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

May 9, 2014

Ms. Karen Fili
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 AND POWER UPRATE INSPECTION REPORT 05000263/2014002

Dear Ms. Fili:

On March 31, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Monticello Nuclear Generating Plant. On April 2, 2014, the NRC inspectors discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented six findings of very low safety significance (Green) during this inspection. All of these findings involved violations of NRC requirements. Further, inspectors documented two licensee-identified violations, which were determined to be of very low safety significance in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the subject or severity of the NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy 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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Monticello Nuclear Generating Plant.

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.

Additionally, as we informed you in the most recent NRC End of Cycle Assessment Report, cross-cutting aspects identified in the last six months of 2013 using the previous terminology were being converted in accordance with the cross-reference in Inspection Manual Chapter (IMC) 0310. Section 4OA5 of the enclosed report documents the conversion of these cross-cutting aspects which will be evaluated for cross-cutting themes and potential substantive

cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review. If you disagree with the cross-cutting aspect assigned, 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, Branch Chief
Branch 2
Division of Reactor Projects

Docket No. 50–263
License No. DPR–22

Enclosure:
IR 05000263/2014002;
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:	05000263/2014002
Licensee:	Northern States Power Company, Minnesota
Facility:	Monticello Nuclear Generating Plant
Location:	Monticello, MN
Dates:	January 1 through March 31, 2014
Inspectors:	P. Zurawski, Senior Resident Inspector P. Voss, Resident Inspector J. Beavers, Emergency Preparedness Inspector M. Ziolkowski, Reactor Engineer K. Walton, Senior Operations Engineer M. Bielby, Senior Operations Engineer J. Corujo-Sandin, Reactor Engineer M. A. Jones Jr., Reactor Inspector B. Jose, Senior Reactor Inspector C. Zoia, Reactor Engineer, Operations S. Bell, Health Physicist A. Shaikh, Senior Reactor Inspector
Approved by:	K. Riemer, Branch Chief Branch 2 Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

Inspection Report (IR) 05000263/2014002; 01/01/2014 – 03/31/2014; Monticello Nuclear Generating Plant. Operability Determinations and Functional Assessments; Surveillance Testing; and Radiological Hazard Assessment and Exposure Controls.

This report covers a three-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Six 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 (SDP)," dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross Cutting Areas," effective date January 1, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated July 9, 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 a non-cited violation of Technical Specification (TS) 3.4.4, "RCS Operational Leakage," was self revealed when the licensee failed to comply with TS 3.4.4, Condition C, which required the plant to be in MODE 3 within 12 hours if pressure boundary leakage exists. Specifically, the licensee operated with reactor coolant system (RCS) pressure boundary leakage as a result of corrosion in the 12 recirculation pump upper seal cooler between August 9, 2013, and January 17, 2014, which is a condition prohibited by TS. The site initiated a troubleshooting team, and following confirmation of the location of the leakage, the plant was shut down in accordance with TSs. The site performed an apparent cause evaluation; implemented a modification to remove the affected seal cooler from service; and developed a periodic replacement plan for heat exchangers in a similar configuration.

The inspectors determined that the licensee's operation with RCS pressure boundary leakage, a condition prohibited by TSs, due to recirculation pump seal cooler leakage, was a performance deficiency requiring evaluation. The inspectors determined that the finding was more than minor in accordance with IMC 0612, Appendix B, because it adversely impacted the Initiating Events Cornerstone attribute of equipment performance—barrier integrity, and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors assessed the significance of this finding in accordance with IMC 0609 and determined this finding was of very low safety significance. The inspectors concluded that this finding was cross-cutting in the Problem Identification and Resolution, Evaluation area, because of the failure to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance [P.2]. (Section 1R15)

Green. The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and

Drawings," for the licensee's failure to ensure that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances and be accomplished in accordance with these procedures. Specifically, the licensee failed to accomplish activities affecting quality in accordance with Fleet Procedure FP–OP–OL–01, in that, on August 9, 2013, and January 3, 4, 7, and 17, 2014, the site failed to ensure that the operability determination for leakage into reactor building closed-cooling water (RBCCW) was sufficient to address the capability of a structure, system, and component (SSC) to perform its specified safety function and, as a result, the site failed to properly classify leakage from the recirculation system as reactor coolant system (RCS) pressure boundary leakage. Following NRC questions and actions by the site to confirm the location of the leakage, the site revised the operability determination and classified the leakage as reactor coolant pressure boundary (RCPB) leakage. This issue was entered into their corrective action program; a root cause evaluation was performed; and additional corrective actions were in development at the time of this report.

The inspectors determined that the failure to properly classify RCS pressure boundary leakage in accordance with the fleet operability determination process was a performance deficiency requiring evaluation. The inspectors determined the issue was more than minor because, if left uncorrected, the failure to perform a thorough operability evaluation for conditions where potential RCPB leakage exists could lead to a more significant safety concern. The inspectors assessed the significance of this finding in accordance with IMC 0609 under the Initiating Events Cornerstone, and determined that it was of very low safety significance. The inspectors concluded that this finding was cross-cutting in the Human Performance, Conservative Bias area, because of the licensee's failure to use decision-making practices that emphasize prudent choices over those that are simply allowable, and a failure to ensure that proposed actions are determined to be safe in order to proceed, rather than unsafe in order to stop [H.14]. (Section 1R15)

Cornerstone: Barrier Integrity

Green. The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to ensure that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances, and be accomplished in accordance with these procedures. Specifically, the licensee failed to accomplish activities affecting quality in accordance with Fleet Procedure FP–OP–OL–01, in that, on February 28, 2014, and March 5, 2014, the site failed to ensure that the operability determination for all eight safety-related drywell-torus vacuum breakers was sufficient to address the capability of the SSCs to perform their specified safety function. Following NRC questions, the site revised the operability determination to include newly discovered information of an instance where the equipment in question had been observed opening at the required setpoint during a plant evolution and, subsequently changing the operability evaluation final conclusion from "operable but nonconforming" to "operable." This issue was entered into their corrective action program (CAP), and additional corrective actions were in development at the time of this report.

The inspectors determined that the failure to properly justify vacuum breaker operability in accordance with the fleet operability determination process was a performance

deficiency requiring evaluation. The inspectors determined the issue was more than minor because, if left uncorrected, the failure to perform a thorough operability evaluation for conditions where a required post-maintenance testing (PMT) was not performed for all eight drywell-torus vacuum breakers could lead to a more significant safety concern. The inspectors assessed the significance of this finding in accordance with IMC 0609 under the Barrier Integrity Cornerstone, and determined the finding was of very low safety significance. The inspectors concluded that this finding was cross-cutting in the Human Performance, Conservative Bias area, because of the licensee's failure to use decision-making practices that emphasize prudent choices over those that are simply allowable, and a failure to ensure that proposed actions are determined to be safe in order to proceed, rather than unsafe in order to stop [H.14]. (Section 1R15)

Green. The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to assure that all testing required to demonstrate that SSCs will perform satisfactorily in service are identified and performed in accordance with written test procedures, which incorporate the requirements and acceptance limits contained in applicable design documents. Specifically, on May 22, 2013, the licensee failed to ensure that post-maintenance and return-to-service testing was performed on all eight safety-related drywell-torus vacuum breakers after refueling outage maintenance, to ensure that surveillance requirements for the valves' opening setpoints were met prior to the valve being returned to service and prior to entry into MODE 2. The licensee entered this issue into their CAP, and additional corrective actions were in development at the time of this report.

The inspectors determined that the licensee's failure to perform required PMTs for vacuum breakers prior to their return-to-service and making a mode change was a performance deficiency requiring evaluation. The inspectors determined that the finding was more than minor in accordance with IMC 0612, Appendix B, because it adversely impacted the Barrier Integrity Cornerstone attribute of SSC and Barrier Performance, and affected the cornerstone objective to provide reasonable assurance that physical design barriers, including containment, protect the public from radionuclide releases caused by accidents or events. The inspectors assessed the significance of this finding in accordance with IMC 0609 and determined this finding was of very low safety significance. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Management area, because of the failure to implement a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority, and to ensure that the work process includes the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities [H.5]. (Section 1R15)

Green. The inspectors identified a finding of very low safety significance and a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," on February 14, 2014, for the licensee's failure to ensure that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances. Specifically, the site changed Procedure 0143, "Drywell-Torus Monthly Vacuum Breaker Check," to include allowances for multiple cyclings on the safety-related drywell-torus vacuum breaker valves to ensure they met their surveillance requirements to close, which constituted unacceptable preconditioning. The licensee

entered this issue into their CAP, and corrective actions were still in development at this time of this report.

The inspectors determined that the licensee's failure to ensure the vacuum breaker monthly testing surveillance procedure was appropriate to the circumstances was a performance deficiency requiring evaluation. 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 adversely impacted the Barrier Integrity Cornerstone attribute of Procedure Quality, and affected the cornerstone objective to provide reasonable assurance that physical design barriers, including containment, protect the public from radionuclide releases caused by accidents or events. In addition, if left uncorrected, the proceduralized unacceptable preconditioning has the potential to lead to a more significant safety concern. The inspectors assessed the significance of this finding in accordance with IMC 0609 and determined this finding was of very low safety significance. The inspectors concluded that this finding was cross-cutting in the Human Performance, Conservative Bias area, because of the licensee's failure to use decision-making practices that emphasize prudent choices over those that are simply allowable, and a failure to ensure that proposed actions are determined to be safe in order to proceed, rather than unsafe in order to stop [H.14]. (Section 1R22)

Cornerstone: Occupational Radiation Safety

Green. A finding of very low safety significance and an associated non-cited violation of Technical Specification (TS) 5.7.1 was self-revealed following a worker's unexpected electronic dosimeter alarm, which resulted in the identification of an unbarricaded and unposted high radiation area. The inspectors determined a performance deficiency occurred when the licensee failed to perform radiological surveys following the implementation of noble metals chemistry which changed plant radiological conditions, and prior to authorizing entry into the 924' torus area. Specifically, on January 19, 2014, a fire watch entered this area when posted as a radiation area and received a dose rate alarm. Follow-up radiological surveys identified a high radiation area of 120 mrem/hr at 30 cm from the residual heat removal piping. This issue was entered into the licensee's corrective action program as CAP 01415285. The licensee immediately barricaded and posted the area as a high radiation area. Additionally, the licensee is performing a review of radiation protection fundamentals as the result of this event.

The finding was more than minor because it impacted the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, the worker's entry into an unsurveyed high radiation area placed the worker at increased risk for unnecessary radiation exposure. Additionally, the inspectors reviewed the guidance in IMC 0612, Appendix E, "Examples of Minor Issues," and identified Example 6(h) as similar to the performance deficiency. The finding was assessed using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," and was determined to be of very low safety significance because the problem was not an as-low-as-reasonably-achievable planning issue; there were no overexposures nor substantial potential for overexposures given the highest dose rate present in the room and the scope of work; and the licensee's ability to assess dose was not compromised. The inspectors concluded that the cause of this event involved a cross-cutting component in the Problem Identification and Resolution,

Operating Experience area, because the licensee failed to implement known industry concerns regarding changing radiological conditions as the result of implementation of noble metals chemistry (P.5). (Section 2RS1.2)

B. Licensee-Identified Violations

Violations of very low safety or security significance or Severity Level IV that were identified by the licensee have been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's CAP. These violations and CAP tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

At the end of the previous inspection quarter, Monticello received an extended power uprate (EPU) amendment which increased the authorized maximum licensed thermal power level by approximately 13 percent, from the previously licensed thermal power of 1775 megawatts thermal (MWt) to 2004 MWt. Monticello began the inspection period operating at 91 percent power (1819 MWt) of its newly licensed EPU power of 2004 MWt. On January 11, 2014, the licensee manually reduced power to approximately 58 percent power in response to a degrading condenser vacuum condition that resulted from the unexpected trip of a steam jet air ejector (SJAE). The plant returned to 91 percent power on January 12, 2014. On January 17, 2014, the licensee entered a forced outage to address reactor coolant pressure boundary (RCPB) leakage in a recirculation system seal cooler. The outage ended on February 6, 2014, and the unit was returned to 88.5 percent power on February 7, 2014, to resume EPU testing. During the inspection period, power was periodically reduced to approximately 75 percent to support turbine valve testing and control rod pattern adjustments. Throughout the inspection period, the unit was operated between 1775 MWt and 1864 MWt to facilitate progressive EPU testing activities. At the end of the inspection period, Monticello was holding at 1775 MWt (the previously licensed 100 percent power), pending additional review of EPU test data.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 External Flooding

a. Inspection Scope

The inspectors evaluated the design, material condition, and procedures for coping with the design basis probable maximum flood. The evaluation included a review to check for deviations from the descriptions provided in the Updated Safety Analysis Report (USAR) for features intended to mitigate the potential for flooding from external factors. As part of this evaluation, the inspectors checked for obstructions that could prevent draining and determined that barriers required to mitigate the flood were in place and operable. Additionally, the inspectors performed a walkdown of the protected area to identify any modification to the site which would inhibit site drainage during a probable maximum flood event or allow water ingress past a barrier. The inspectors walked down the intake structure areas to inspect flood barriers and review the necessary flood preparation activities for those areas. The inspectors also reviewed the abnormal operating procedure (AOP) for mitigating the design basis flood to ensure it could be implemented as written, during the ongoing bin wall construction project. Specific documents reviewed during this inspection are listed in the Attachment to this report.

