gaskets; June 25, 2013
WO 480741; 1ARS Lower Radiator Flanges Leaking—Repair or Seal; June 23, 2013
WO 451747; Small Oil Leak at 2R Core Ground Bushing; February 15, 2012
WO 482653; Investigate Cause of 2R Lockout when No. 11 MG Set was started; June 23, 2013
EWI-10.01.00; Equipment Aging Management Process Description; Revision 8

Section 1R04

2124; Plant Prestart Checklist, Diesel Generators and Fuel Oil System; Revision 8
NH-36051; P&ID, Diesel Oil System; Revision 77
2154-14; Fuel Oil System Prestart Valve Checklist; Revision 17
2154-28; Diesel Generator Air Start System Prestart Valve Checklist; Revision 9
CAP 1377506; NRC Asked Question Regarding 12 EDG Operability
CAP 1374792; Evidence of Minor 12 EDG Leaks Identified during Walkdown
CAP 1322045; Air Leak on 12 EDG
2154-12; RHR System Prestart Valve Checklist; Revision 46
NH-36247; P&ID RHR System; Revision 83
9111-01; Shutdown Cooling Div 1 Protected System Ticket Checklist; Revision 3
Operations Manual B.03.03-05; RHR System—System Operation; Revision 64
CAP 1380304; RHR Pump Mechanical Seal Leaking
CAP 1379977; 11 RHR and 13 RHR Pumps did not return to 95 Percent OEM Pump Curve
CAP 1379978; 11 RHR Pump DP Exceeded Required Action Limit Prior to PST
CAP 1380303; RHR Pump Mechanical Seal Leaking
CAP 1379965; P-202C Preservice Reference Value Change
CAP 1379962; P-202A Preservice Reference Value Change
M-120; P&ID Residual Heat Removal System; Revision 81
2120; RHR System Prestart Valve Checklist; Revision 46
CAP 1323059; RHR P-202A and P-202B Reduced Margin

CAP 1323369; Packing Leak on 14 RHR Pump Suction Valve
CAP 1323485; FR-10-143 LPCI SDC Flow Erratic Indication
CAP 1324218; Seal-Wire Missing from Drain Valve, Div I RHR Injection Flow
CAP 1325702; Missed Maintenance Rule Evaluation Assignments
CAP 1326162; RHR System Health is RED
CAP 1328219; RHR Pumps P-202A and P-202B Differential Pressure
2154-09; Control Rod Drive System Prestart Valve Checklist; Revision 33
2154-37; Control Rod Drive System Prestart Valve and Hydraulic Control Unit Checklist
NH-36244; Control Rod Hydraulic System; Revision 81
NH-36245; Control Rod Hydraulic System; Revision 78
FP-E-MR-03; Maintenance Rule Monitoring; Revision 0
Operations Manual B.01.03-05; Control Rod Drive System—System Operation; Revision 38
2117; Plant Prestart Checklist Control Rod Drive System; Revision 9
Operations Manual B.01.02-05; Control Rod Drives—System Operation; Revision 4
CAP 1388754; PI-7224 Broken Gage Glass
CAP 1387445; Reactor Water Level Trend Questions
CAP 1372373; 12 CRD Inboard Seal Misting Water
CAP 1387715; Maintenance Rule Database not Updated in a Timely Manner
CAP 1305722; Adverse Trend Identified for CRD and CRH Equipment Issues
CAP 1351664; RMCS Failure during CRD Exercise Test 0074
CAP 1306811; Unplanned LCO Entry Due to CRD 30-19 Inoperable
CAP 1361983; November 2013 Meeting Results
CAP 1306770; Single Rod Scram while Performing 0010
CAP 1374651; Evaluate CRD Hydraulic System Operation for Core Reload
List of open WOs for CRD System; June 28, 2013
WO 480018; Repair Crack in No. 11 CRD Pump Skid Gusset Plate; February 24, 2013
WO 480577; CRD 30-11 Position Indication Problem; May 24, 2013
WO 482753; C-05 Blue Scram Light for CRD 26-11 has Broken Socket; June 26, 2013
2154-11; Core Spray System Prestart Valve Checklist; Revision 21
CAP 1381410; MO-1741 Actuator Leaking Grease/oil since 2005
CAP 1379793; 11 CS Pump did not Regain Expected D/P after Rebuild
CAP 1379794; MO-2002 Failed Return to Service Testing
CAP 1324896; PCV-2458 Pressure at 118 PSIG with No. 11 CS Pump in Service
Operations Manual B.03.01-05; Core Spray Cooling System—System Operation; Revision 36
CAP 1346386; CS Flow Used in C.5-1100 to Define Adequate Core Cooling
CAP 1293889; MO-1741 Leaked Oil during Run of No. 11 CS Quarterly Test
List of Open WOs—CS System; May 2013
NH-36248; Core Spray System; Revision 81
2119; Plant Prestart Checklist Core Spray System; Revision 9

