



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
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November 6, 2017

Mr. Christopher R. Church
Monticello Nuclear Generating Plant
Northern States Power Company, Minnesota
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT—NRC INTEGRATED
INSPECTION REPORT 05000263/2017003

Dear Mr. Church:

On September 30, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Monticello Nuclear Generating Plant. On October 3, 2017, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

No NRC-identified or self-revealing findings were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Billy C. Dickson, Chief
Branch 2
Division of Reactor Projects

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

Enclosure:
Inspection Report 05000263/2017003

cc: Distribution via LISTSERV®

Letter to Christopher R. Church from Billy C. Dickson dated November 6, 2017

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT—NRC INTEGRATED
INSPECTION REPORT 05000263/2017003

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000263/2017003

Licensee: Northern States Power Company, Minnesota

Facility: Monticello Nuclear Generating Plant

Location: Monticello, MN

Dates: July 1 through September 30, 2017

Inspectors: P. Zurawski, Senior Resident Inspector
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Approved by: B. Dickson, Chief
Branch 2
Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY.....	2
REPORT DETAILS.....	3
Summary of Plant Status.....	3
1. REACTOR SAFETY	3
1R01 Adverse Weather Protection (71111.01).....	3
1R04 Equipment Alignment (71111.04)	3
1R05 Fire Protection (71111.05)	5
1R06 Flood Protection Measures (71111.06).....	6
1R11 Licensed Operator Requalification Program (71111.11Q).....	6
1R12 Maintenance Effectiveness (71111.12).....	7
1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13).....	8
1R15 Operability Determinations and Functional Assessments (71111.15)	9
1R18 Plant Modifications (71111.18)	10
1R19 Post-Maintenance Testing (71111.19).....	10
1R22 Surveillance Testing (71111.22)	11
1EP6 Drill Evaluation (71114.06).....	12
2. RADIATION SAFETY	13
2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06)	13
2RS7 Radiological Environmental Monitoring Program (71124.07)	13
4. OTHER ACTIVITIES	16
4OA1 Performance Indicator Verification (71151)	16
4OA2 Identification and Resolution of Problems (71152)	17
4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)	20
4OA6 Management Meetings	21
SUPPLEMENTAL INFORMATION.....	1
Key Points of Contact.....	1
List of Items Opened, Closed, and Discussed.....	2
List of Documents Reviewed	3
List of Acronyms Used	8

SUMMARY

Inspection Report 05000263/2017003; 07/01/2017–09/30/2017; Monticello Nuclear Generating Plant.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG–1649, "Reactor Oversight Process," Revision 6.

NRC-Identified and Self-Revealed Findings

None

Licensee-Identified

None

REPORT DETAILS

Summary of Plant Status

Monticello operated at, or near, 100 percent power for the inspection period with the following exceptions:

- On September 16, 2017, power was reduced to approximately 75 percent for quarterly turbine valve testing, a control rod pattern adjustment, and SCRAM testing. Power was returned to 100 percent on September 17, 2017.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Summer Seasonal Readiness Preparations

a. Inspection Scope

The inspectors performed a review of the licensee's preparations for summer weather for selected systems, including conditions that could lead to an extended drought.

During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Updated Safety Analysis Report (USAR) and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. Documents reviewed are listed in the Attachment to this report. The inspectors also reviewed Corrective Action Program (CAP) items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their corrective action program in accordance with station corrective action procedures. The inspectors' reviews focused specifically on the following plant systems:

- Severe Weather—High Winds/Lightning.

This activity constituted one seasonal adverse weather sample as defined in 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:

- Emergency Diesel Generator (EDG)–Essential Service Water (ESW) – Division 1;
- Emergency Filtration Train (EFT)–ESW – Division 1; and
- A Residual Heat Removal (RHR) Room – Division 1.

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 corrective action program (CAP) with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These activities constituted three 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 August 14, 2017, the inspectors performed a complete system alignment inspection of the High Pressure Coolant Injection (HPCI) during Reactor Core Isolation Cooling (RCIC) Maintenance Work Window 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 were 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.

This activity 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 15–E; Diesel Oil Pump Building;
- Fire Zone 19–A; Makeup Demineralizer Area;
- Fire Zone 19–B; Essential Motor Control Center (MCC) 142 & 143 931’;
- Fire Zone 31–B; EFT 1st Floor – Division II;
- Fire Zone 32–B; EFT 2nd Floor – Division II; and
- Fire Zone 33; EFT 3rd Floor.

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 Flood Protection Measures (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 abnormal operating procedures to identify licensee commitments. The specific documents reviewed are listed in the Attachment to this report. 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 corrective action program to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant area(s) to assess the adequacy of doors and verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments:

- HPCI Room.

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

This activity constituted one internal flooding sample as defined in IP 71111.06–05.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program (71111.11Q)

.1 Resident Inspector Quarterly Review of Licensed Operator Regualification

a. Inspection Scope

On July 10, 2017 and August 7, 2017, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator regualification training. The inspectors verified that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and that 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.