This inspection constituted one external flooding 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:

- 'A' standby gas treatment (SBGT);
- Secondary containment (airlocks and dampers);
- High pressure coolant injection (HPCI) (during reactor core isolation cooling (RCIC) maintenance); and
- 11 emergency diesel generator (EDG) during 12 EDG maintenance.

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, USAR, Technical Specification (TS) requirements, outstanding work orders (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

a. Inspection Scope

On March 8, 2014, the inspectors performed a complete system alignment inspection of the core spray 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 13C; Turbine building, 911' east;
- Fire Zone 13B; Turbine building, 911' east;
- Fire Zone 12A; Lower kV (13 and 15);
- Fire Zone 15A; No. 12 diesel generator (DG) room;
- Fire Zone 34; East electrical equipment room; and
- Fire Zones 35 and 36; 13 DG and day tank room.

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

These activities constituted six quarterly fire protection inspection samples as defined in IP 71111.05–05.

b. Findings

No findings were identified.

1R06 Flooding (71111.06)

.1 Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the USAR, engineering calculations, and AOPs to identify licensee commitments. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee's corrective action documents with respect to past flood-related items identified in the CAP to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant areas to assess the adequacy of watertight doors and verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments:

- Turbine building, 931' east; and
- Turbine building, 931' west.

Documents reviewed during this inspection are listed in the Attachment to this report. This inspection constituted two internal flooding samples as defined in IP 71111.06–05.

b. Findings

No findings were identified.

1R07 Annual Heat Sink Performance (71111.07)

.1 Heat Sink Performance

a. Inspection Scope

The inspectors reviewed the licensee's testing of the recirculation system heat exchangers to verify that potential deficiencies did not mask the licensee's ability to detect degraded performance; to identify any common cause issues that had the potential to increase risk; and to ensure that the licensee was adequately addressing problems that could result in initiating events that would cause an increase in risk. The inspectors reviewed the licensee's observations as compared against acceptance criteria, the correlation of scheduled testing and the frequency of testing, and the impact of instrument inaccuracies on test results. The inspectors reviewed the results of heat exchanger boundary integrity tests, including leak testing to identify the source of leakage into RBCCW. Inspectors also verified that test acceptance criteria considered

differences between test conditions, design conditions, and testing conditions. Documents reviewed for this inspection are listed in the Attachment to this report.

This annual heat sink performance inspection constituted one sample as defined in IP 71111.07–05.

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 March 20, 2014, 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 and notifications.

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 71111.11–05.

b. Findings

No findings were identified.

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

a. Inspection Scope

On January 17, 2014, the inspectors observed licensed control room operators performing a TS-required plant shutdown due to RCPB leakage. 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 manipulations; and
- oversight and direction from supervisors.

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 71111.11–05.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations

a. Inspection Scope

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

- HPCI;
- Recirculation system; and
- 13 Non-safeguards DG.

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 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 three 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:

- risk mitigation during plant startup;
- transversing incore probe replacement;
- EPU troubleshooting prior to forced outage;
- heat exchanger intergranular stress-corrosion cracking (IGSCC) extent of condition evaluation; and
- mechanical pressure regulator adjustment risk evaluation.

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.

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

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- drywell-torus vacuum breaker failure to indicate closed;
- recirculation seal cooler pressure boundary leakage;
- RBCCW leak evaluation;
- fire penetration combustible material found;
- 'B' control room ventilation compressor unexpected flow while in standby;
- inadequate drywell-torus vacuum breaker PMT following maintenance; and
- nonsafety-related gaskets in the RCS pressure boundary.

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 operability inspection constituted seven samples as defined in IP 71111.15–05.

b. Findings

Reactor Coolant System Pressure Boundary Leakage Operation Prohibited by Technical Specifications

Introduction

A finding of very low safety significance and a NCV of TS 3.4.4 "RCS Operational Leakage," was self-revealed when the licensee failed to comply with TS 3.4.4, Condition C, which required the plant to be in MODE 3 within 12 hours if pressure boundary leakage exists. Specifically, the licensee operated with RCS pressure boundary leakage as a result of corrosion in the 12 recirculation pump upper seal cooler between August 9, 2013, and January 17, 2014, which is a condition prohibited by TS.

Description

On August 9, 2013, plant staff responded to an increased trend on the RBCCW radiation monitor. Investigation revealed that the RBCCW tank had indications of an increasing level trend (approximately 2-3 inches/month) and that the RBCCW water contained

radioactive isotopes which were indicative of RCS water leaking into the closed RBCCW system. As a result, the plant entered AOP C.4-B.02.05.B, “Leak into RBCCW.” The site developed an operational decision-making issue (ODMI) evaluation, and initiated formal troubleshooting activities to identify the source of the leakage. Troubleshooting determined that the leak source was either the reactor water cleanup (RWCU) regenerative heat exchanger or the reactor coolant recirculation pump coolers. After narrowing the leakage source down to the two potential causes, the licensee did not take action to investigate further into which of the two systems was the source of the leak. Inspectors noted that the licensee did not recognize the risk that the leakage was potential RCS pressure boundary leakage.

In September 2013, the licensee noted that the leakage and radioactivity in RBCCW appeared to have dropped below the bounds of detectability. As a result, the licensee continued to monitor for changes to the leakage in accordance with their ODMI. On November 2, 2013, the licensee had indications of a lowering trend in 12 recirculation pump upper seal pressure, in that the pressure had decreased by approximately 30 psig in one week, and was continuing to lower. The licensee also periodically had indications of recirculation seal pressure step changes when adjusting drywell cooling units, which were cooled by RBCCW. The licensee attributed the recirculation seal pressure changes to a recently implemented online noble chemistry injection project, and did not take action in accordance with AOP C.4-B.02.05, which provided guidance for when decreasing recirculation seal pressure was identified.

On January 3, 2014, the RBCCW system experienced a step change in the rate of leakage into the RBCCW tank from undetectable to 0.055 gpm. As a result, the licensee reinitiated troubleshooting activities, which again left them with two potential leakage sources: the recirculation seal coolers and RWCU regenerative heat exchanger. Inspectors noted that the licensee utilized the next two weeks to plan an activity to remove RWCU from service in order to determine if this system was the leak source. On January 17, 2014, the licensee performed the work activity to isolate and assess if RWCU was the leakage source, and determined that it was not. As a result, the licensee concluded that the leakage was coming from the recirculation seal coolers. Following questions and concerns from the inspectors and these actions to determine which of the two systems were the source of leakage, the licensee concluded that the plant had been operating with RCS pressure boundary leakage, and took action to shut down the plant.

Inspectors reviewed AOP C.4–B.02.05.B, “Leak into RBCCW,” and determined that the procedure contained instructions which should have led the licensee to take the appropriate actions, given the leakage indications present in August 2013. Specifically, Step 5 states, “If the Recirc System is NOT the suspected leak into RBCCW, then Shutdown and Depressurize Reactor Water Cleanup System.” Inspectors noted that the licensee should have completed procedural actions to eliminate RWCU as a source of the leakage in August 2013. The inspectors observed that these actions delayed potential recognition of RCPB leakage and plant shut down when leakage indications first surfaced. The inspectors noted that the failure to take this action also delayed the decision to shut the plant down between January 3, 2014, and January 17, 2014, after RBCCW experienced a step change in in-leakage.

The inspectors also noted that on November 2, 2013, while still in the AOP C. 4–B.02.05.B Procedure, the licensee observed a 30 psig decrease in recirculation seal pressure. Inspectors noted that the site should have taken action in accordance with AOP C.4-B.02.05.B procedure Step 3, which states in part, "If any recirc pump seal pressure has lowered by 20 psig or more since the leak into RBCCW began, then perform the following:

- shutdown and isolate affected recirc pump; and
- if the Recirc pump isolation valves leak, as indicated by RBCCW surge tank level still increasing and recirc seal pressures remaining at Reactor pressure, then refer to 2204 (Plant Shutdown)."

The inspectors noted that the bases for these steps state in part, "the leak is then isolated by isolating the recirc pump rather than the RBCCW to the drywell." The bases section also states, "It is recognized that the recirc suction and discharge valves may NOT provide a "zero-leakage" isolation, thus two different actions are allowed, depending on whether the leak is isolated." Inspectors concluded that these steps should have driven plant staff to shut down the reactor.

Following investigation into the cause of the seal cooler leakage, the licensee determined that the leakage was a result of IGSCC. The inspectors noted that the licensee should have had a maintenance plan in place to inspect or replace the seal coolers in question. The inspectors reviewed the licensee's apparent cause evaluation and noted that the plant staff had failed to recognize the susceptibility of the recirculation seal coolers to IGSCC due to sustained boiling conditions in the cooling coils. Specifically, the plant had failed to thoroughly evaluate the impacts of the temperature drops present in the seal coolers, to identify that sustained boiling could occur and the cooling coil could be susceptible to IGSCC.

Once the failure occurred, the licensee evaluated the properties of the crack in the cooling coil, and determined that the length of the flaw in the coil in the 12 recirculation pump bleed heat exchanger was well below the critical flaw length necessary to cause plastic collapse of the piping and excessive leakage of RCS coolant into the RBCCW system. In addition, the site's ODMI trigger point to shut down at a threshold of 0.33 gpm would have been met prior to the crack reaching a critical flaw length. The inspectors noted that this information, along with the slow rates of crack growth due to IGSCC limited the significance of this condition. The leakage rate from the heat exchanger at the time plant was shut down was measured to be 0.22 gpm.

The inspectors concluded that the licensee failed to take action to place the unit in MODE 3 within 12 hours, after RBCCW surge tank was found to have increased by 2.5 inches within a month; local RBCCW rad monitor readings had increased; and RBCCW chemistry sampling showed activity consistent with reactor water leakage. The inspectors noted that this occurred as a result of the licensee's failure to take action to thoroughly evaluate the source of the leakage due to a lack of risk recognition; failure to fully utilize instructions in AOP C.4–B.02.05.B, "Leak into RBCCW," to isolate RWCU for leak identification, which ultimately delayed entry required shut down actions; and failure to recognize the susceptibility of the recirculation seal coolers to IGSCC due to sustained boiling conditions in the cooling coils.

Analysis

The inspectors determined that the licensee's operation with RCS pressure boundary leakage, a condition prohibited by TSs, due to recirculation pump seal cooler leakage was a performance deficiency requiring evaluation. The inspectors determined that the finding was more than minor in accordance with IMC 0612, Appendix B, because it adversely impacted the Initiating Events Cornerstone attribute of equipment performance—barrier integrity, and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations.