Section 1R05

Fire Strategy A.3-12-A; Lower 4KV Bus Area (13 and 15); Revision 15
Fire Strategy A.3-03-D; Rx Bldg. RBCCW Pump Area; Revision 8
CAP 1385685; Investigation into NRC Identified Potential Worker Performance Issue
Fire Strategy A.3-07C; Division II Battery Room; Revision 6
Fire Strategy A.3-08; Cable Spreading Room; Revision 12
Fire Zone A.3-09; Control Room; Revision 8

Section 1R11

MT-LOR-13B-001S; Simulator Exercise Guide—EPU Conditions/RPV Level Control; Revision 0
C.4-B.05.14.A; Abnormal Procedures—Earthquake; Revision 15
8218; Reactor Dynamics Test—CLTP; Revision 0
C.4-A; Abnormal Procedures; Revision 39
C.4-B.09.06.A; Loss of Bus 11 or Bus 12; Revision 7
Operations Manual B.05.07-05; Condensate Feedwater System—System Operation; Revision 18
C.6-008-C-12; Annunciator Response Procedure—No 12 13.8KV Buss Lockout; Revision 1
C.4-B.06.05.A; Abnormal Procedures—Feedwater or Condensate Pump Trip; Revision 11

Section 1R12

C.4-B.09.02.B; Abnormal Procedures—Loss of Normal Offsite Power; Revision 15
Operations Manual B.09.08-05; EDG System—System Operation; Revision 40
Strict Plant Status Control Approval Guidelines; June 14, 2013
NF-36298-1; Electrical Load Flow One Line Diagram; Revision 105
WO 401360-80; EC 11445—Install 13.8KV Cables in Outage Only Areas; May 11, 2013
WO 392312-16; EC 11444—2R Transformer Install—2R Testing; April 27, 2013
WO 392312-36; EC 11444—2R Transformer Install—2R to Bus 13/14 and Bus 11/12 Testing; May 18, 2013
WO 392314-13; EC 11444—2R Transformer Install—Energize 2R; May 22, 2013
WO 392314-14; EC 11444—2R Transformer Install—2R Repeat Factory Acceptance Testing; April 11, 2013
WO 392314-15; EC 11444—2R Transformer Install—Op Test of 2R Protective Devices; April 30, 2013
WO 392314-17; EC 11444—2R Transformer Install—2R 13.8kv Operability Testing; May 23, 2013
WO 392314-18; EC 11444—2R Transformer Install—2R Preenergization Test; May 9, 2013
WO 392314-21; EC 11444—Partial Turnover No. 2; June 2, 2013
WO 392343-25; EC 11445—Partial Turnover No. 2; June 2, 2013
CAP 1388331; Tracking Question for Cable Condition Monitoring Program
CAP 1387584; 187/AT Relay Programmed Different than Calculation
CAP 1387959; Main Generator Lockout Received during Diesel Synch to Grid
CAP 1387463; Internal Ground in 13.8kv Breaker Number 13kvb-03
125 System Certification Package; April 15, 2013
125 System Health Report; April 15, 2013
CAP 1346190; Range for Acceptable Voltage on D20
CAP 1347952; Unexpected Alarms Received during 11 EDG Start
CAP 1367510; No. 12 Battery Connection Resistance don't Meet Acceptance Criteria
CAP 1370507; EPRI Maintenance Recommendation not Followed
CAP 1334083; CDBI-Battery Capacity Test Terminated at 1V in 2007
CAP 1387394; D10, 11 Battery 125VDC Charger, Ground Voltage Out of Spec
CAP 1387397; D20, 12 Battery 125VDC Charger, Ground Voltage Out of Spec
CAP 1384131; MREP Meeting Cancelled due to Outage Activities – May 30, 2013
CAP 1381360; MREP Meeting Cancelled due to Outage Activities – May 02, 2013
Maintenance Rule Program—Boundary Definition Guidance Document; Revision 3
Maintenance Rule Program—System Basis Document; 125 VDC Battery System; Revision 2
CAP 1385704; D10, 11 Battery 125VDC Charger, Ground Voltage Out of Spec