These activities constituted two quarterly licensed operator requalification program simulator samples as defined in IP 71111.11-05.

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation During Periods of Heightened Activity or Risk

a. Inspection Scope

On September 16, 2017, the inspectors observed licensed control room operators during reactor downpower activities for a rod pattern adjustment and turbine valve testing. 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;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

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 activity 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:

- High Pressure Core Injection.

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

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;
- characterizing system reliability issues for performance;
- charging unavailability for performance;
- trending key parameters for condition monitoring;
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- verifying appropriate performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2), or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

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

These activities constituted one quarterly maintenance effectiveness sample 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:

- Control Room Ventilation (CRV)–EFT “B”, WO 700020657;
- Secondary Containment Door High Risk Maintenance;
- 125 VDC Battery Room Door Flow Testing; and
- RHR Pump Room – Sump Pump

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 four 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:

- CAP 501000000792–12 EDG Elevated Oil Temperature;
- CAP 5010000001527–HO–7 Opening Time Exceeded Trend Band;
- CAP 5010000002379–0314 Safety Relief Valve Pressure Switch Check Not Complete Within Frequency;
- CAP 501000002977–Unidentified Leakage Increase; and
- 24 VDC Battery Operability Check.

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.

These activities constituted five operability samples as defined in IP 71111.15–05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modification(s):

- RHR High Point Vent Installation (WO 700021387).

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the Updated Safety Analysis Report (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 (PM) activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- RHR High Point Vent System Leak Test and VT–2 (WO 700021387);
- OPS–EFT–II, PMT (WO 00544762–02); and
- V–ERF–11 Heater Cutoff Flow (WO 559175–01).

These activities were selected based upon the structure, system, or component's 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.

These activities constituted three post-maintenance testing samples as defined in IP 71111.19-05.

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:

- 0397, SRV Low-Low Set System Quarterly Tests [ROUTINE];
- ISP-RHR-0602, Reactor Steam Dome Pressure Low-Channel Calibration and Channel Functional Test [ROUTINE];
- 0089, Boron Concentration-Standby Liquid Control System [ROUTINE];
- 0253-01, SBTG A Train Quarterly Test [CIV]; and
- 0255-06-IA-1, HPCI Quarterly Pump and Valve Test [IST].

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 in-service testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

These activities constituted three routine surveillance testing samples, one containment isolation valve sample, and one in-service test sample as defined in IP 71111.22, Sections –02 and –05.

b. Findings

No findings were identified.

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 July 25, 2017, and a licensee emergency exercise on August 29, 2017, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. During each activity, the inspectors observed emergency response operations in the Control Room Simulator, Technical Support Center, and Emergency Offsite Facility 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 corrective action program. As part of the

inspections, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

These activities constituted two emergency preparedness drill inspections as defined in IP 71114.06–05.

b. Findings

No findings were identified.

2. RADIATION SAFETY

2RS6 Radioactive Gaseous and Liquid Effluent Treatment (71124.06)

.1 Calibration and Testing Program (02.03)

a. Inspection Scope

The inspectors reviewed calibration and functional tests for select effluent monitors to evaluate whether they were performed consistent with the Offsite Dose Calculation Manual (ODCM). The inspectors assessed whether National Institute of Standards and Technology traceable sources were used, primary calibration represented the plant nuclide mix, secondary calibrations verified the primary calibration, and calibration encompassed the alarm set points.

The inspectors assessed whether effluent monitor alarm set points were established as provided in the ODCM and procedures.

The inspectors evaluated the basis for changes to effluent monitor alarm set points.

These inspection activities supplemented those documented in Inspection Report 05000263/2017002 and constituted one complete sample as defined in Inspection Procedure (IP) 71124.06–05.

b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (71124.07)

.1 Site Inspection (02.02)

a. Inspection Scope

The inspectors walked down select air sampling stations and dosimeter monitoring stations to determine whether they were located as described in the ODCM and to determine the equipment material condition.

The inspectors reviewed calibration and maintenance records for select air samplers, dosimeters, and composite water samplers to evaluate whether they demonstrated adequate operability of these components.

The inspectors assessed whether the licensee had initiated sampling of other appropriate media upon loss of a required sampling station.

The inspectors observed the collection and preparation of environmental samples from select environmental media to determine if environmental sampling was representative of the release pathways specified in the ODCM and if sampling techniques were in accordance with procedures.

The inspectors evaluated whether missed and/or anomalous environmental samples were identified and reported in the annual environmental monitoring report. The inspectors selected events that involved a missed sample, inoperable sampler, lost dosimeter, or anomalous measurement to determine if the licensee had identified the cause and had implemented corrective actions. The inspectors reviewed the licensee's assessment of any positive sample results and reviewed any associated radioactive effluent release data that was the source of the released material.

The inspectors selected structures, systems, or components that involve or could reasonably involve a credible mechanism for licensed material to reach ground water, and assessed whether the licensee had implemented a sampling and monitoring program sufficient to detect leakage to ground water.