The inspectors assessed the significance of this finding in accordance with IMC 0609 and determined this finding was of very low safety significance because the leak would not have exceeded the RCS leak rate for a small loss-of-coolant accident (LOCA) and would not have likely affected other systems used to mitigate a LOCA resulting in a total loss of their function. Specifically, the slow rate of change for cracking due to IGSCC in type 304 stainless steel will result in leakage rates well below a small break LOCA, which would be observed through the crack, alerting operators to take action to isolate the affected recirculation loop and shut down the plant prior to experiencing a component rupture. The inspectors concluded that this finding was cross-cutting in the Problem Identification and Resolution, Evaluation area, because of the failure to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance [P.2]. Specifically, the licensee failed to take action to thoroughly evaluate the source of the leakage due to a lack of risk recognition; failed to fully utilize instructions in AOP C.4–B.02.05.B, "Leak into RBCCW," to isolate RWCU for leak identification, which ultimately delayed entry required shut down actions; and failed to recognize the susceptibility of the recirculation seal coolers to IGSCC due to sustained boiling conditions in the cooling coils.

Enforcement

Technical Specification 3.4.4, "RCS Operational Leakage" states, "RCS operational leakage shall be limited to no pressure boundary leakage." Technical Specification 3.4.4, Condition C, requires that if pressure boundary leakage exists, the licensee must take action to "be in MODE 3 in 12 hours."

Contrary to this requirement, on August 9, 2013, the licensee failed to take action to put the plant into MODE 3 within 12 hours when indications of pressure boundary leakage existed. Specifically, the licensee operated with RCS pressure boundary leakage as a result of corrosion in the 12 recirculation pump upper seal cooler between August 9, 2013, and January 17, 2014, which is a condition prohibited by TS. Corrective actions included troubleshooting to confirm the location of the leakage and actions to shut down the plant in accordance with TSs. The site performed an apparent cause evaluation, implemented a modification to remove the affected seal cooler from service, and developed a periodic replacement plan for heat exchangers in a similar configuration. Because the violation was of very low safety significance and was entered into the licensee's corrective action program (CAP 01415225), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (**NCV 05000263/2014002–01; RCS Pressure Boundary Leakage Operation Prohibited by TSs**)

Failure to Follow Procedure for Reactor Coolant System Operability Determination

Introduction

The inspectors identified a finding of very low safety significance and a NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to ensure that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances and be accomplished in accordance with these procedures. Specifically, the licensee failed to accomplish activities affecting quality in accordance with Fleet Procedure FP–OP–OL–01, in that on August 9, 2013, and January 3, 4, 7, and 17, 2014, the site failed to ensure that the operability determination for leakage into RBCCW was sufficient to address the capability of an SSC to perform its specified safety function, and as a result, the site failed to properly classify leakage from the recirculation system as RCS pressure boundary leakage.

Description

On August 9, 2013, plant staff responded to an increased trend on the RBCCW radiation monitor. Investigation revealed an increasing level in the RBCCW surge tank and that the RBCCW water contained radioactive isotopes which were indicative of RCS water leakage. The site developed an ODMI and initiated formal troubleshooting activities to identify the source of the leakage. Troubleshooting determined that the leak source was either the RWCU regenerative heat exchanger or the reactor coolant recirculation pump coolers. After narrowing the leakage source down to the two potential causes, the licensee utilized their ODMI to establish monitoring actions for the leakage. On January 3, 2014, the RBCCW system experienced a step change in the rate of leakage into the RBCCW tank from undetectable to 0.055 gpm. The site reinitiated troubleshooting, and began planning an activity to determine if RWCU was the leak source.

During a review of the condition, the inspectors noted that operability determinations for CAPs generated on August 9, 2013, and January 3, 4, and 7, 2014, documented a conclusion that none of the potential sources of in-leakage to RBCCW would be classified as RCS pressure boundary leakage as defined in TSs. The conclusion included discussion that if the recirculation seal coolers were found to be the source, then the recirculation suction and discharge valves could be credited with the ability to isolate the leakage. As a result, the operability evaluations concluded that the leakage would be isolable, and therefore did not meet the definition of RCPB leakage described in Regulatory Guide 1.45 and TSs. On January 8, 2014, after reviewing these operability determinations, the inspectors questioned operations management on the operability evaluation conclusions for the leakage into RBCCW and challenged the determination that the leakage was not RCPB leakage. Specifically, the inspectors questioned whether crediting the recirculation suction and discharge valves was sufficient to meet the requirements of TSs, and whether double valve isolation was required if the leakage was found to be originating in the recirculation seal coolers. Inspectors also pointed to the fact that the recirculation seal cooler coils were American Society of Mechanical Engineers (ASME) Code Class 1 and Class 2 components. The licensee generated CAP 01413772 in response to these concerns.

While the licensee developed their response to NRC questions, the inspectors engaged NRC Regional and Headquarters staff to ascertain the NRC position on the definition of RCPB leakage. Regional and Headquarters staff provided insights and operating experience which pertained to the Monticello condition. On January 15, 2014, the inspectors engaged plant management to reemphasize their concerns, and to question the timeliness of their planned activity to determine whether the source of the leakage was RWCU or the recirculation system. On the morning of January 17, 2014, engineering supervision, operations management, and regulatory affairs management presented an engineering evaluation which concluded that if the leakage was found to be originating from the recirculation seal coolers, the leakage was NOT RCS boundary leakage. The inspectors informed the licensee that this conclusion may not be in line with the NRC position, and cited operating experience regarding a violation which documented the NRC position for a similar case at another site.

The resident inspectors and NRC Regional and Headquarters staff reviewed the licensee's evaluation. The NRC staff determined that the licensee's conclusion was contrary to the NRC position on RCPB leakage and the ability of the recirculation seal cooler to perform its safety function to maintain the integrity of the RCS pressure boundary. Later on the morning of January 17, 2014, the inspectors provided a copy of the previously discussed violation to licensee staff and informed the licensee of the NRC position. Specifically, inspectors stated that the NRC position was that a plant could not operate with un-isolated RCPB leakage, and that the isolation for the RCPB leakage needed to utilize either two valves, or a single valve if closing the valve would result in zero leakage (i.e. the leakage was completely isolated).

On the afternoon of January 17, 2014, the licensee completed the activity to isolate RWCU, and determined that the source of the leakage was the recirculation seal coolers. Subsequently, the licensee concluded that this met the definition of RCPB leakage, and they initiated action to shut the plant down rather than attempt to isolate the affected recirculation loop.

Title 10 CFR 50.2 defines RCPB as "… all those pressure-containing components of boiling and pressurized water-cooled nuclear power reactors, such as pressure vessels, piping, … which are part of the reactor coolant system, or connected to the reactor coolant system, up to and including any and all of the following: The outermost containment isolation valve in system piping which penetrated primary reactor containment, the second of two valves normally closed during normal reactor operation in system piping which does not penetrate primary reactor containment, or the reactor coolant system safety and relief valves."

Monticello Nuclear Generating Plant (MNGP) TS define RCPB leakage as "leakage through a nonisolable fault in a Reactor Coolant System component body, pipe wall, or vessel wall." Technical Specification 3.4.4, "RCS Operational Leakage" states, "RCS operational leakage shall be limited to no pressure boundary leakage," and requires that if pressure boundary leakage exists, the licensee must take action to "be in MODE 3 in 12 hours."

The MNGP TS Bases for TS 3.4.4 states, "A limited amount of leakage inside containment is expected from auxiliary systems that cannot be made 100 percent leaktight. Leakage from these systems should be detected, located, and isolated from the containment atmosphere, if possible, to not interfere with RCS leakage detection.

This limiting condition for operation (LCO) deals with protection of the RCPB from degradation and the core from inadequate cooling, in addition to preventing the accident analyses radiation release assumptions from being exceeded. The consequences of violating this LCO include the possibility of a loss of coolant accident." The MNGP TS bases also states, "No pressure boundary LEAKAGE is allowed, being indicative of material deterioration."

Inspectors concluded based on this information, that the leakage into RBCCW from the recirculation seal cooling coil met the definition of RCPB leakage, and that the licensee was required to take action in accordance with TSs to either isolate the leakage or be in Mode 3 within 12 hours. Inspectors also concluded that if the licensee chose to isolate the leakage, they were required to maintain the RCS pressure boundary integrity in accordance with the 10 CFR 50.2 RCPB requirements up to the second of two normally closed valves.

Fleet Procedure FP–OP–OL–01, "Operability/Functionality Determination," Section 5.3.3.a, regarding Operability Determination/Recommendations states, "An Operability Determination/Recommendation, as applicable, SHALL be sufficient to address the capability of the SSCs to perform their specified safety functions." In addition, Attachment 1, regarding considerations for immediate operability review, Section 4, states, "Upon discovery of leakage from a Class 1, 2, or 3 component pressure boundary of a high energy system, the Shift Manager or designee SHALL declare the affected component inoperable." The definition of a high energy system includes systems where the maximum operating temperature and pressure are greater than 200 degrees F and 275 psig. Attachment 2, regarding guidelines for operability recommendations, Section 1.15, includes instruction to Review industry experience and address anomalies in the operability recommendation (OPR).

The inspectors determined that the licensee failed to follow the requirements of FP–OP–OL–01, in that the licensee's operability determinations for RBCCW in-leakage were not sufficient to address the capability of the recirculation seal coolers to perform their safety function to maintain the integrity of the RCS pressure boundary. As a result, the operability evaluation did not drive the required actions to isolate the leakage or shut down the plant, and did not ensure that the isolation device would isolate the fault in a manner that continued fault growth would not cause higher RCS leakage.

Inspectors also noted that per the procedural instructions, the site should have looked for external operating experience that could contradict the operability determination and explain the anomalies. The inspectors noted that there were other examples of operating experience at various other sites which should have provided guidance for the leakage condition at Monticello. Inspectors observed that the operability determinations also failed to address the fact that the recirculation seal cooling coils were ASME Code Class 1 and 2 piping, and were high energy components. Per the site's operability procedure, these components should be declared inoperable upon discovery that they were leaking. The inspectors observed that licensee efforts to answer this question should have driven additional action to expedite determination of the leak location.

Analysis

The inspectors determined that the failure to properly classify RCS pressure boundary leakage in accordance with the fleet operability determination process was a

performance deficiency requiring evaluation. Inspectors evaluated the issue using the SDP and determined the issue was more than minor because, if left uncorrected, the failure to perform a thorough operability evaluation for conditions where potential RCPB leakage exists could lead to a more significant safety concern.

The inspectors assessed the significance of this finding in accordance with IMC 0609 under the Initiating Events Cornerstone, and determined that it was of very low safety significance because the quantity of leakage being assessed by the operability evaluation would not have exceeded the RCS leak rate for a small LOCA and would not have affected other systems used to mitigate a LOCA resulting in a total loss of their function. The inspectors concluded that this finding was cross-cutting in the Human Performance, Conservative Bias area, because of the licensee's failure to use decision-making practices that emphasize prudent choices over those that are simply allowable, and a failure to ensure that proposed actions are determined to be safe in order to proceed, rather than unsafe in order to stop [H.14].

Enforcement

Title 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings." Fleet Procedure FP–OP–OL–01, "Operability/Functionality Determination," Section 5.3.3.a, provides instructions for Operability Determination/Recommendations, and states, "An Operability Determination/Recommendation, as applicable, SHALL be sufficient to address the capability of the SSCs to perform their specified safety functions."