CAP 1385707; D20, 12 Battery 125VDC Charger, Ground Voltage Out of Spec

Section 1R13

OSP-EDG-0540-11; 11 EDG 24 Month Test; Revision 5
WO 440943-01; OPS- G-3A, OSP-EDG-0540-11 11 EDG 24 Month Test; April 14, 2013
CAP 1379792; Minor Leakage Identified at Cylinder Test Valves for 11 EDG
CAP 1379836; G-3 (11 EDG) Speed Adjustment Switch GCSI/CS not Responding
CAP 1379938; EDG Hot Restart Surveillance Steady State Frequency Concerns
NX-9216-5-3; Physical Scheme and Field Connections Model No. 999 – No. 11 EDG; Revision 77
Operations Manual B.04.02-05; Secondary Containment/SBGT—System Operation; Revision 30
NH-36881; SBGT Flow Diagram; Revision 76
CAP 1383852; Control Rod Testing not Performed due to SBGT Issues
CAP 1383851; Inadequate 'B' SBGT Flow during Surveillance Testing
CAP 1383844; FIC-2943 'A' SBGT Flow Controller not Working Properly
CAP 1380792; MO-2399, Broken Yoke and Other Valve Damage
NH-36049-2; Instrument Air System; Revision 83
CAP 1379814; Loss of Instrument Air Caused by PS-1469 Being Isolated
4 AWI-04.05.10; Scaffolding Controls; Revision 8
8146; Scaffold Control; Revision 33
FP-OP-SC-01; Status Control; Revision 1
CAP 1387216; FPC Vulnerable to Loss of Non-essential Instrument Air
C.4-B.02.01.A; Abnormal Procedures—Loss of Fuel Pool Cooling; Revision 5
CAP 1379814; Maintenance Rule Functional Failure Evaluation
CAP 1382225; ESI Part 21 Notice on EDG Injectors Installed in 11 EDG
9009; Procedure for Moving Fuel within the Fuel Storage Pool; Revision 22
8398; Alternate Spent Fuel Pool Cooling System Operation; Revision 1
2270; Critical Safety System Checklist; Revision 7
CAP 1381857; NRC Resident Questioned Form 2270 Status in OCC
MNGP Unit Log—Outage Control Center Continuous Log; May 6, 2013

Section 1R15

CAP 1374651; Evaluate CRD Hydraulic System Operations for Core Reload
CAP 1374586; Isolated Control Rod Drift during Defueled Conditions
Vessel Level Instrumentation during Refueling Outages Evaluation—RF26 2013
OSP-ECC-0566; Low Pressure ECCS Automatic Initiation and Loss of Auxiliary Power Test; Revision 10
CAP 1373816; Isolation Valve I-C55-L-18 Body-to-stem Leak
CAP 1385487; CV-2371 Failed PMT
CAP 1385056; Two RPV Level Indicators have Errant Indications
CAP 1385556; Discrepancy between Temporary Level Indicator and LI-2-3-86
CAP 1385718; Concern with Accuracy of Temporary vessel level indication
CAP 1385754; Temporary Vessel Level Instrument Rise
CAP 1385790; Extent of Condition: Offscale Reactor Level Status Verify Indication Ok
RPV Level Trend Printouts; May 6-8, 2013
CAP 1385917; NRC Questions Validity of ECCS Test Results Due to not Meeting Test Prerequisite
CAP 1386196; Test Result Evaluation not Assigned Mode Restraint