The inspectors evaluated whether records important to decommissioning, as required by Title 10 of the *Code of Federal Regulations* (CFR), Part 50.75(g), were retained in a retrievable manner.

The inspectors reviewed any significant changes made by the licensee to the ODCM as the result of changes to the land census, long-term meteorological conditions, or modifications to the sampler stations since the last inspection. The inspectors reviewed technical justifications for any changed sampling locations to evaluate whether the licensee performed the reviews required to ensure that the changes did not affect its ability to monitor the impacts of radioactive effluent releases on the environment.

The inspectors assessed whether the appropriate detection sensitivities with respect to the ODCM were used for counting samples. The inspectors reviewed the Quality Control Program for analytical analysis.

The inspectors reviewed the results of the licensee's Interlaboratory Comparison Program to evaluate the adequacy of environmental sample analyses performed by the licensee. The inspectors assessed whether the interlaboratory comparison test included the media/nuclide mix appropriate for the facility. The inspectors reviewed the licensee's determination of any bias to the data and the overall effect on the Radiological Environmental Monitoring Program.

These inspection activities constituted a partial sample as defined in IP 71124.07-05.

b. Findings

No findings were identified.

.2 Groundwater Protection Initiative Implementation (02.03)

a. Inspection Scope

The inspectors reviewed monitoring results of the groundwater protection initiative to evaluate whether the licensee had implemented the program as intended and to assess whether the licensee had identified and addressed anomalous results and missed samples.

The inspectors evaluated the licensee's implementation of the minimization of contamination and survey aspects of the groundwater protection initiative and the Decommissioning Planning Rule requirements in 10 CFR 20.1406 and 10 CFR 20.1501.

The inspectors reviewed leak and spill events and 10 CFR 50.75 (g) records and assessed whether the source of the leak or spill was identified and appropriately mitigated.

The inspectors assessed whether unmonitored leaks and spills were evaluated to determine the type and amount of radioactive material that was discharged. The inspectors assessed whether the licensee completed offsite notifications in accordance with procedure.

The inspectors reviewed evaluations of discharges from onsite contaminated surface water bodies and the potential for ground water leakage from them. The inspectors assessed whether the licensee properly accounted for these discharges as part of the effluent release reports.

The inspectors assessed whether onsite ground water sample results and descriptions of any significant onsite leaks or spills into ground water were documented in the Annual Radiological Environmental Operating Report or the Annual Radiological Effluent Release Report.

The inspectors determined if significant new effluent discharge points were updated in the ODCM and the assumptions for dose calculations were updated as needed.

This inspection activity constituted one complete sample as defined in IP 71124.07–05.

b. Findings

No findings were identified

.3 Problem Identification and Resolution (02.04)

a. Inspection Scope

The inspectors assessed whether problems associated with the Radiological Environmental Monitoring Program were being identified by the licensee at an appropriate threshold and were properly addressed for resolution. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involved the Radiological Environmental Monitoring Program.

This inspection activity constituted one complete sample as defined in IP 71124.07–05.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES**

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

4OA1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index—Emergency AC Power System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) – Emergency AC Power System performance indicator for the period from the third quarter 2016 through second quarter 2017. To determine the accuracy of the performance indicator (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 31, 2013, were used. The inspectors reviewed the licensee’s operator narrative logs, MSPI derivation reports, issue reports, event reports and NRC Integrated Inspection Reports for the period of July 1, 2016 through June 30, 2017, to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. 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 MSPI emergency AC power system sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index—High Pressure Injection Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI – High Pressure Injection Systems performance indicator for the period from the third quarter 2016 through second quarter 2017. 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 31, 2013, were used. The inspectors reviewed the licensee’s operator narrative logs, issue reports, MSPI derivation reports, event reports and NRC Integrated Inspection Reports for the period of July 1, 2016 through June 30, 2017, to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had

changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. 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 MSPI high pressure injection system sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index—Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Heat Removal System performance indicator for the period from the third quarter 2016 through second quarter 2017. 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 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, MSPI derivation reports, and NRC Integrated Inspection Reports for the period of July 1, 2016 through June 30, 2017, to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. 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 MSPI heat removal system sample as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

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

a. Inspection Scope

As 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 corrective action program at an appropriate threshold, adequate attention was being given to timely corrective actions, and adverse trends were identified and addressed. Some minor issues were entered into the licensee's corrective action program as a result of the inspectors' observations; however, they are not discussed in 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.

b. Findings

No findings were identified.

.2 Annual In-Depth Review

a. Inspection Scope

The inspectors selected the following condition reports for in-depth review:

- CAP 50100000877 (CAP Generation Rate has Declined) was initiated by the licensee to document that Monticello's CAP generation rate has declined since the spring 2017 refueling outage. Inspectors selected this CAP for annual in-depth review due to the low threshold for corrective action program weaknesses and the potential impact of a declined initiation rate for corrective action program issues.