Contrary to these requirements, on August 9, 2013, and January 3, 4, 7, and 17, 2014, the licensee failed to accomplish activities affecting quality in accordance with instructions, procedures, or drawings. Specifically, the licensee failed to accomplish activities affecting quality in accordance with FP–OP–OL–01, when the site failed to ensure that the operability determination for leakage into RBCCW was sufficient to address the capability of an SSC to perform its specified safety function, and as a result, the site failed to properly classify leakage from the recirculation system as RCS pressure boundary leakage. Corrective actions included actions by the site to confirm the location of the leakage, revision of the operability determination, and classification of the leakage as RCPB leakage. The site also initiated a root cause evaluation, and additional corrective actions were in development at the time of this report. Because this violation was of very low safety significance and it was entered into the corrective action program (CAP 01413772. CAP 01415802), this issue is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (**NCV 05000263/2014002–02; Failure to Follow Procedure for RCS Operability Determination**)

Drywell-Torus Vacuum Breaker Inadequate Post-Maintenance and Return-to-Service Test

Introduction

The inspectors identified a finding of very low safety significance and a NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to assure

that all testing required to demonstrate that SSCs will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Specifically, on May 22, 2013, the licensee failed to ensure that post-maintenance and return-to-service testing was performed on all eight safety-related drywell-torus vacuum breakers after refueling outage maintenance, to ensure that surveillance requirements for the valves' opening setpoints were met prior to being returned to service and prior to entry into MODE 2.

Description

On February 7, 2014, the licensee made a 10 CFR 50.72 notification for a potential loss of safety system function for a drywell-torus vacuum breaker which had failed to indicate full closed after being stroked during testing. This was documented in CAP 01417977. On February 11, 2014, the licensee made a second 10 CFR 50.72 notification for the same vacuum breaker failing to indicate full closed. On February 14, 2014, the licensee made a change to Procedure 0143, "Drywell-Torus Monthly Vacuum Breaker Check," to allow multiple cyclings of the vacuum breaker during testing. In response to inspector questions, the licensee stated that they believed the procedural change was acceptable, because their investigation had concluded that the cause of the dual indication they were receiving was an indication issue, rather than evidence of an actual vacuum breaker problem.

On February 19, 2014, inspectors questioned the basis on which the licensee had determined that the dual indication was caused by limit issues rather than vacuum breaker position itself. The inspectors requested evidence to support the conclusion, information on other procedures that test the vacuum breaker surveillance requirements, and requested copies of those tests. The licensee response was due back to the inspectors on February 26, 2014. On February 25, 2014, the inspectors were notified that the individual responding to the NRC questions had discovered that Surveillance Procedure 0127, "Drywell-Torus Vacuum Breaker Inspection, Functional Tests and Calibration of Position Indication and Alarm System," was required to be performed as a post-maintenance/return-to-service test, following maintenance activities on all eight drywell-torus vacuum breakers during the previous refueling outage. The licensee had discovered that this test had not been performed after the maintenance activity, and only as-found testing had been performed. Procedure 0127 is performed in part to verify the opening setpoint of each required vacuum breaker is less than or equal to 0.5 psid in accordance with Surveillance Requirement (SR) 3.6.1.7.3.

Administrative Work Instruction 4 AWI-04.05.06, "Post-Maintenance and Return to Service Testing," Step 4.1.10, states, "IF RTS testing is required, THEN the applicable Tech Spec-related SSC SHALL NOT be declared operable until the testing is satisfactorily completed." Work Orders for licensee Procedure 4050–PM, "Torus to Drywell Vacuum Breaker Seal Replacement," required that PM and return-to-service testing be performed on each vacuum breaker using Procedure 0127, "Drywell-Torus Vacuum Breaker Inspection, Functional Tests and Calibration of Position Indication and Alarm System." The inspectors concluded that the licensee had failed to perform required post-maintenance/return-to-service testing for all eight drywell-torus vacuum breakers in May 2013. As a result, the inspectors concluded that the licensee had failed to assure that all testing required to demonstrate that SSCs will perform satisfactorily in

service was identified and performed in accordance with written test procedures, in accordance with 10 CFR 50, Appendix B, Criterion XI, "Test Control."

Inspectors noted that the WO had incorrectly marked that the post-maintenance/ return-to-service test had been completed, because it mistakenly listed the WO number for the 0127 that was completed for the “as-found” test, rather than including a new WO number for the “as-left” test. Inspectors concluded that the licensee had failed to properly plan, control, and execute the work activity, which resulted in the performance deficiency. Inspectors also noted that as of April 2, 2014, the condition evaluation action for CAP 01417977, regarding the original issue where the vacuum breaker failed to close, had not been completed and remained at accept/assign status.

Analysis

The inspectors determined that the licensee’s failure to perform required PMTs for vacuum breakers prior to their return-to-service and making a mode change was a performance deficiency requiring evaluation. The inspectors determined that the finding was more than minor in accordance with IMC 0612, Appendix B, because it adversely impacted the Barrier Integrity Cornerstone attribute of SSC and Barrier Performance, and affected the cornerstone objective to provide reasonable assurance that physical design barriers, including containment, protect the public from radionuclide releases caused by accidents or events.

The inspectors assessed the significance of this finding in accordance with IMC 0609 and determined this finding was of very low safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment, and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors concluded that this finding was cross-cutting in the Human Performance, Work Management area, because of the failure to implement a process of planning, controlling, and executing work activities, such that nuclear safety is the overriding priority, and to ensure that the work process includes the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities [H.5].

Enforcement

Title 10 CFR 50, Appendix B, Criterion XI, "Test Control," requires, in part, that “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Administrative Work Instruction 4 AWI–04.05.06, “Post-Maintenance and Return to Service Testing,” Step 4.1.10, states, “IF RTS [return-to-service] testing is required, THEN the applicable Tech Spec-related SSC SHALL NOT be declared operable until the testing is satisfactorily completed.” Work orders for licensee Procedure 4050–PM, “Torus to Drywell Vacuum Breaker Seal Replacement,” required that PM and return-to-service testing be performed on each vacuum breaker using Procedure 0127, “Drywell-Torus Vacuum Breaker Inspection, Functional Tests and Calibration of Position Indication and Alarm System.” Procedure 0127 is performed in part to verify the opening setpoint of each required vacuum breaker is less than or equal to 0.5 psid in accordance with SR 3.6.1.7.3.

Contrary to these requirements, on May 22, 2013, the licensee failed to assure that all testing required to demonstrate that SSCs will perform satisfactorily in service was identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Specifically, the licensee failed to ensure that post-maintenance and return-to-service testing was performed on all eight safety-related drywell-torus vacuum breakers after refueling outage maintenance, to ensure that surveillance requirements for the valves' opening setpoints were met prior to the valve being returned to service and prior to entry into MODE 2. The licensee entered this issue into their CAP, and additional corrective actions were in development at the time of this report. Because the violation was of very low safety significance and was entered into the licensee's corrective action program (CAP 01420318), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000263/2014002–03; Drywell-Torus Vacuum Breaker Inadequate Post-maintenance and Return-to-service Test)**

Failure to Follow Procedure for Drywell-Torus Vacuum Breaker Operability Determination

Introduction

The inspectors identified a finding of very low safety significance and a NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to ensure that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances and be accomplished in accordance with these procedures. Specifically, the licensee failed to accomplish activities affecting quality in accordance with FP–OP–OL–01, in that on February 28, 2014, and March 5, 2014, the site failed to ensure that the operability determination for all eight safety-related drywell-torus vacuum breakers was sufficient to address the capability of the SSCs to perform their specified safety function.

Description

On February 7, 2014, the licensee made a 10 CFR 50.72 notification for a potential loss of safety system function for a drywell-torus vacuum breaker which had failed to indicate full closed after being stroked during testing. On February 11, 2014, the licensee made a second 10 CFR 50.72 notification for the same vacuum breaker failing to indicate full closed. On February 24, 2014, while responding to NRC questions, the licensee discovered that they had failed to perform required post-maintenance/return-to-service testing for all eight drywell-torus vacuum breakers after refueling outage maintenance. Specifically, Procedure 4050–PM, "Torus to Drywell Vacuum Breaker Seal Replacement," involved work on the sealing components on the valve hinges. The as-found tests were performed for each vacuum breaker prior to the work using Procedure 0127, "Drywell-Torus Vacuum Breaker Inspection, Functional Tests and Calibration of Position Indication and Alarm System." However, the retest/PMT of the vacuum breakers using this same procedure was not performed as required, prior to the return to service of the equipment. Procedure 0127 is performed as a refueling outage TS surveillance test, and is performed in part to verify the opening setpoint of each required vacuum breaker is less than or equal to 0.5 psid in accordance with SR 3.6.1.7.3.

The inspectors reviewed the operability evaluation for this issue (dated February 28, 2014), questioned the licensee on several aspects of the evaluation, and concluded that the information contained in the evaluation did not fully justify operability. Inspectors consulted with the Region and NRC Headquarters staff for independent reviews of the licensee's operability evaluation. Following this review, on March 4, 2014, the inspectors engaged the licensee and highlighted discussion contained in TSs regarding SR 3.0.1 and the Bases section for that SR.

Technical Specification SR 3.0.1 states in part, "SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO…" The Bases section for SR 3.0.1 states in part, "Upon completion of maintenance, appropriate post maintenance testing is required to declare equipment OPERABLE. This includes ensuring applicable Surveillances are not failed and their most recent performance is in accordance with SR 3.0.2."

In addition, licensee Procedure FP–OP–OL–01, "Operability/Functionality Determination," Section 5.3.3.a, regarding Operability Determination/Recommendations states, "An Operability Determination/Recommendation, as applicable, SHALL be sufficient to address the capability of the SSCs to perform their specified safety functions." Attachment 2, regarding guidelines for operability recommendations, Section 3.0, "Missed or Deficient Surveillances," Step 3.3, states, "IF this is a failure to retest or perform functional verification of equipment prior to restart or return to service, THEN the equipment is inoperable."

Based on these requirements, the inspectors, in discussion with NRC Regional and Headquarters staff, concluded that because the licensee had performed maintenance on the vacuum breakers which could affect the ability to meet SR 3.6.1.7.3, and as a result, they were required to demonstrate that the SR would still be met. The inspectors concluded that because the licensee did not perform post-maintenance/return-to-service testing and did not demonstrate that SR 3.6.1.7.3 would still be met for all eight of the vacuum breakers, the equipment should be declared inoperable.

Following discussions with NRC inspectors and management, the licensee took actions to revise their operability determination on March 5 and March 7, 2014, to include additional information. Inspectors noted that among other information, Revision 2 of the operability determination included newly discovered information pertaining to actual demonstrated performance of the vacuum breakers during startup activities from the January 2014 forced outage. Specifically, the licensee presented plant data and operator observations during the drywell inerting process on February 7, 2014, which demonstrated that the vacuum breakers had fully opened at their setpoints in accordance with SR 3.6.1.7.3. Following the review of this information, the inspectors informed licensee staff that they had no additional operability concerns.

Analysis

The inspectors determined that the failure to properly justify vacuum breaker operability in accordance with the fleet operability determination process was a performance deficiency requiring evaluation. The inspectors evaluated the issue using IMC 0612,

Appendix B, and determined the issue was more than minor because, if left uncorrected, the failure to perform a thorough operability evaluation for conditions where a required PMT was not performed for all eight drywell-torus vacuum breakers could lead to a more significant safety concern.

The inspectors assessed the significance of this finding in accordance with IMC 0609 under the Barrier Integrity Cornerstone, and determined the finding was of very low safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors concluded that this finding was cross-cutting in the Human Performance, Conservative Bias area, because of the licensee's failure to use decision-making practices that emphasize prudent choices over those that are simply allowable, and a failure to ensure that proposed actions are determined to be safe in order to proceed, rather than unsafe in order to stop [H.14]. Specifically, the licensee had reviewed the procedure requirements and SR 3.0.1 discussions prior to NRC engagement, but failed to take appropriate actions to ensure that the proposed actions were safe in order to proceed, rather than unsafe in order to stop.