Section 1R19

0255-04-IIC-1; RHR System Leakage Test – Loop A; Revision 30
WO 463771-03; Perform PMT Following Pump Rebuild; April 26, 2013
WO 440522-06; CV-1728 As-left Diagnostic Testing; April 21, 2013
WO 440522-07; CV-1728 PMT; April 23, 2013
0113-02; ADS System Bypass Timer Test; Revision 12
EWI-08.03.02; Logic System Testing Program; Revision 7
4 AWI-04.05.06; Post-Maintenance and Return to Service Testing; Revision 22
CA-03-037; Instrument Setpoint Calculation, ADS Blowdown Initiation Time Delay Relay; Revision 11
CAP 1325199; Degraded Voltage Relay Scheme Wiring Discrepancy
CAP 1333184; Critical Relays Identified Without Replacements or PM
CAP 1351815; 11 Critical Relays Installed by EPU with no PMs
CAP 1354192; Safety Related GE O.L. Relay Found Manufactured Incorrectly
CAP 1365594; PM4068 Relay Inspection Anomalies
CAP 1377979; Relay Test Data not Matching Current Rev of Motor Calculations
CAP 1281073; Relay did not Respond as Expected during 0113.02 Test
0255-20-IIC-1; Reactor Coolant Pressure Boundary Leakage Test; Revision 37B
CAP 1387776; RCS Leakage Test—AO-2-80C
CAP 1387768; RCS Leakage Test—FW-247-6
CAP 1387771; RCS Leakage Test—Pipe Cap for Test Valve RC-36
CAP 1387773; RCS Leakage Test—Pipe Cap for MS-161
CAP 1387774; RCS Leakage Test—MO-2-53A
CAP 1387775; RCS Leakage Test—MO-2-53B
CAP 1387778; RCS Leakage Test—1-CRA-R-22 Drain (Valve for LS-7428F)
CAP 1387780; RCS Leakage Test—XR-31-1 on Pipe Cap
CAP 1387782; RCS Leakage Test—Manual Valve below MO-2-53B
CAP 1387784; RCS Leakage Test—CS-22-1
CAP 1387785; RCS Leakage Test—CS-23-1
CAP 1387786; RCS Leakage Test—AO-10-46B
CAP 1387787; RCS Leakage Test—MO-4085A
CAP 1387788; RCS Leakage Test—MO-4086
CAP 1387789; RCS Leakage Test—AO-10-46A
CAP 1387790; RCS Leakage Test—MO-2-43B
EC 18692; 1R Transformer Testing Requirements for Qualified Source; Revision 0
CAP 1384157 Essential Bus Transfer Occurred while Performing 2R Testing
WO 392314-17; 2R Transformer Operational Test Plan for 13.8KV Loads (EC-11444); Revision 0
EC-18692; New 1R Transformer Testing Requirements for Qualified Source Engineering Evaluation; Revision 0
WO 392314-08; EC 11444-2R, Test Control and Protective Circuits; Revision 0
WO 392314-16; 2R Transformer Operational Test Plan for 4.16KV Loads (EC-11444); Revision 0
WO 392340-26; EC 14725 Phase Test of 2R Secondary's (4.16 KV) at 152-401—High Risk Plan
WO 392314-13; Verify Systems Complete for Onsite Power; Revision 0
CAP 1383740; 2R Transformer Deluge System Nozzle Position are in Question
CAP 1383703; 34.5KV Personal Protective Grounds
CAP 1383688; 2R Protecto Wire System will not Initiate and Alarm