As appropriate, the inspectors verified the following attributes during their review of the licensee's corrective actions for the above condition reports and other related condition reports:

- complete and accurate identification of the problem in a timely manner commensurate with its safety significance and ease of discovery;
- consideration of the extent of condition, generic implications, common cause, and previous occurrences;
- classification and prioritization of the resolution of the problem commensurate with safety significance;
- identification of corrective actions, which were appropriately focused to correct the problem; and
- completion of corrective actions in a timely manner commensurate with the safety significance of the issue.

The inspectors discussed the corrective actions and associated evaluations with licensee personnel.

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

b. Observations and Assessments

Since the spring 2017 refueling outage, corrective action program data reflects that the site's CAP generation rate has declined. As a result, the licensee initiated CAP 50100000877 to document the issue. Typically the licensee's monthly on-line corrective action program issue generation totals are historically between 100 and 50 for conditions adverse to quality (CAQs). In the month of June 2017, 100 CAQs were initiated within the licensee's corrective action program. For July 2017, 69 CAQs were initiated, prompting the above referenced CAP which documented the declined initiation trend. Inspectors selected this CAP for annual in-depth review due to the low threshold

for corrective action program weaknesses and the potential impact of a declined initiation rate for corrective action program issues.

Inspectors reviewed CAP 50100000877, the licensee's condition evaluation and resultant actions, and monitored corrective action program initiation rates throughout the inspection period. Inspectors determined the licensee recognized the declined trend in a timely manner. Specifically, the licensee conducted a condition evaluation which concluded, in July 2017, the site experienced a decrease of approximately 40 percent in the CAP initiation rate compared to normal, on-line monthly totals. The licensee determined the reasons for this included better equipment performance and improved human performance (fewer people onsite following a refueling outage and during the summer). In an effort to evaluate possible drivers for the declined trend, the licensee made a comparison between July 2016 and July 2017, to further understand maintenance notifications that were generated along with person hours worked and clock resets (i.e. human performance error rate). The licensee concluded that maintenance notifications generated in July 2017 indicated an improvement in equipment performance in July 2017. Relative to person-hour totals, the licensee concluded those totals are typically 15 to 20 percent lower compared to other months of the year, a potential contributor to the decline in corrective action program initiation rate seen in July 2017. Further, the licensee examined both crew and department clock resets for the month of July 2017, determining that there were no crew clock resets and only one department clock reset thereby resulting in the lowest human performance error rate at Monticello. Finally, the licensee reviewed operational logs and concluded that Operations personnel exhibited a low threshold for corrective action program generation even though the review noted several instances where unexpected annunciator alarms (i.e. sub-yard trouble) had not been entered into the CAP. Lastly, the licensee's condition evaluation reviewed CAP data for the first half of August 2017 and noted that CAP initiation rates were on an upward trend.

As a result of the condition evaluation for CAP 50100000877, the licensee established the following corrective actions:

- site Focus team members were directed to look for and challenge instances where CAP thresholds were not being set by individuals and report those occurrences to Performance Improvement Manager;
- communicated the issue with Fleet Performance Improvement; and
- forwarded the results of the Operations log review to the Operations Manager to reinforce expectations to operators with respect to initiating CAP's for unexpected alarms.

Inspector review of the licensee's condition evaluation determined the licensee's actions associated with CAP 50100000877 were satisfactory. Inspector's monitored corrective action program initiation rates throughout the inspection period. Ninety-nine CAQs were generated in August 2017 and 86 CAQs were generated in September 2017. The slight reduction in number between August and September was determined to be attributed to considerable lower person-hours during September (even fewer than July 2017). Inspector's concluded the licensee continues to monitor and reinforce low threshold corrective action program initiation. Overall, the inspectors did not identify any issues with the licensee's actions, however will continue to monitor corrective action program issue initiation.

.3 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector corrective action program item screening discussed in Section 4OA2.1 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the 6-month period of March 2017 through August 2017, although some examples expanded beyond those dates where the scope of the trend warranted.

The review also included issues documented outside the corrective action program in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self-assessment reports, and Maintenance Rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's corrective action program trending reports. Corrective actions associated with a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

This review constituted one semi-annual trend review inspection sample as defined in IP 71152.

b. Observations and Assessments

No findings were identified.

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

.1 (Closed) Licensee Event Report 05000263/2016-003-00 and 01, "HPCI Declared Inoperable Due to Excessive Water Level in Turbine"

a. Inspection Scope

The inspectors reviewed the original revision of this licensee event report (LER) submitted on January 25, 2017, and the subsequent revision submitted on May 25, 2017. In their review, the inspectors noted the only change in the subsequent revision consisted of adding specific vendor information to include manufacturer and model number associated with the HPCI turbine exhaust drain pot switch that did not function properly and resulted in rendering HPCI inoperable. Additionally, the inspectors reviewed the associated causal evaluation detailing the event and circumstances that resulted in the condition that could have prevented the fulfillment of the HPCI system safety function from November 21, 2016 – December 1, 2016; design bases documents; the USAR; and TS requirements to ensure the issues documented in the LERs were adequately addressed in the licensee's CAP. The inspectors also validated that the associated exhaust drain pot switch was routinely tested within the licensee's preventative maintenance program and noted that this failure was the first failure recorded. The inspectors also independently confirmed the licensee's non-safety related classification for the exhaust drain pot switch per Fleet Procedure FP-E-RTC-02, "Functional Location Classification Process." Lastly, the inspectors performed a historical review of work orders and the CAP to verify that the exhaust drain pot switch

failure was not within the licensee's ability to foresee and correct and therefore no performance deficiency was identified. Documents reviewed as part of this inspection are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