Enforcement

Title 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings." Fleet Procedure FP–OP–OL–01 "Operability/Functionality Determination," Section 5.3.3.a, provides instructions for Operability Determination/Recommendations, and states, "An Operability Determination/Recommendation, as applicable, SHALL be sufficient to address the capability of the SSCs to perform their specified safety functions." Fleet Procedure FP–OP–OL–01, Attachment 2, regarding guidelines for operability recommendations, Section 3.0, "Missed or Deficient Surveillances," Step 3.3 states, "IF this is a failure to retest or perform functional verification of equipment prior to restart or return to service, THEN the equipment is inoperable."

Contrary to these requirements, on February 28, 2014, and March 5, 2014, the licensee failed to accomplish activities affecting quality in accordance with FP–OP–OL–01, when plant personnel failed to ensure that the operability determination for all eight safety-related drywell-torus vacuum breakers was sufficient to address the capability of the SSCs to perform their specified safety function. Corrective actions included revising the operability determination to include newly discovered information of an instance where the equipment in question had been observed opening at the required setpoint during a plant evolution, and subsequently changing the operability evaluation final conclusion from "operable but nonconforming" to "operable." This issue was entered into the CAP, and additional corrective actions were in development at the time of this report. Because the violation was of very low safety significance and was entered into the licensee's corrective action program (CAP 01421809), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy.
(NCV 05000263/2014002–04; Failure to Follow Procedure for Drywell-Torus Vacuum Breaker Operability Determination)

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modification:

- 11 and 12 recirculation pump lower seal cooler bypass modifications (temp mod).

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the USAR, and the TS, as applicable, to verify that the modification did not affect the operability or availability of the affected system(s). The inspectors, as applicable, observed ongoing and completed work activities to ensure that the modifications were installed as directed and consistent with the design control documents; the modifications operated as expected; post-modification testing adequately demonstrated continued system operability, availability, and reliability; and that operation of the modifications did not impact the operability of any interfacing systems. As applicable, the inspectors verified that relevant procedure, design, and licensing documents were properly updated. Lastly, the inspectors discussed the plant modification with operations, engineering, and training personnel to ensure that the individuals were aware of how the operation with the plant modification in place could impact overall plant performance. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one temporary modification sample as defined in IP 71111.18–05.

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:

- source range monitor bypass switch replacement;
- drywell equipment sump pump level switch repair;
- RCIC pump valve test;
- drywell closeout following recirculation seal cooler maintenance;
- 12 Recirculation seal cooler post-modification testing;
- 13 Nonsafeguards DG maintenance; and
- 11 EDG time delay relay replacement.

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 post-maintenance 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 seven post-maintenance testing samples as defined in IP 71111.19–05.

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Other Outage Activities

a. Inspection Scope

The inspectors evaluated outage activities for an unscheduled outage that began on January 17, 2014, and continued through February 6, 2014. The inspectors reviewed activities to ensure that the licensee considered risk in developing, planning, and implementing the outage schedule.

The inspectors observed or reviewed the reactor shutdown and cooldown; outage equipment configuration and risk management; electrical lineups; selected clearances; control and monitoring of decay heat removal; control of containment activities; personnel fatigue management; startup and heatup activities; and identification and resolution of problems associated with the outage. Inspectors also reviewed activities to troubleshoot and repair the cause of RCS leakage into RBCCW, which had driven the site into the unplanned outage.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted one other outage sample as defined in IP 71111.20–05.

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:

- traversing in-core probe system/local power range monitor gain adjust surveillance (routine);
- 0037; APRS [atmospheric pressure relief valve]; low pressure core cooling pumps discharge pressure interlock instruments test and calibration (routine);
- 0533; Containment sump flow measurement instrumentation (RCS);
- 0255-05–1A–1–1; Residual heat removal (RHR) SW 'A' quarterly pump and valve tests (in-service test (IST));
- 8215; 8216; EPU power ascension and dynamic testing (routine);
- 0030; Emergency core cooling system (ECCS) drywell pressure sensor (routine); and
- 0143; Drywell-torus monthly vacuum breaker check (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 were 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, ASME 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, one IST sample, and one RCS leak detection inspection sample as defined in IP 71111.22, Sections–02 and–05. The routine inspection sample for the 8215/8216 EPU power ascension and dynamic test also constituted a power uprate sample as defined in IP 71004.

b. Findings

Inadequate Drywell-Torus Monthly Vacuum Breaker Test Procedure Due to Proceduralized Unacceptable Preconditioning

Introduction

The inspectors identified a finding of very low safety significance and a NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," on February 14, 2014, for the licensee's failure to ensure that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances. Specifically, the site changed Procedure 0143, "Drywell-Torus Monthly Vacuum Breaker Check," to include allowances for multiple cyclings on the safety-related drywell-torus vacuum breaker valves to ensure they met their surveillance requirements to close, which constituted unacceptable preconditioning.

Description

On February 7, 2014, the licensee made a 10 CFR 50.72 notification for a potential loss of safety system function for a drywell-torus vacuum breaker which had failed to indicate full closed after being stroked during testing. On February 11, 2014, the licensee made a second 10 CFR 50.72 notification for the same vacuum breaker failing to indicate full closed. In both cases the vacuum breakers were declared inoperable until cycling the vacuum breaker resulted in a closed indication. On February 14, 2014, the licensee made a change to surveillance Procedure 0143, "Drywell-Torus Monthly Vacuum Breaker Check," to allow multiple cyclings of the vacuum breaker during testing. This procedure was subsequently utilized for the February and March performances of the monthly surveillance test; however, additional cycling was not required during those tests.

On February 19, 2014, the inspectors questioned the licensee on their basis for why the procedure change would not represent preconditioning. In response to inspector

questions, the licensee stated that they believed the procedural change was acceptable, because their investigation had concluded that the cause of the dual indication they were receiving was an indication issue, rather than evidence of an actual vacuum breaker problem. Specifically, their response stated, "the phenomenon of the vacuum breaker bouncing has been identified as a possibility when closing the vacuum breaker; therefore the root cause and correction of this issue has already been determined and is not considered preconditioning." The response continued, "the act of performing additional cycles of the valve is not to get the valve to go closed, but to ensure the indication accurately reflects the closed position of the valve." The inspectors noted that IMC 0326, "Operability," Section A.02, states, "repetitive testing to achieve acceptable test results without identifying the root cause or correction of the problem in a previous test is not acceptable as a means to establish or verify operability and may constitute "preconditioning."

Technical Guidance 9900, "Preconditioning," defines unacceptable preconditioning as "the alteration, variation, manipulation, or adjustment of the physical condition of an SSC before or during technical specification surveillance or ASME Code testing that will alter one or more of an SSC's operational parameters which results in acceptable test results. Such changes could mask the actual as-found condition of the SSC and possibly result in an inability to verify the operability of the SSC. In addition, unacceptable preconditioning could make it difficult to determine whether the SSC would perform its intended function during an event in which the SSC might be needed. Influencing test outcome by performing valve stroking, preventive maintenance, pump venting or draining, or manipulating SSCs does not meet the intent of the as found testing expectations…" Licensee Procedure CD 5.5, "Inservice Testing Standard," includes similar guidance.

Surveillance Requirement 3.6.1.7.2, states, "Perform a functional test of each required vacuum breaker." Procedure 0143 echoes the purpose listed in the TS Bases for this SR, and says, "This procedure will cycle each of the following Drywell-Torus vacuum breakers to check they open adequately to perform the design function and each will return to the fully closed position." Based on their review of this information, the inspectors concluded that if manual action is required in order to perform this functional verification, these actions would constitute unacceptable preconditioning, in accordance with NRC guidance.

The inspectors concluded that because TS Surveillance Procedure 0143 performs functional verification by relying on the vacuum breaker light indications, proceduralizing actions that would result in manipulating those indications during the surveillance test would constitute unacceptable preconditioning. Specifically, cycling the vacuum breakers when dual indication is received would alter one or more operational parameters (i.e., valve position indications) which would result in acceptable test results. The inspectors also noted that the licensee had failed to determine the root cause described in IMC 0326, and in fact had only identified a possible cause, and as a result, these actions were further contrary to NRC and licensee procedural guidance. As a result, the inspectors concluded that the procedure change to 0143 resulted in creating a procedure that was not appropriate to the circumstances.

Analysis

The inspectors determined that the licensee's failure to ensure the vacuum breaker monthly testing surveillance procedure was appropriate to the circumstances was a performance deficiency requiring evaluation. 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 adversely impacted the Barrier Integrity Cornerstone attribute of Procedure Quality, and affected the cornerstone objective to provide reasonable assurance that physical design barriers, including containment, protect the public from radionuclide releases caused by accidents or events. In addition, if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, proceduralizing actions which would constitute unacceptable preconditioning when vacuum breaker dual indication is received during surveillance testing could result in masking the actual as-found condition of the SSC and could result in an inability to verify the operability of the SSC.

The inspectors assessed the significance of this finding in accordance with IMC 0609 and determined this finding was of very low safety significance because the inadequate procedure did not represent an actual open pathway in the physical integrity of reactor containment and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The inspectors concluded that this finding was cross-cutting in the Human Performance, Conservative Bias area, because of the licensee's failure to use decision-making practices that emphasize prudent choices over those that are simply allowable, and a failure to ensure that proposed actions are determined to be safe in order to proceed, rather than unsafe in order to stop [H.14]. Specifically, at the time the procedure was being revised, preconditioning questions were raised by the licensee but were addressed using non-conservative assumptions, which constituted a failure to emphasize prudent choices over those they believed were simply allowable, and a failure to ensure proposed actions were safe in order to proceed.

Enforcement

Title 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

Contrary to this requirement, on February 14, 2014, the licensee failed to ensure that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances. Specifically, the site changed Procedure 0143, "Drywell-Torus Monthly Vacuum Breaker Check," to include allowances for multiple cyclings on the safety-related drywell-torus vacuum breaker valves to ensure they met their surveillance requirements to close, which constituted preconditioning. The licensee entered this issue into their CAP, verified that all vacuum breakers had met their surveillance requirements without needing multiple cyclings, and quarantined the surveillance procedure until a new testing strategy could be developed. Because the violation was of very low safety significance and was entered into the licensee's corrective action program (CAP 01424260), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy.

(NCV 05000263/2014002-05; Inadequate Drywell-Torus Monthly Vacuum Breaker Test Procedure due to Proceduralized Unacceptable Preconditioning)

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on February 13, 2014, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the Technical Support Center (TSC), Emergency Operations Facility, and Control Room Simulator to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the CAP. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

This emergency preparedness drill inspection constituted one sample as defined in IP 71114.06–06.

b. Findings

No findings were identified.

2. RADIATION SAFETY

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

This inspection constituted one complete sample as defined in IP 71124.01–05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed all licensee performance indicators for the Occupational Exposure Cornerstone for follow-up. The inspectors reviewed the results of Radiation Protection Program audits (e.g., licensee's quality assurance audits or other independent audits). The inspectors reviewed any reports of operational occurrences related to occupational radiation safety since the last inspection. The inspectors reviewed the results of the audit and operational report reviews to gain insights into overall licensee performance.

b. Findings

No findings were identified.

.2 Radiological Hazard Assessment (02.02)

a. Inspection Scope

The inspectors determined if there have been changes to plant operations since the last inspection that may result in a significant new radiological hazard for onsite workers or members of the public. The inspectors evaluated whether the licensee assessed the potential impact of these changes and has implemented periodic monitoring, as appropriate, to detect and quantify the radiological hazard.

The inspectors reviewed the last two radiological surveys from selected plant areas and evaluated whether the thoroughness and frequency of the surveys were appropriate for the given radiological hazard.

The inspectors conducted walkdowns of the facility, including radioactive waste processing, storage, and handling areas to evaluate material conditions and performed independent radiation measurements to verify conditions.

The inspectors selected the following radiologically risk-significant work activities that involved exposure to radiation:

- recirculation pump seal replacement;
- recirculation pump seal cooler repair; and
- reactor water pump seal replacement.