CAP 1383829; 2R Flexible Link Boots are 2 Inches Short
CAP 1383848; 2R Computer Points Testing Delayed
CAP 1383866; 2R 13.8 Winding Neutral Grounding Resistor Cable
CAP 1383860; There was an Unexpected Alarm at 2R Transformer
CAP 1384012; Blue Service Light for 2RS/GM Illuminated
CAP 1383684; Serveron CT-95 Installed in Wrong Winding
0084; Reactor Protection System Channel Time Response Test Procedure; Revision 17
CAP 1382375; Procedure 0084 does not use Current Fuse Nomenclature
WO 395025; Replace Reactor Protection System Relay—1C; May 22, 2013
WO 395026; Replace Reactor Protection System Relay—2C; May 22, 2013
WO 395029; Replace Reactor Protection System Relay—5C; May 22, 2013
WO 395032; Replace Reactor Protection System Relay—9C; May 22, 2013
System Certification—EDG Division 1; April 19, 2013
System Certification—EDG Division 2; April 19, 2013
CAP 1379127; 11 EDG No. 1 Lower Air Start Motor Missing Roller Bearing
1052-07; 11 Diesel Generator Start Logic Test; Revision 11
4100-02-OCD; 11 Emergency Diesel Generator 2 Starting System; Revision 11
4100-01-OCD; 11 Emergency Diesel Generator 1 Starting System; Revision 9
WO 458922-02; Mech- G-3A, Perform 4100-02-PM Mechanical Inspections; April 1, 2013
1081-01; 11 Diesel Generator Alarm Circuits Check; Revision 9
4030-01-PM; 11 EDG Control Cabinet Electrical Connection Inspection; Revision 7
1052-03; 11 Diesel Generator Auxiliary Systems Test; Revision 14
WO 455008-03; 11 EDG Post Maintenance Testing; Revision 0
WO 440531; ELEC-C-91/93, Perform 4030-01-PM; Revision1
4107-01-PM; Emergency Diesel 2 Cycle Maintenance; Revision 23
WO 398668-50; EC-10915, Install Feedwater Pump P-2A (CFW System Flush - Part A); May 19, 2013
WO 398668-50; EC-10915, Install Feedwater Pump P-2A (CFW System Flush - Part B); May 24, 2013
WO 398668-50; EC-10915, Install Feedwater Pump P-2A (CFW System Flush - Part C); May 30, 2013
Drawing 139D308; Outline Induction Motor; Revision G
Drawing NX-236727-5-1; Condensate Pumps Equipment Condition Monitoring PLC-VMS-05; Revision 1
4948-PM; AC Motor Online (EMAX) Testing; Revision 9
Drawing NH-100320; P&ID Hydrogen Water Chemistry Hydrogen & Oxygen Injection Systems; Revision 78
Drawing NH-36036; P&ID Condensate & Feedwater; Revision 85
Drawing NH-36037; P&ID Condensate & Feedwater; Revision 86
Drawing NH-36038; P&ID Condensate Demineralizer System; Revision 83
Drawing NH-36038-01; P&ID Condensate Demineralizer System; Revision 79
Drawing NH-36038-02; P&ID Condensate Demineralizer System; Revision 84
Drawing NH-36039; P&ID Condensate & Demineralized Water Storage Systems; Revision 90
Drawing NH-36041; P&ID Service Water System; Revision 99
Drawing NH-54817-4; P&ID Off-Gas Modification Train A Engineering Flow Diagram Recombiner Building; Revision 79

Section 1R20

CAP 1358637; Fatigue Assessment Form
CAP 1380898; Potential Adverse Trend in Work Hour Procedure Adherence
CAP 1382769; Worker Found Sleeping in RCA
CAP 1381550; Challenge to Use of Predictive Tool for Work Hour Schedules
CAP 1378713; Work Hours not Updated in WHM Tool IAW Procedure
CAP 1380602; Work hours not Updated IAW Procedure
CAP 1382769; 10CFR26 Fatigue Assessment Form--Waiver; May 14, 2013
CAP 1376471; 10CFR26 Fatigue Assessment Form; March 27, 2013
CAP 1377858; 10CFR26 Fatigue Assessment Form; April 7, 2013
CAP 1377821; 10CFR26 Fatigue Assessment Form; April 6, 2013
CAP 1378366; 10CFR26 Fatigue Assessment Form; April 10, 2013
CAP 1304794; 10CFR26 Fatigue Assessment Form—Self Declaration; September 21, 2011
Individual Maintenance I&C Worker Schedule; March 2, 2013 - May 25, 2013
Individual RP Fire Brigade Worker Schedule; February 3, 2013 – May 29, 2013
Individual Operations Worker Schedule; February 1, 2013 – May 1, 2013
Individual Site Contract Construction/maintenance Worker Schedule; February 2, 2013 – May 4, 2013