.2 (Closed) Licensee Event Report 05000263/2017-003-00, "Main Steam Isolation Valve Leakage Exceeds Technical Specifications Requirements"

a. Inspection Scope

The inspectors reviewed the event and circumstances detailed in this LER associated with the failure of the 13-C Outboard Main Steam Isolation Valve (MSIV) to meet leakage requirements during testing per the requirements of 10 CFR 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." In their review, the inspected determined that the issues documented in the LER were adequately addressed in the licensee's CAP and noted repairs and subsequent leakage testing for the MSIV were completed satisfactorily in a timely and effective manner. The inspectors noted that because the 13-C Inboard MSIV (installed in series with the 13-C Outboard MSIV) successfully passed the associated leakage and closure test requirements during the past operating cycle, the required primary containment isolation safety function was maintained. Lastly, the inspectors verified based on a review of work orders, the CAP, and surveillance performance history that the failure of the 13-C Outboard MSIV to pass leakage test requirements was not within the licensee's ability to foresee and correct and therefore no performance deficiency was identified. Documents reviewed as part of this inspection are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On October 3, 2017, the inspectors presented the inspection results to Mr. C. Church, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

An interim exit meeting was conducted for:

- The inspection results for the Radiation Safety Program review with Mr. P. Gardner, Site Vice President, on July 20, 2017.

The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

C. Church, Site Vice President (Incoming)
P. Gardner, Site Vice President (Outgoing)
K. Scott, Site Operations Director
C. Dieckmann, Plant Manager
M. Antony, Operations Manager
M. Lingenfelter, Director of Engineering
R. Olson, Maintenance Manager
S. Quiggle, Chemistry Manager
C. England, Radiation Protection Manager
T. Hedges, RP General Supervisor
A. Ward, Regulatory Affairs Manager
P. Young, Nuclear Program Engineering Manager
R. Garding, Program Engineering Supervisor
T. Jones, Engineering Analyst Principal
R. Deopere, Engineering Analyst Principal
R. Loeffler, Regulatory Affairs
G. Huff, Chemist

U.S. Nuclear Regulatory Commission

B. Dickson, Chief, Reactor Projects Branch 2
P. Zurawski, Senior Resident Inspector
L. Haeg, Senior Resident Inspector
D. Krause, Resident Inspector
P. LaFlamme, Resident Inspector
T. Ospino, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

- | | | |
|----------------------|-----|--|
| 05000263/2017-004-00 | LER | High Pressure Coolant Injection Steam Stop Valve Failed to Open During Test |
| 05000263/2017-005-00 | LER | Diesel Generator Emergency Service Water System Automatic Transfer to Alternate Shutdown Panel |

Closed

- | | | |
|----------------------|-----|---|
| 05000263/2016-003-00 | LER | HPCI Declared Inoperable Due to Excessive Water Level in Turbine |
| 05000263/2016-003-01 | LER | HPCI Declared Inoperable Due to Excessive Water Level in Turbine |
| 05000263/2017-003-00 | LER | Main Steam Isolation Valve Leakage Exceeds Technical Specification Requirements |

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors 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.

1R01 Adverse Weather

- 1444; Post Severe Weather Checklist; Revision 14-B
- 4 AWI-04.02.01; Housekeeping; Revision 28
8300-02; External Flooding Protection Implementation to Support A.6 Acts of Nature; Revision 8
- A.6; Acts of Nature; Revision 56
Calculation 14-043; Evaluation of Door Flood Barriers and Wall Penetration Barriers; Revision 0
- Calculation 14-046; External Flooding Protection Features (FPF) List; Revision 2

1R04 Equipment Alignment

- 0255-06-IA-1; HPCI Quarterly Pump and Valve Tests; Revision 100
- 1047-02; Operations Control Room Checklist; Revision 102
- 2118; Plant Prestart Checklist HPCI System; Revision 17
- 2120; Plant Prestart Checklist RHR system; Revision 12
- 2154-22; EDG Emergency Service Water System Prestart Valve Checklist; Revision 27
- 2154-34; Emergency Service Water System Prestart Valve Checklist; Revision 30
- B.03.02-05; Operations Manual – HPCI; Revision 54
- CAP 501000002495; Phoenix Tool not Appropriately Updated
- CAP 501000002556; Incorrect Nomenclature in Procedure 2120
- DBD-B.03.02; High Pressure Coolant Injection System; Revision 11
- DBD-T.05; External Flooding Topic; Revision 6