For these work activities, the inspectors assessed whether the pre-work surveys performed were appropriate to identify and quantify the radiological hazard and to establish adequate protective measures. The inspectors evaluated the Radiological Survey Program to determine if hazards were properly identified, including the following:

- identification of hot particles;
- the presence of alpha emitters;
- the potential for airborne radioactive materials, including the potential presence of transuranics and/or other hard-to-detect radioactive materials (This evaluation may include licensee planned entry into non-routinely entered areas subject to previous contamination from failed fuel.);
- the hazards associated with work activities that could suddenly and severely increase radiological conditions and that the licensee has established a means to inform workers of changes that could significantly impact their occupational dose; and
- severe radiation field dose gradients that can result in non-uniform exposures of the body.

The inspectors observed work in potential airborne areas and evaluated whether the air samples were representative of the breathing air zone. The inspectors evaluated whether continuous air monitors were located in areas with low background to minimize false alarms, and were representative of actual work areas. The inspectors evaluated the licensee's program for monitoring levels of loose surface contamination in areas of the plant with the potential for the contamination to become airborne.

b. Findings

Uncontrolled High Radiation Area Following Shut-down Cooling Re-Alignment

Introduction

A finding of very low safety significance (Green) and an associated NCV of TS 5.7.1 was self-revealed following an unexpected electronic dosimeter alarm. Follow-up radiological surveys identified an unposted high radiation area on the 924' elevation of the torus. At the time, this area was being controlled as a radiation area. The licensee failed to identify high radiation area conditions existed prior to allowing entry into the area.

Description

On January 19, 2014, a person performing fire watch duties entered the 924' elevation of the torus, posted as a radiation area, and received an unexpected electronic dosimeter dose rate alarm. Follow-up radiological surveys identified high radiation area conditions of 120 mrem/hr at 30 centimeters from RHR piping. These areas of the plant normally do not become high radiation areas; however, the licensee implemented noble metal chemistry the previous outage. Noble metal injection changes the deposition rates of materials contained within the RCS. Radiological conditions are expected to change on RCS piping. There existed numerous examples within the industry operating experience database that discuss changes to RCS piping radiological conditions including the RHR system following noble metals implementation, a portion of which was within the area where the individual was located.

Analysis

The inspectors determined that the issue of concern was a performance deficiency, because the worker was authorized entry into the area prior to the completion of radiological surveys. This was within the licensee's ability to foresee and correct, and should have been prevented. The finding was not subject to traditional enforcement since the incident did not have a significant safety consequence, and did not impact the NRC's ability to perform its regulatory function, and was not willful. The performance deficiency impacted the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation; in that, the worker's entry into an unsurveyed high radiation area placed the worker at increased risk for unnecessary radiation exposure. Additionally, the inspectors reviewed the guidance in IMC 0612, Appendix E, "Examples of Minor Issues," and identified Example 6(h) as similar to the performance issue. The finding was assessed using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," and was determined to be of very low safety significance because the problem was not an as-low-as-reasonably-achievable (ALARA) planning issue; there were no overexposures, nor substantial potential for overexposures, given the highest dose rate present in the room and the scope of work; and the licensee's ability to assess dose was not compromised.

The inspectors determined that the cause of this event involved a cross-cutting component in Problem Identification and Resolution, Operating Experience area,

because the licensee failed to implement known industry concerns regarding changing radiological conditions as the result of implementation of noble metals chemistry (P.5).

Enforcement

Technical Specification 5.7.1.e states, in part, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. Contrary to the above, on January 19, 2014, an individual was authorized entry into the 924' elevation of the torus prior to dose rates in the area being determined and communicated to the worker. Since the failure to comply with the TS was of very low safety significance (Green) and has been entered in the licensee's CAP as CAP 01415285, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000263/2014002–06; Uncontrolled High Radiation Area Following Shut-down Cooling Re-alignment)**

.3 Instructions to Workers (02.03)

a. Inspection Scope

The inspectors selected various containers holding non-exempt licensed radioactive materials that may cause unplanned or inadvertent exposure of workers, and assessed whether the containers were labeled and controlled in accordance with 10 CFR 20.1904, "Labeling Containers," or met the requirements of 10 CFR 20.1905(g), "Exemptions To Labeling Requirements."

The inspectors reviewed the following radiation work permits used to access high radiation areas and evaluated the specified work control instructions or control barriers:

- RWP 829 recirculation pump seal replacement;
- RWP 1783 recirculation pump seal cooler repair; and
- RWP 1787 reactor water pump seal replacement.

For these radiation work permits, the inspectors assessed whether allowable stay times or permissible dose (including from the intake of radioactive material) for radiologically significant work under each radiation work permit were clearly identified. The inspectors evaluated whether electronic personal dosimeter alarm set points were in conformance with survey indications and plant policy.

The inspectors reviewed selected occurrences where a worker's electronic personal dosimeter noticeably malfunctioned or alarmed. The inspectors evaluated whether workers responded appropriately to the off-normal condition. The inspectors assessed whether the issue was included in the CAP and dose evaluations were conducted as appropriate.

For work activities that could suddenly and severely increase radiological conditions, the inspectors assessed the licensee's means to inform workers of changes that could significantly impact their occupational dose.

b. Findings

No findings were identified.

.4 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

The inspectors observed locations where the licensee monitors potentially contaminated material leaving the radiological control area and inspected the methods used for control, survey, and release from these areas. The inspectors observed the performance of personnel surveying and releasing material for unrestricted use and evaluated whether the work was performed in accordance with plant procedures and whether the procedures were sufficient to control the spread of contamination and prevent unintended release of radioactive materials from the site. The inspectors assessed whether the radiation monitoring instrumentation had appropriate sensitivity for the type(s) of radiation present.

The inspectors reviewed the licensee's criteria for the survey and release of potentially contaminated material. The inspectors evaluated whether there was guidance on how to respond to an alarm that indicates the presence of licensed radioactive material.

The inspectors reviewed the licensee's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters. The inspectors assessed whether or not the licensee has established a de facto "release limit" by altering the instrument's typical sensitivity through such methods as raising the energy discriminator level or locating the instrument in a high radiation background area.

The inspectors selected several sealed sources from the licensee's inventory records and assessed whether the sources were accounted for and verified to be intact.

The inspectors evaluated whether any transactions, since the last inspection, involving nationally tracked sources were reported in accordance with 10 CFR 20.2207.

b. Findings

No findings were identified.

.5 Radiological Hazards Control and Work Coverage (02.05)

a. Inspection Scope

The inspectors evaluated ambient radiological conditions (e.g., radiation levels or potential radiation levels) during tours of the facility. The inspectors assessed whether the conditions were consistent with applicable posted surveys, radiation work permits, and worker briefings.

The inspectors evaluated the adequacy of radiological controls, such as required surveys, radiation protection job coverage (including audio and visual surveillance for remote job coverage), and contamination controls. The inspectors evaluated the licensee's use of electronic personal dosimeters in high noise areas as high radiation area monitoring devices.

The inspectors assessed whether radiation monitoring devices were placed on the individual's body, consistent with licensee procedures. The inspectors assessed

whether the dosimeter was placed in the location of highest expected dose or that the licensee properly employed an NRC-approved method of determining effective dose equivalent.

The inspectors reviewed the application of dosimetry to effectively monitor exposure to personnel in high radiation work areas with significant dose rate gradients.

The inspectors reviewed the following radiation work permits for work within airborne radioactivity areas with the potential for individual worker internal exposures:

- recirculation pump seal replacement;
- recirculation pump seal cooler repair; and
- reactor water pump seal replacement.

For these radiation work permits, the inspectors evaluated airborne radioactive controls and monitoring, including potential for significant airborne levels (e.g., grinding, grit blasting, system breaches, entry into tanks, cubicles, and reactor cavities). The inspectors assessed barrier (e.g., tent or glove box) integrity and temporary high efficiency particulate air ventilation system operation.

The inspectors examined the licensee's physical and programmatic controls for highly activated or contaminated materials (i.e., nonfuel) stored within spent fuel and other storage pools. The inspectors assessed whether appropriate controls (i.e., administrative and physical controls) were in place to preclude inadvertent removal of these materials from the pool.

The inspectors examined the posting and physical controls for selected high radiation areas and very high radiation areas to verify conformance with the Occupational Performance Indicator (PI).

b. Findings

No findings were identified.

.6 Risk-Significant High Radiation Area and Very High Radiation Area Controls (02.06)

c. Inspection Scope

The inspectors discussed with the Radiation Protection Manager the controls and procedures for high-risk, high radiation areas and very high radiation areas. The inspectors discussed methods employed by the licensee to provide stricter control of very high radiation area access, as specified in 10 CFR 20.1602, "Control of Access to Very High Radiation Areas," and Regulatory Guide 8.38, "Control of Access to High and Very High Radiation Areas of Nuclear Plants." The inspectors assessed whether any changes to licensee procedures substantially reduce the effectiveness and level of worker protection.

The inspectors discussed the controls in place for special areas that have the potential to become very high radiation areas during certain plant operations with first-line Health Physics Supervisors (or equivalent positions having backshift health physics oversight authority). The inspectors assessed whether these plant operations require communication beforehand with the health physics group, so as to allow corresponding

timely actions to properly post, control, and monitor the radiation hazards including re-access authorization.

The inspectors evaluated licensee controls for very high radiation areas and areas with the potential to become very high radiation areas to ensure that an individual was not able to gain unauthorized access to the very high radiation areas.

d. Findings

No findings were identified.

.7 Radiation Worker Performance (02.07)

e. Inspection Scope

The inspectors observed radiation worker performance with respect to stated radiation protection work requirements. The inspectors assessed whether workers were aware of the radiological conditions in their workplace and the radiation work permit controls/limits in place, and whether their performance reflected the level of radiological hazards present.

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be human performance errors. The inspectors evaluated whether there was an observable pattern traceable to a similar cause. The inspectors assessed whether this perspective matched the corrective action approach taken by the licensee to resolve the reported problems. The inspectors discussed with the Radiation Protection Manager any problems with the corrective actions planned or taken.

f. Findings

No findings were identified.

.8 Radiation Protection Technician Proficiency (02.08)

a. Inspection Scope

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

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be radiation protection technician error. The inspectors evaluated whether there was an observable pattern traceable to a similar cause. The inspectors assessed whether this perspective matched the corrective action approach taken by the licensee to resolve the reported problems.

b. Findings

No findings were identified.

.9 Problem Identification and Resolution (02.09)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring and exposure control were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's CAP. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radiation monitoring and exposure controls. The inspectors assessed the licensee's process for applying operating experience to their plant.

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 Unplanned Scrams per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams per 7000 Critical Hours PI for the period from the first quarter 2013 through the fourth 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 7, dated August 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports and NRC IR for the period of January 2013 through December 2013 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 unplanned scrams per 7000 critical hours sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.2 Unplanned Scrams with Complications

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams with Complications PI for the period from the first quarter 2013 through the fourth 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 7, dated August 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports and NRC IR for the period of January 2013 through December 2013 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 unplanned scrams with complications sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.3 Unplanned Transients per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Transients per 7000 Critical Hours PI for the period from the first quarter 2013 through the fourth 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 7, dated August 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports and NRC IR for the period of January 2013 through December 2013 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 unplanned transients per 7000 critical hours 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 Selected Issue Follow-Up Inspection: Emergency Preparedness Issues

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized corrective action items documenting issues regarding PIs, recent Emergency Preparedness drill results, and Emergency Action Level (EAL)/Emergency Operating Plan (EOP) entry decision making during a RWCU room high temperature event on February 23, 2014. The inspectors reviewed related CAPs and evaluated whether the licensee had taken appropriate action in accordance with the EALs, AOPs, and EOPs for the RWCU room high temperature trend. The inspectors engaged with NRC headquarters staff to assist with review of the Monticello EAL basis documents to ensure that the licensee's decision to not declare an EAL was well understood. The inspectors noted that several licensee actions were taken to decrease temperature in the RWCU room and provide additional margin to their EAL/EOP setpoints. These actions

included insulating a high heat load valve in the room, repairing temperature controllers for RWCU ventilation, and isolating a minor steam leak. The inspectors did not identify any violations of NRC requirements.