Section 1R22

0304-01; Safeguard Bus Loss of Voltage Protection Relay Unit Calibration – Safeguards Bus No. 15; Revision 12
WO 412462; TD-4KV, 0304-01 Safeguard Bus Loss of Volt Protection Relay; May 8, 2013
CAP 1279844; Relay 127-5Y and 127-5Z Contact Measured ~4000 Ohms not Open
OSP-ECC-0544; RHR and Core Spray Sequence Timer Test; Revision 6
0255-04-IA-1-1; RHR Loop 'A' Quarterly Pump and Valve Tests; Revision 81
0198-01; 125 VDC Battery Capacity Test; Revision 21
WO 440502-05; Work Plan-Install and Remove Temporary Battery to Perform 0198-01 Procedure; Revision 0
3749-02; Monticello Impact Statement –Outage ("Perform 11 Battery 125 VDC Capacity Test"); Revision 3
8053-01; Fire Barrier Utility Penetration Sealing; Revision 10
4263; Maintenance and Construction Pre-job Briefing Checklist; Revision 29
EC 21887; Monticello 125V No. 11 Modified Performance Test Profile; Revision 0
CAP 1320265; 11/D1 Battery Replacement –D1
CAP 1321464; No. 11 Battery Deficiencies Noted during 4510- PM
CAP 1337888; Charger D10 Current Out of Spec
CAP 1347221; Several Out of Specification Battery Alarms Identified
OSP-ECC-0566; Low Pressure ECCS Automatic Initiation and Loss of Auxiliary Power Test; Revision 10
CAP 1385480; ECCS Test Work Order not Classified as High Risk in PPT
CAP 1385231; ECCS Schedule Delay due to Secondary Containment Control Process
WO 395437; Low Pressure ECCS Automatic Initiation and Loss of Auxiliary Power Test—High Risk Plan; No Date
WO 395437; Low Pressure ECCS Automatic Initiation and Loss of Auxiliary Power Test—Work Order Risk Screening Worksheet; No Date
CAP 1385317; MO-2-53B LS-14 Contact not Verified during ECCS Loop 1 Test
CAP 1385423; VIPER Data not Recorded during 12 EDG Load Shed Testing

WO 452665; OSP-ECC-0566 Lo Press ECCS Auto Initiation and Loss of Auxiliary Power Test; March 2, 2013

Section 2RS3

FP-RP-AM-01; Alpha Monitoring Program; Revision 2
FP-RP-JPP-01; RP Job Planning; Revision 12
R.02.02; Surface Contamination Surveys; Revision 28
R.05.07; SCBA Inspection and Function Check; Revision 22
R.05.08; Service Air Composition Test; Revision 5
R.05.09; Respirator Fitting; Revision 17
R.14.22; DAC-Hour Tracking; Revision 2
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Letter from USNRC to Nuclear Management Company, LLC Regarding Delta Protection Respiratory Protection Equipment; December 28, 2005
SCBA Testing Records; 2012
SCBA Qualification Records; Various Records
RWP 1732; Main Steam Line Piping Re-Installation – Alpha Level 3; Revision 0
Air Sampling Records; Various Records
Radiological Work Assessment Form TEDE ALARA Evaluation; Various Records
SCBA Qualification Matrix
CAP 1291441; Portable HEPA Ventilation Machines Failed Empirical Testing
CAP 1292021; Two SCBA Masks Failed Monthly Inspection
CAP 1377095; Smoke Eaters Used in the RCA are not DOP Tested
2RS4 Occupational Dose Assessment (71124.04)
4 AWI-08.04.01; Radiation Protection Plan; Revision 32
4 AWI-08.04.02; Personnel Exposure Monitoring and Control; Revision 17
R.14.21; In Vitro Bioassay Sampling; Revision 3
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FG-RP-ED-01; External Dosimetry: Standard Monitoring Activities; Revision 6
FP-RP-DP-01; Dosimetry Program; Revision 4
FP-RP-DH-01; Dose Records and TLD Issue; Revision 6
FP-RP-SP-01; Special Dosimetry; Revision 7
FP-RP-WBC-01; Whole Body Counter Use and Functional Check; Revision 1
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Evaluation of the Canberra Argos Zeus-4G Personnel Contamination Monitor; Revision 1
CAP 1279041; Adverse Trend in EDs left in PCs when Exiting SOPs
CAP 1300325; First Period 2011 TLD Dose 22.4 Rem Higher than ED Dose
CAP 1310132; TLD Empty Case Worn for Over Two Months
CAP 1347895; Second Quarter 2012 TLD Dose 50 Percent Higher than ED Dose
CAP 1366454; Unplanned Internal Dose