1R05 Fire Protection

- A.3-15-E; Fire Zone 15-E Strategy, Diesel Oil Pump House; Revision 8
- A.3-19-A; Fire Zone 19-A Strategy, Make-up Demin Area; Revision 13
- A.3-19-B; Fire Zone 19-B Strategy, Essential MCC Area (NO. 142 & 143 931' Elevation); Revision 13
- A.3-31-B; Fire Zone 31-B Strategy, EFT Building 1st Floor (DIV II) Area; Revision 16
- A.3-32-B; Fire Zone 3-B Strategy, EFT Building Second Floor (DIV II) Area; Revision 11
- A.3-33; Fire Zone 33 Strategy, EFT Building Third Floor Area; Revision 10
- CAP 501000002427; A.3-33 (Fire Strategy FZ-33) Enhancement
- PO A88357; Purchase Order to Overly Manufacturing Company for Security Bullet Resistant Doors; October 6, 1982

1R06 Flood Protection Measures

- A.6; Acts of Nature; Revision 56
Calculation 14-043; Evaluation of Door Flood Barriers and Wall Penetration Barriers; Revision 0
- DBD-T.08; Internal Flooding; Revision 3

1R11 Licensed Operator Requalification Program

- 2300; Reactivity Maneuvering Steps; Revision 20
- FP-OP-COO-21; Reactivity Control; Attachment to the 2300 Procedure for Maneuver Listed below; Revision 0
- NUC-01.02; Power Adjustment Planning; Revision 33
- SEG RQ-SS-09E; MPR Failure Causing Reactor Pressure Reduction with ATWS and Group 1 Isolation Failure; Revision 0

1R12 Maintenance Effectiveness

- CAP 50001516361; Repair HPCI Oil to Restore HPCI Function
- CAP 50100000056; SV-1/HPC Coupling Oil Leak
- CAP 50100000082; Minor Oil Leak from Union on HPC
- CAP 501000002792; HPCI-R-7 has Packing Leak
- DBD-03.02; High Pressure Coolant Injection System; Revision 11
- FP-E-MR-01; Maintenance Rule Process; Revision 9
- FP-OP-ACM-01; Adverse Condition Monitoring Plan Process; Revision 1
- QF0584; (a)(1) Action Plan Development and Action Plan Monitoring; August 11, 2016
- USAR-06.02; Emergency Core Cooling System (ECCS); Revision 35p

1R13 Maintenance Risk Assessment and Emergent Work

- 4069-02-PM; CRV-EFT "B" Train Preventative Maintenance; Revision 7
- B.08.13-05; Operations Manual, Control Room H&V and EFT System Operation; Revision 32
- CAP 501000000721; Delay in Starting 4069-02-PM
- CAP 501000001146; Upper West Leaf on Door-45 Bent/Warped
- NH-170037; Main Control Room CRV/EFT System; Revision 82
- OWI-03.05; Safety Function Determination Program; Revision 6
- WO 700006589; MECH-EFT, 4069-02-PM CRV-EFT "B" Train; July 18, 2017
- WO 700020657; 4069-02-PM CRV-EFT "B" Train Preventative Maintenance; July 18, 2017
- WO 700022388; Door-103,109,110-Flow Testing; SCR-17-0152; Revision 0

1R15 Operability Evaluations

- 0314; Safety Relief Valve Pressure Switch Check; Revision 20
- CAP 501000001527; HO-7 Opening Time Exceeded Trend Band
- CAP 501000002379; 0314 Surveillance not Complete within Frequency
- ESP-24V-0615-01; No. 14 24 VDC Battery Operability Check; Revision 0

1R18 Modifications

- 3063-05; ASME Section XI, Repair/Replacement Plan; Revision 9
- CAP 501000000565; RHR Venting Exceeded Acceptance Criteria
- EC 28692; Add High Point Vent at RHR Side of PC-18; July 13, 2017
- FP-PE-NDE-520; Visual Examination for Leakage, VT-2; Revision 7
- NH-36247; P&ID Residual Heat Removal System; Revision 88
- NH-36256; P&ID Fuel Pool Cooling & Clean-up System; Revision 78
- OSP-RHR-0556; RHR Water Fill Verification; Revision 10
- USAR-06-02; Emergency Core Cooling System (ECCS); Revision 34
- WO 700021387; Add High Point Vent at RHR Side of PC-18; July 12, 2017

1R19 Post Maintenance Testing

- 0465-01; Emergency Filtration Treatment System; Revision; Revision 47
- 2145; RHR System Discharge Venting; Revision 16
- 8906; UT System Full Check Following Draindown; Revision 1
- CAP 501000000554; Voids Found in Shutdown Cooling Line
- CAP 501000000567; Voids Identified RHR Piping Division 1
- NH-170037; Main Control Room CRV/EFT System; Revision 82
- WO 559175-01; Work Plan V-ERF-11 Heater Cutoff Flow; Revision 1
- WO 700006589-020 (544762-02); 406-02-PM, CRV-EFT "B" Train Preventative Maintenance OPS-EFT-II, PMT; July 18, 2017
- WO 700021387 Op50; Add High Point Vent at RHR Side of PC-18, PMT; July 12, 2017