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 Rapid Down Power due to Steam Jet Air Ejectors Trip and Degrading Condenser Vacuum

a. Inspection Scope

The inspectors reviewed the plant's response to a degraded condenser vacuum, which occurred on January 11, 2014. Specifically, as a result of a failed pressure transmitter, one of the plant's steam jet air ejectors (SJAE) tripped, which resulted in a degrading condenser vacuum. In response to the degrading condenser vacuum, operators implemented actions in accordance with AOPs for loss of condenser vacuum, and performed a rapid downpower by adjusting recirculation pump flow. Operators reduced power to approximately 58 percent during this evolution. Inspectors responded to the site the morning after the event and reviewed operator actions in response to the event, as well as abnormal operating procedures and plant data. Inspectors also assessed licensee troubleshooting efforts to determine the cause of the SJAE trip.

The cause of the unexpected SJAE trip was determined to be associated with a failed pressure switch in the trip logic for the SJAE, and the affected pressure switch was replaced. The inspectors noted that plant staff performed an extent of condition to ensure that the other SJAE had not experienced the same pressure switch failure. In addition, following causal investigation by the licensee, the pressure switch manufacturer identified a manufacturing defect in all four SJAE pressure switches. Subsequently, the licensee took action to replace the remaining three affected switches.

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.

.2 Both Emergency Diesel Generators Declared Inoperable Following Identification of Time Delay Relay Vulnerability

a. Inspection Scope

The inspectors responded to the site on the evening of February 10, 2014, after being notified both EDGs had been declared inoperable. The licensee determined both

EDGs (11 and 12) were unable to meet SR 3.8.1.2, which states “the EDG must be capable of auto start and energize permanently connected loads within 10 seconds.” As a result, the licensee entered TS 3.8.1, Condition E, which required one EDG be restored to operable within two hours. If unable to restore at least one EDG the licensee would have entered Condition F, which required the unit be shutdown (Mode 3 in 12 hours, Mode 4 in 36 hours).

Plant engineers identified a deficiency with the loss of essential bus voltage logic. The deficiency would have resulted in the EDGs exceeding the 10 second requirement. The licensee estimated the actual time would have been approximately 10.2 - 10.3 seconds. The inspectors noted the USAR assumes 15 seconds. As designed, the loss of voltage logic would try to supply voltage to the essential busses from one of the qualified offsite sources first (2R, 1R or 1AR). If unable to restore voltage, the EDGs would then power the essential busses.

As a compensatory action, the licensee isolated the 1AR (auxiliary reserve transformer) from the logic, allowing the EDGs to energize the essential busses in a shorter time frame. The licensee was able to implement this modification prior to exhausting the two-hour limit of T.S. 3.8.1, Condition E, so no shutdown was required. Licensee staff documented this condition in their CAP (01418321) and evaluated paths toward restoration of 1AR to the loss of voltage logic’s sequence. The inspectors verified that the licensee’s actions were appropriate, and addressed reportability and operability aspects of the condition.

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

One licensee-identified finding is included in Section 4AO7 of this report.

.3 (Closed) Licensee Event Report (LER) 05000263/2013-002-00: Essential Bus Transfer During 2R Transformer Testing

This event occurred on May 24, 2013. During performance of 2R transformer 4kV load testing, the licensee’s operations staff was not able to observe red light indication for the 4kV supply breaker to Bus 13 (152-301) either locally or from the control room following closure of the breaker. The lack of red light indication with the breaker closed is an indication that the breaker could not be tripped electronically and all breaker protective trips and remote tripping from control room would not be available. This resulted in the operations staff mechanically tripping the breaker causing the Division I 4kV bus 15 automatic transfer to 1AR transformer. Also, due to the momentary loss of voltage to bus 15, EDG 12 automatically started (EDG 11 was placed in pull-to-lock and therefore, did not start) and 480 V Division I load center 13, which was cross-tied to the Division II load center 14, was shed. The licensee was able to restore Division I electrical line-up from transformer 1R and restore power to load center 13 from essential bus 15 within minutes.

The licensee’s troubleshooting revealed that breaker 152-301 had a secondary disconnect pin damaged to the extent that it would not make contact with the secondary disconnect rail. The licensee performed an equipment cause evaluation

(CAP 01384157) and concluded that inadequate protection for the 4kV breaker during temporary storage apparently caused damage to the breaker. Also, the licensee identified a contributing cause of not having specific guidance in operations Procedure B.09.06–05 for inspection of breakers during installation. Following the event, the licensee installed and satisfactorily tested a spare breaker in the cubicle for breaker 152–301, as an immediate corrective action. Also, as of September 2013, the licensee revised the operations manual procedure B.09.06–05 by incorporating critical steps to specifically inspect primary and secondary disconnects. Inspector's review of the sequence of events, equipment cause evaluation and the corrective actions completed by the licensee did not identify any additional concerns. 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.

.4 Both Secondary Containment Access Doors Briefly Opened Simultaneously

a. Inspection Scope

On September 18, 2013, while performing the secondary containment airlock door interlock surveillance test, the interlock to the main plenum room did not prevent the opening of both doors to the plenum room airlock (DOOR–85 and DOOR–86). With the outer door to the main plenum room open, the inner door was able to be opened. The plenum airlock doors were then closed. The operator attempted a second time to verify interlock functionality. This time the inner door was opened, and again the interlock did not prevent the opening of the outer door. The plenum airlock doors were immediately closed. The total time both doors were opened was estimated to be less than 10 seconds.

With both doors open, TS SR 3.6.4.1.3 was not met and secondary containment was declared inoperable. Secondary containment was declared operable, after independently verifying that at least one secondary containment access door was closed.

b. Findings

Inspectors reviewed the LER and decided that additional information was needed to determine whether a performance deficiency exists for the event. In order to close this Unresolved Item (URI), the inspectors intend to review the site's recently performed evaluation aimed at removing this issue from being counted in the Safety System Functional Failure PI. In addition, the inspectors will factor in any insights from NRR's more generic resolution to industry wide secondary containment issues. **(URI 05000263/2014002–07; Both Secondary Containment Access Doors Briefly Opened Simultaneously)**

4OA5 Other Activities

.1 Power Uprate Related Inspection Activities (71004)

a. Inspection Scope

During this inspection period, the inspectors observed several activities related to the power uprate amendment. Specific activities are documented below, and as referenced:

- Section 1R22 – This section documents specific inspector reviews of EPU procedures associated with power ascension testing, along with the conduct of control room observation of EPU power dynamic testing.

b. Findings

No findings were identified.

.2 Cross-cutting Aspect Changes

The table below provides a cross-reference from the third and fourth quarter 2013 findings and associated cross-cutting aspects to the new cross-cutting aspects resulting from the common language initiative. These aspects and any others identified since January 2014, will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review.

Finding	Old Cross-Cutting Aspect	New Cross-Cutting Aspect
05000263/2013005-01	H.4.C	H.2
05000263/2013406-01	H.3.A	H.5
05000263/2013005-03	H.3.B	H.5
05000263/2013004-02	H.2.C	H.7
05000263/2013004-01	H.2.C	H.7
05000263/2013004-04	H.2.C	H.7
05000263/2013007-01	H.2.C	H.7
05000263/2013405-01	H.4.B	H.8
05000263/2013005-02	H.4.A	H.11
05000263/2013007-02	H.4.A	H.12
05000263/2013007-03	H.1.A	H.13
05000263/2013008-01	H.1.B	H.14
05000263/2013004-03	H.1.B	H.14

4OA6 Management Meetings

.1 Exit Meeting Summary

On April 2, 2014, the inspectors presented the inspection results to Site Vice President Karen Fili, 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 Meeting

An interim exit was conducted for:

- the inspection results for the area of Radiological Hazard Assessment and Exposure Controls with Mr. P. Gardener, Director, Site Operations, on March 28, 2014.

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

The following violations of very low significance (Green) or Severity Level IV were identified by the licensee and are violations of NRC requirements which meet the criteria of the NRC Enforcement Policy for being dispositioned as NCVs.

- The licensee identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions." Criterion XVI requires, in part, that "measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected." Contrary to this requirement, on February 11, 2014, the licensee identified that they had failed to identify and correct a condition adverse to quality where a single failure could result in the EDGs picking up load on the essential busses in a time frame longer than what is required by TS SR 3.8.1.12. Surveillance Requirement 3.8.1.12 states that when required, the EDGs auto-start and energize permanently connected loads in approximately 10 seconds. Specifically, after the NRC identified an NCV on May 8, 2012, where required time delay limits would be exceeded in the site's EDG/1AR degraded voltage transfer logic, the licensee's extent of condition failed to identify and correct a deficiency where relays in the EDG/1AR loss of voltage transfer logic could result in the EDGs energizing the connected loads in a slightly longer time period than allowed (< 11 seconds).

  The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attributes of Design Control and Equipment Performance, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using IMC 0609, the inspectors determined that the finding represented a loss of system and/or function as defined for the EDGs in the TS bases; however, a detailed risk evaluation determined that there was no change in core damage frequency because exceeding the time delay would not impact the Probabilistic Risk Assessment function to respond to a loss of offsite power event. As a result, the inspectors concluded that the finding had very low safety significance. The licensee entered this issue into their CAP, and declared both EDGs inoperable until action was taken to remove 1AR from service, and relays with acceptable time delays could be installed. (Green)

- Technical Specification 5.7.1, “High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation,” requires, in part, that such areas shall be barricaded and conspicuously posted as a high radiation area.

Contrary to the above, on October 11, 2013, a drain hose was moved from inside the RWCU pump room to outside the room. This hose was the source of radiation which resulted in an unbarricaded and unposted high radiation area outside the pump room. This was identified by radiation protection technicians performing radiological surveys in the area. The licensee documented this issue in CAP 01401180. The finding was determined to be of very low safety significance (Green) because it was not an ALARA planning issue, there was no overexposure nor potential for overexposure, and the licensee’s ability to assess dose was not compromised.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

K. Fili, Site Vice President
H. Hanson, Jr., Plant Manager
P. Albares, Operations Manager
M. Lingenfelter, Director of Engineering
K. Jepson, Recovery Manager
S. Mattson, Maintenance Manager
K. Petersen, Chemistry Manager
A. Zelie, Radiation Protection Manager
P. Kissinger, Regulatory Affairs Manager
T. Hedges, Radiation Protection General Supervisor

Nuclear Regulatory Commission

K. Riemer, Chief, Branch 2, Division of Reactor Projects

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000263/2014002-01	NCV	RCS Pressure Boundary Leakage Operation Prohibited by Technical Specifications (Section 1R15)
05000263/2014002-02	NCV	Failure to Follow Procedure for RCS Operability Determination (Section 1R15)
05000263/2014002-03	NCV	Drywell-Torus Vacuum Breaker Inadequate Post-maintenance and Return-to-service Test (Section 1R15)
05000263/2014002-04	NCV	Failure to Follow Procedure for Drywell-Torus Vacuum Breaker Operability Determination (Section 1R15)
05000263/2014002-05	NCV	Inadequate Drywell-Torus Monthly Vacuum Breaker Test Procedure due to Proceduralized Unacceptable Preconditioning (Section 1R22)
05000263/2014002-06	NCV	Uncontrolled High Radiation Area Following Shut-down Cooling Re-Alignment (Section 2RS1)
05000263/2014002-07	URI	Both Secondary Containment Access Doors Briefly Opened Simultaneously (Section 4OA3.4)

Closed

05000263/2014002-01	NCV	RCS Pressure Boundary Leakage Operation Prohibited by Technical Specifications (Section 1R15)
05000263/2014002-02	NCV	Failure to Follow Procedure for RCS Operability Determination (Section 1R15)
05000263/2014002-03	NCV	Drywell-Torus Vacuum Breaker Inadequate Post-maintenance and Return-to-service Test (Section 1R15)
05000263/2014002-04	NCV	Failure to Follow Procedure for Drywell-Torus Vacuum Breaker Operability Determination (Section 1R15)
05000263/2014002-05	NCV	Inadequate Drywell-Torus Monthly Vacuum Breaker Test Procedure due to Proceduralized Unacceptable Preconditioning (Section 1R22)
05000263/2014002-06	NCV	Uncontrolled High Radiation Area Following Shut-down Cooling Re-Alignment (Section 2RS1)
05000263/2013-002-00	LER	Essential Bus Transfer During 2R Transformer Testing (Section 4OA3.3)

Discussed

None.