Section 4OA1

NEI 99-02; Regulatory Assessment Performance Indicator Guideline; Revision 6
RCS Leakage Data Sheets; April 2012 through March 2013
Various CAP Equipment Issue Documents Selected between April 2012 and March 2013
Various Licensee-submitted LERs Documenting Potential SSFs; April 2012 through March 2013
Various Maintenance Rule Records; April 2012 through March 2013

Section 4OA2

FP-OP-CTC-01; Control of Time Critical Operator Actions; Revision 4
FP-OP-OB-01; Operator Burden Program; Revision 5
Operations Manual B.03.04-04; Residual Heat Removal System; Revision 46
CAP 1379794; MO-2002 Failed Return to Service Testing
NH-36247; P&ID Residual Heat Removal System; Revision 84
CAP 1379409; MO-2002 De-clutch Lever Work not Completed as Planned
CAP 1271207; Mid Cycle NEW ENH OP.1-Operator Workarounds
CAP 1293058; Proceduralized Operator Work Around for OG Storage System
Operations Aggregate Operator Burden Index; List of Operator Burdens as of February 2013
CAP 1250179; 4KV Flood Barrier TMOD--Installation of Flood Barrier
Operations Aggregate Operator Burden Index; List of Operator Burdens Predicted Remaining after 1R26; June 6, 2013
CAP 1366238; Division II 125V Air Velocity Indicator
Operations Aggregate Operator Burden Index; List of Current Operator Burdens; June 6, 2013
CAP 1366238-04; FIR-4619 Division II (125VDC) Air Velocity Indicator Abnormal Indications
CAP 1250179-09; TMOD, Installation of Flood Barrier for Lower 4KV Room
CAP 1250179-01; Numerous RWCU Valves Require Manual Manipulation
CAP 1250179-30; RM-B3 'Condensate Demin Area Rad' Spurious Alarm
CAP 1250179-58; Installed Hoist for Cooling Tower Return Screen Cleaning Does not Function
CAP 1250179-45; Feedwater Heater Leaks and 14 and 15 FWH Dump and Drain Valve Issues
CAP 1250179-10; V-AC-1 (Condenser Area (Hotside) Cooling Unit) Upper Cooling Coils Isolated Due to Leaks
CAP 1250179-03; MO-2372, Main Steam Line Drain Inboard Flickering Position Indication Light
CAP 1250179-44; Trouble Alarms in PEB Fire Panels Unable to be Reset
CAP 1250179-57; Unexpected Fire Alarm when Starting No. 11 EDG
CAP 1366238-01; CRD 06-35 Position 31 Display
CAP 1366238-02; CRD 38-23 Partial Loss of Position Indications
CAP 1366238-03; Unexpected ANN-20-B-9 Div II – 125 Vdc Trouble—DC System Ground in Alarm
CAP 1366238-05; Roof Top Siren did not Sound as Required
CAP 1366238-07; Low Oil Alarm was Due to Indication from Upper Recirc B Oil Reservoir
CAP 1366238-09; Downward Spike on NR-7-46A for APRM-1
CAP 1366238-11; 300-B-11 Computer Room Fire Zone Alarm Received but Computer Room Halon System did not Indicate an Alarm
CAP 1366238-13; ANN-8-C-13, No. 11 125 VDC Bus Ground
CAP 1366238-14; Unexpected ANN-259-A-11 DW Monitor Inop Alarm
CAP 1366238-15; V-EF-20 Rx Bldg Main Exh Fan
CAP 1366238-16; IRM 14 Select Pushbutton Light is Flickering
CAP 1366238-17; MO-1087B – B Turbine Vacuum Breaker Light Indication Did not Light
CAP 1319187-01; ANN-20-B-28 Alarm Will not Reset
CAP 1310334; Load Limit Stopped at 86 Percent

CAP 1319187-05; PRO Control and Indication
CAP 1319187-09; PI-1223, 10 Stage Ext. Stm Press Failed Downscale
CAP 1319187-11; TR-2-3-90 (Reactor Vessel Skin Temperature Recorder) not Tracing Properly
CAP 1382418; NRC Questioned Need for Seismic Eval for Scaffold
EC-21669; Scaffold on EDG Low Roof Area for EC 11445, WO 0399909-27; March 1, 2013
4 AWI-04.05.10; Scaffolding Controls; Revision 8
8146; Scaffold Control; Revision 33
3799; Scaffold Evaluation; Revision 0
Scaffold Control Site Area Maps—Building Roofs
4AWI-04.02.01; Housekeeping; Revision 20