1R22 Surveillance Test

- 0058; HPCI Steam Line High Area Temperature Test and Calibration Procedure; Revision 31
- 0089; Boron Concentration-Standby Liquid Control System; Revision 26
- 0253-01; SBGT A Train Quarterly Test; Revision 54
- 0255-06-IA-1; HPCI Quarterly Pump and Valve Tests; Revision 100
- 0397-A; SRV Low-Low Set System Quarterly Tests; Revision 26; August 11, 2017
- C.4-B.08.07.A; Ventilation System Failure; Revision 40
- CAP 501000002769; HPCI Temperature Switch Out of As Found
- CAP 501000002797; 0058, Wrong Temp Switches
- CAP 501000002810; Minor Delay in Start of HPCI Quarterly
- CAP 501000002826; NRC Question on Effect Cal of Temp Switch
- I.01.87; Sodium Pentaborate; Revision 4
- I.05.05; Liquid Poison System Sampling; Revision 8
- ISP-RHR-0602; Reactor Steam Dome Pressure Low-Channel Calibration and Channel Functional Test; Revision 5
- WO 700013661-0010; 0058 HPCI Steam Line High Area Temperature Test and Calibration Procedure; September 17, 2017
- WO 700017456-0010; 0089-Boron Concentration-Standby Liquid Control System; August 11, 2017
- WO 700018533-0010; ISP-RHR-0602; Reactor Steam Dome Pressure Low-Channel Calibration and Channel Functional Test; August 9, 2017

1EP6 Drill Evaluation

- 5790-106-01; Support Group Leader Checklist; Revision 26
- 5790-106-02; TSC Staffing and Organizational Chart; Revision 16
- A.2-001; Emergency Organization; Revision 55
- A.2-213; Responsibilities of Emergency Director; Revision 29
- CAP 501000000958; EP Drill - Questions on Accountability
- CAP 501000000968; EP Drill - TSC Enhancements
- CAP 501000000981; EP Drill - Documents in SAP not Accessible
- CAP 501000000983; EP Drill - TSC Fax Machine Lacks Numbers
- CAP 501000000996; EP Drill - Evacuation Confusion
- CAP 501000001005; EP Drill - EOF Rollup
- CAP 501000001007; EP Drill - EAL Board Conditions for General Emergency
- CAP 501000001010; EP Drill - Inter/Intra Communication Issues
- CAP 501000001017; EP Drill - Follow-up Notifications

- CAP 501000001034; EP Drill – OSC Rollup Items
- CAP 501000001036; EP Drill – NRC Inspector Observations
- CAP 501000002026; EP Exercise – Failure of Simulator ERDS
- CAP 501000002041; EP Exercise – EOF Field Team Radio Cut Out
- CAP 501000002045; EP Exercise – State and Site had Different Dose
- CAP 501000002049; EP Exercise – TSC ED Roll-Up Critique Items
- CAP 501000002056; EP Exercise – Security Group Leader Roll-up
- CAP 501000002065; EP Exercise – REC Issue Rollup
- CAP 501000002066; EP Exercise – Incorrect EAL Declared
- CAP 501000002067; EP Exercise – SAE Declaration
- CAP 501000002069; EP Exercise – EOF Roll-Up
- CAP 501000002075; EP Exercise – Roll-Up for TSC Communication
- CAP 501000002100; EP Exercise – TSC Roll-Up, Controllers
- CAP 501000002187; EP Exercise – Objective Grading
- E-PLAN; Emergency Plan; Revision 48
- Monticello Nuclear Generating Plant Emergency Plan Drill; July 25, 2017
- Monticello Nuclear Generating Plant Emergency Plan Exercise; August 29, 2017

2RS6 Radioactive Gaseous and Liquid Effluent Treatment

- RCE 1537833; Past RBV Settings Prevented to Transition to Mid/High Range; Revision 2

2RS7 Radiological Environmental Monitoring Program

- 2015 Annual Radiological Environmental Operating Report; May 12, 2016
- 2016 Annual Groundwater Monitoring Report; May 17, 2017
- 2016 Annual Radiological Environmental Operating Report; May 10, 2017
- CAP 1489004; NEI 07-07; AFI for Annual Reporting Related to Ground Water
- CAP 1506908; Official 100m Data Availability for 2014 89.6%
- CAP 1536407; Missed Semi-Annual Invertebrate REMP Samples
- CAP 1551435; MET Tower PM periodicity not aligning with E-Plan
- CAP 1553848; REMP SSA; Unclear Reporting in 2015 REMP Report
- CAP 1553861; REMP SSA; Improvement Opp. For Invert and Sediment Sampling
- Form 5078; REMP Sample Field Data Form; July 19, 2017
- Form 5078; REMP Sampling Field Data Form; Revision 13
- FP-CY-GWPP-01; Fleet Groundwater Protection Program; Revisions 5 and 6
- I.05.33; Weekly Radiological Environmental Monitoring Procedures (REMP); Revision 9
- Land Use Census and Critical Receptor Report; December 8, 2016
- Land Use Census and Critical Receptor Report; November 3, 2015
- Meteorological Joint Frequency Distributions; 2015-2016
- ODCM-06.01; Dose From All Uranium Fuel Cycle Sources; Revision 4
- ODCM-07.01; Radiological Environmental Monitoring Program; Revision 25