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

1478; External Flood Surveillance; Revision 9
5790-101-02; Emergency Action Level Matrix; Revision 8
8300-02; External Flooding Protection Implementation to Support A.6 Acts of Nature; Revision 0
A.2-101; Classification of Emergencies; Revision 47
A.6; Acts of Nature; Revision 48
CAP 01419526; Ext Flooding Potential Leakage Path Not Evaluated
CAP 01419535; Inadequate Flooding Protection of Substation Control Houses
CAP 01420650; Flooding Procedure A.6 and 1478 Equipment Functionality
CAP 01423655; Deficiencies Identified During Annual Flooding Surveillance
DBD-S.06; Turbine Building; Revision 5
DBD-T.05; External Flooding Topic; Revision 5
EC 21474; Documentation of MNGP External Flooding Walkdown Record Forms; Revision 0
EC 21937-31; West Side Intake Excavation Plan; Revision 0
EC 21960; Intake Structure Penetration PEN-003 SEAL; Revision 0
FP-PE-HAZ-01; External Flooding Program; Revision 0
NF-36378; Intake Structure, Sections A-A and B-B; Revision 77
NF-36379; Piping Drawing Intake Structure Plan at EL 919'-0"; Revision 80
NF-36439; Intake Structure Plan at EL 934'-0"; Revision 76
NF-36440; Intake Structure, Sections C-C, D-D, and E-E; Revision 79
NF-36454; MNGP Intake Structure Plan at EL. 919'-0"; Revision 77
NF-74413-3; Underground Services Mechanical Piping; Revision 86
NH-178639; Flood Barriers for A.6 Acts of Nature Procedure; Revision 78
NH-178639-1; Levee Alignment and Bin Wall Plan; Revision 1
NH-236801-28; Grading and Drainage Plan; Revision 1
USAR-02; Site and Environs; Revision 30
WO 00458473; EDES – Misc, 1478 Annual Flood Surveillance; April 9, 2013
WO 00473206-03; Plant Admin BLDG, Build Sandbag Barriers External Flood; Revision 0
WO 00473207; A6, Building a Large Ring Levee for External Flooding; March 4, 2014
WO 00473209; A6, Install Steel Plates as Barriers; March 7, 2014
WO 00473210; A6, Seal Large Gaps between Intake Structure and Alcove; January 13, 2013
WO 00473212; A6, Intake Structure Task for External Flooding Event; February 28, 2014
WO 00473559; A6, MISC Tasks for External Flooding Event; September 22, 2013
WO 00478167; 1478-A Monthly Flood Surveillance; December 2013
WO 00481008; 1478-A Monthly Flood Surveillance; January 2014

Section 1R04

2112; Plant Restart Checklist SBGT; Revision 13
2119; Plant Prestart Checklist Core Spray System; Revision 9
NY-36248; P&ID Core Spray System; Revision 84

2124; Plant Restart Checklist DG and Fuel Oil System; Revision 9
2154-06; SBGT Prestart Valve Checklist; Revision 11
2154-14; Fuel Oil System Prestart Valve Checklist; Revision 18
2154-22; EDG Emergency Service Water System Prestart Valve Checklist; Revision 24
2154-28; Diesel Generator Air Start System Prestart Valve Checklist; Revision 9
2206; Plant Restart Checklist EDG – Emergency Service Water System; Revision 4
B.04.02; Secondary Containment/SBGT; Revision 13
B.09.08-05; Operations Manual for EDG System Operation; Revision 41
CAP 01374351; SBGT 'A' Charcoal Fltr Inlet Temp Low OOS
CAP 01381862; 'A' SBGT Restored Prior to Charcoal Sample Obtained
CAP 01404989; 'A' SBGT Heater Resistance to Ground Lower Than Previous
CAP 01420262; Door 11, EDG Room Foyer East Door Will Not Automatically Close; February 25, 2014
CAP 01420339; NRC Questions about EDG System Valve Checklist; February 25, 2014
M-133, Sheet 1; P&ID Diesel Oil System; Revision 81
NH-36159; Off-Gas System; Revision 80
NH-36881; SBGT Treatment Flow Diagram; Revision 76

Section 1R05

0255-06-IA-1; HPCI Quarterly Pump and Valve Tests; Revision 90
Strategy A.3-13-C; Turbine Building 911' Elevation East MCC Area; Revision 8
Strategy A.3-13-B; Rx Feedpump and Lube Oil Reservoir Room; Revision 12
2154-10; HPCI System Prestart Valve Checklist; Revision 32
Strategy A.3-34; Fire Zones 34, 35 and 36, East Electrical Equipment Room, 13 DG and Day Tank Room; Revision 12
CAP 01420471; Non 1E Room Housekeeping Issues
CAP 01420479; Door 499 Blocked Open Without Fire Protection Approval

Section 1R06

0275-03; Fire Door Inspections; Revision 33
0275-04; Fire Door Inspections; Revision 36
4092; Turbine Building Normal Waste Sump - Oil Interceptor - DG Room Floor Drain Backwater Valves Cleaning and Inspection; Revision 10
4380; Railroad Door Drains Flushing Procedure; Revision 4
B.07.01-01; Liquid Radwaste, Functional and General Description of System; Revision 3
B.07.01-02; Liquid Radwaste, Functional and General Description of System; Revision 20
B.07.01-05; Liquid Radwaste, System Operation; Revision 34
B.08.06-01; Domestic Water and Non-Radioactive Drains, Functional and General Description of System; Revision 11
B.08.06-05; Domestic Water and Non-Radioactive Drains, System Operation; Revision 18
C.4-I; Plant Flooding; Revision 12
C.6-084A-A-07; Turb Bldg Norm Waste Sump S-45 Hi Level; Revision 3
C.6-084A-A-12; Turbine Bldg Floor Drain Sump S-40 High Level; Revision 2
C.6-084A-B-14; Turbine Building Normal Waste Sump Monitor High Inop; Revision 6
CAP 01336571; Floor Drains in Turbine Building Backing Up due to Rain
CAP 01342258; 931' TB Railroad Bay Floor Drains Plugged and Overflowing
CAP 01364025; Obtain Updated Stakeholder Input from Internal Flooding
CAP 01364905; TBNWS Floor Drains Backup when T-87, Depth Filter Backwashes

CAP 01397658; Floor Drains Not Functioning Properly in Turbine Building
CAP 01405095; Water Backing Up in Contaminated Floor Drains of 935 TB RR
DBD T.08; Design Basis Document for Internal Flooding
DBD-S.06; Turbine Building; Revision 5
MN06-995-20-201; (CA-07-021) Reactor Building, Turbine Building & Intake Structure Water Height - Internal Flooding; Revision 0
MN06-995-20-203; Rx and Turbine Building & Intake Structure Water Height for Internal Flooding; Revision 0
NF-36060; Equipment Location - Turbine BLDG Plan at EL. 931'-0"; Revision 79
NF-36069; Turbine Building - Mezzannine Floor Plan at Elev 931'-0"; Revision 80
NF-36141; Plumbing & Drainage Turbine Building Plans at EL. 911'-0" (West); Revision D
NF-36142; Plumbing & Drainage Turbine Building Plans at EL. 911'-0" (East); Revision D
NF-36299; Plumbing & Drainage Turbine Building Plans at EL. 931'-0" & EL. 925'-0"; Revision 76
NH-36043; P&ID - Open (Dirty) Radwaste Sump System; Revision 84
NH-36044; P&ID Closed (Clean) Radwaste Sump System; Revision 80
NH-36046; P&ID Dirty Radwaste System; Revision 79
NL-36140-22; Instrument Level Setting Diagram Turb. Build. Floor Drain Sump S-45; Revision T
NL-36140-32; Instrument Level Setting Diagram Turb. Build. Floor Drain Sump S-40; Revision S
PRA-CALC-04-001; Flood Areas; no date
PRA-CALC-04-003; Flood Source Identification; no date
PRA-CALC-04-005; Equipment Vulnerabilities to Flooding; no date
PRA-CALC-04-006; Flood Scenarios and Effects; no date
WO 00389802; 0275-03 Fire Door Inspections; May 2010
WO 00439525; 0275-03 Fire Door Inspections; May 2012

Section 1R07

CAP 01415632; P-200B Lower Seal Cooler Leakage
CAP 01416054; Bolt found in B-recirc Pump Heat Exchanger Break Down Coil
CAP 01416733; NRC Question Documentation
CSM-2014-001-01; Classification of Subcomponents and Material--¾ and 1" Flexatallic, Spiral Wound, Style R Gaskets; January 30, 2014
WO 00495249-05; Test to Determine if RWCU is the Source of RBCCW Leakage; January 17, 2014
WO 00496298-06; T-MOD 23513 – Demo and Reinstall Heat Exchanger Piping; January 27, 2014

Section 1R11

Simulator Exercise Guide RQ-SS-127; Revision 0

Section 1R12

Apparent Cause Evaluation for CAP 01353605-05 and 1356091-04; Past Operability Review, CE-1353605-03; Determined that when Removing Y81, HPCI was Inoperable; November 19, 2012
Apparent Cause Evaluation for CAP 01397599; HPCI Turbine Coupling Steam Leak; October 23, 2013
CAP 01171891; MCC-311 in the RCIC Room has a Door Gasket Out of Position; March 5, 2009
Maintenance Rule Program System Basis Document Non-Essential Diesel Generator; Revision 13

System Health Report NDG Non-Essential Diesel Generator; 4th Quarter 2013
FP-E-MR-01; Maintenance Rule Process; Revision 2
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LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
ALARA	As-Low-As-Is-Reasonably-Achievable
AOP	Abnormal Operating Procedure
ASME	American Society of Mechanical Engineers
AWI	Administrative Work Instruction
CAP	Corrective Action Program
CFR	Code of Federal Regulations
DG	Diesel Generator
EAL	Emergency Action Level
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EOP	Emergency Operating Plan
EPU	Extended Power Uprate
EPRI	Electric Power Research Institute
ESW	Emergency Service Water
FP	Fleet Procedure
gpm	gallons per minute
HPCI	High Pressure Coolant Injection
IGSCC	Intergranular Stress-Corrosion Cracking
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
IST	Inservice Test
kV	Kilovolt
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LOCA	Loss of Coolant Accident
MNGP	Monticello Nuclear Generating Plant
MWt	Megawatts Thermal
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation, Office of (NRC)
NUMARC	Nuclear Management and Resources Council
ODMI	Operational Decision-Making Issue
PARS	Publicly Available Records System
PI	Performance Indicator
PMT	Post-Maintenance Testing
psig	Pounds Per Square Inch Gauge
RBCCW	Reactor Building Closed Cooling Water
RCIC	Reactor Core Isolation Cooling
RCPB	Reactor Coolant Pressure Boundary
RCS	Reactor Coolant System
RHR	Residual Heat Removal
RWCU	Reactor Water Cleanup
RWP	Radiation Work Permit
SBGT	Standby Gas Treatment
SCT	Secondary Containment
SDP	Significance Determination Process

SJAE	Steam Jet Air Ejectors
SR	Surveillance Requirement
SSC	Structure, System and Component
TS	Technical Specification
TSC	Technical Support Center
USAR	Updated Safety Analysis Report
URI	Unresolved Item
V	Volts
WO	Work Order

cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review. If you disagree with the cross-cutting aspect assigned, 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, Branch Chief
Branch 2
Division of Reactor Projects

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Letter to Karen Fili from Kenneth Riemer dated May 9, 2014

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