Section 4OA3

CAP 1378744; E SRV Low-Low Set Tailpipe DP Root Valve Found Closed
C.4-B.09.02.B; Abnormal Procedures—Loss of Normal Offsite Power; Revision 15
Operations Manual B.09.08-05; EDG System—System Operation; Revision 40
Strict Plant Status Control Approval Guidelines; June 14, 2013
NF-36298-1; Electrical Load Flow One Line Diagram; Revision 105
WO 401360-80; EC 11445—Install 13.8KV Cables in Outage Only Areas; May 11, 2013
WO 392312-16; EC 11444—2R Transformer Install—2R Testing; April 27, 2013
WO 392312-36; EC 11444—2R Transformer Install—2R to Bus 13/14 and Bus 11/12 Testing; May 18, 2013
WO 392314-13; EC 11444—2R Transformer Install—Energize 2R; May 22, 2013
WO 392314-14; EC 11444—2R Transformer Install—2R Repeat Factory Acceptance Testing; April 11, 2013
WO 392314-15; EC 11444—2R Transformer Install—Op Test of 2R Protective Devices; April 30, 2013
WO 392314-17; EC 11444—2R Transformer Install—2R 13.8kv Operability Testing; May 23, 2013
WO 392314-18; EC 11444—2R Transformer Install—2R Preenergization Test; May 9, 2013
WO 392314-21; EC 11444—Partial Turnover No. 2; June 2, 2013
WO 392343-25; EC 11445—Partial Turnover No. 2; June 2, 2013
LER 2013-001-00; E SRV Low-Low Set Tailpipe DP Root Valve Found Closed; June 7, 2013
Event Notice 48919; Unanalyzed Condition Due to Isolated Differential Pressure Switch on Safety Relief Valve Tailpipe; April 13, 2013
WO 00432925; Contingency Replace Entire SRV E; June 24, 2011
4280-PM; SRV Change-out; Revision 41
3063-05; ASME Section XI Repair/replacement Plan; Revision 8
8136-04; Secondary Containment Penetration Work Control Checklist; Revision 16
4263; Maintenance and Construction Pre-job Briefing Checklist; Revision 23
CAP 1378744; E SRV Low-low Set Tailpipe DP Root Valve Found Closed
CAP 1378807; Lack of SRV Tailpipe Pres Indication Incorrectly Evaluated

LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agencywide Document Access Management System
ADS	Automatic Depressurization System
CAP	Corrective Action Program
CFR	Code of Federal Regulations
d/p	Differential Pressure
DRP	Division of Reactor Projects
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
FSAR	Final Safety Analysis Report
GE	General Electric
HCU	Hydraulic Control Unit
IMC	Inspection Manual Chapter
INPO	Institute of Nuclear Power Operations
IP	Inspection Procedure
IR	Inspection Report
IST	Inservice Test
kV	Kilovolt
LER	Licensee Event Report
LLS	Low-Low Set
LOCA	Loss-of-Coolant Accident
LOOP	Loss of Offsite Power
MG	Motor-Generator
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
NUMARC	Nuclear Management and Resources Council
OSP	Outage Safety Plan
OWA	Operator Workaround
PARS	Publicly Available Records System
PI	Performance Indicator
PI&R	Problem Identification and Resolution
PM	Post Maintenance
PMT	Post-Maintenance Testing
RBCCW	Reactor Building Closed-Cooling Water
RCS	Reactor Coolant System
RFO	Refueling Outage
RHR	Residual Heat Removal
RPS	Reactor Protection System
SBGT	Standby Gas Treatment
SDP	Significance Determination Process
SRV	Safety Relief Valve
SSC	Structure, System and Component
SW	Service Water
TS	Technical Specification
TSO	Transmission System Operator
USAR	Updated Safety Analysis Report
Vdc	Volts Direct Current
WO	Work Order

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Sincerely,

/RA/

Kenneth Riemer, Chief
Branch 2
Division of Reactor Projects

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Letter to M. Schimmel from K. Riemer dated August 5, 2013

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT NRC INTEGRATED INSPECTION REPORT AND POWER UPRATE REVIEW INSPECTION REPORT 05000263/2013003

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