4OA1 Performance Indicator Verification

- Dose Equivalent Iodine Data; 3rd Quarter 2016 through 2nd Quarter 2017
- ED Dose and Dose Rate Alarms; 3rd Quarter 2016 through 2nd Quarter 2017
- Internal and External Dose Evaluations; 3rd Quarter 2016 through 2nd Quarter 2017
- Radiological Effluent Quarterly Dose Summaries; 3rd Quarter 2016 through 2nd Quarter 2017

40A2 Identification and Resolution of Problems

- CAP 500001534796; 12 CRD Pump Motor Leaking Oil
- CAP 500001544250; PI-4430A, V-EAC-14A Compressor Oil Press
- CAP 500001552560; SW-MIC Pitting Detected in Line ESW1-3-H
- CAP 500001552684; SW-MIC Pitting Detected in Line ESW1-3-H
- CAP 500001553812; SW-MIC Pitting in Line FM-10-KB
- CAP 500001555290; Low Flow Margin to 13 RHR Pump Motor Cooler
- CAP 500001558731; HPCI-34, Booster Pump Vent Leaks By
- CAP 501000000877; CAP Generation Rate has Declined
- Corrective Action Program Issues (March 2015 through August 2017)
- FP-ARP-PA-01; CAP Process; Revision 52

40A3 Follow-Up of Events and Notices of Enforcement Discretion

- 0137-07A; Reactor Steam Supply Valves Leak Rate Testing; Revision 34
- B.03.02-01; HPCI Operations Manual; Revision 12
- CAP 1278168; Internal Damage to Outboard MSIVs
- CAP 1483971; Equipment Cause Evaluation
- CAP 1483971; SVOS-4 Failed During 0009 Stop Valve Closure Scram
- CAP 1487368; Past Operability Review of Turbine Stop Valve SV-4 RPS Switch
- CAP 1543170; LS-23-98 May not be Functioning Properly
- CAP 1546068; NO-2036 (HPCI Turbine Steam Supply) Leaking
- CAP 1550998; Rising Temperature on HPCI Turbine Casing #2
- CAP 1556319; AO-2-86C Exceeded App J Tech Spec Surv Limit ECE
- CAP 1559500; From Past Op: MSIV Outboard AO-2-86C was INOP from 1R27-1R28
- CAP 500001542376; MO-2036, Turbine Steam Supply
- CAP 500001543140; Small Water Leak Under HPCI Steam Turbine
- CAP 500001543170; LS-23-98 May not be Functioning Properly
- CAP 500001543630; PCI Temp TE-4218B Thread Leak at 1 Drop
- CAP 500001545998; LS-23-9B (PCI Exh Drn Pot H1 LVL) Alarm
- EC 27893; Remove SV-2049 and Make LS-29-98 Alarm Only; Revision 0
- FP-E-RTC-02; Functional Location Classification; Revision 14; July 24, 2015
- NH-36249; High Pressure Coolant Injection System; Revision 82
- NRC Information Notice 93-67; Bursting of High Pressure Coolant Injection Steam Line Rupture Discs Injures Plant Personnel; August 16, 1993
- USAR-06 02; Monticello Updated Safety Analysis Report; Revision 32
- WO 555012-01; MO-2036; HPCI Turbine Steam Supply, Steam Leak from Packing; November 21, 2016
- WO 555012-05; OPS-MO-2036, PMT/RTS; November 23, 2016
- WO 555012-06; Elec-MO-2036, Perform As Left Viper and Adjustments; November 21, 2016
- WO 557718-01; VALC-MO-2036, Repair Valve; May 5, 2017
- WO 557718-06; OPS-MO-2036, PMT/RTS; May 13, 2017

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
CAP	Corrective Action Program
CAQ	Condition Adverse to Quality
CFR	<i>Code of Federal Regulations</i>
CRV	Control Room Ventilation
DRP	Division of Reactor Projects
EDG	Emergency Diesel Generator
EFT	Emergency Filtration Train
ESW	Essential Service Water
HPCI	High-Pressure Coolant Injection
IP	Inspection Procedure
LER	Licensee Event Report
MSIV	Main Steam Isolation Valve
MSPI	Mitigating Systems Performance Index
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PI	Performance Indicator
PM	Planned or Preventative Maintenance
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
SBGT	Standby Gas Treatment
SCRAM	Reactor Protection System Actuation
TS	Technical Specification
USAR	Update Safety Analysis Report
WO	Work Order