UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
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January 29, 2016

Mr. Peter A. Gardner
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company, Minnesota
2807 West County Road 75
MONTICELLO, MN 55362–9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT NRC INTEGRATED INSPECTION REPORT NOS. 05000263/2015004 AND 072000058/2015001

Dear Mr. Gardner:

On December 31, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Monticello Nuclear Generating Plant. The enclosed report documents the results of this inspection, which were discussed on January 5, 2016 with you and other members of your staff.

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

Based on the results of this inspection, no findings of significance were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS).

ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Kenneth Riemer, Chief
Branch 2
Division of Reactor Projects

Docket No. 50–263
License No. DPR–22

Enclosure:
IR 05000263/2015004; 072000058/2015001

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50–263
License No:	DPR–22
Report No:	05000263/2015004 and 072000058/2015001
Licensee:	Northern States Power Company, Minnesota
Facility:	Monticello Nuclear Generating Plant
Location:	Monticello, MN
Dates:	October 1 through December 31, 2015
Inspectors:	P. Zurawski, Senior Resident Inspector P. Voss, Resident Inspector D. Krause, Resident Inspector P. LaFlamme, Resident Inspector S. Bell, Health Physicist D. McNeil, Senior Operations Engineer J. Seymour, Operations Engineer G. Hansen, Senior Emergency Preparedness Inspector J. Havertape, Reactor Engineer M. Learn, Reactor Engineer
Approved by:	K. Riemer, Chief Branch 2 Division of Reactor Projects

Enclosure

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SUMMARY

Inspection Report 05000263/2015004; 10/01/2015–12/31/2015*;* Monticello Nuclear Generating Plant; Integrated Inspection Report.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG–1649, “Reactor Oversight Process” Revision 5, dated February, 2014.

REPORT DETAILS

Summary of Plant Status

Monticello began the inspection period at approximately 100 percent power. On October 24, 2015 and November 21, 2015 power was lowered to approximately 95 percent for planned control rod drive testing. Power was returned to approximately 100 percent later in the day on each of those dates. On November 23, 2015, the 11 recirculation pump locked out, followed shortly after by a large indicated spike in steam flow on the 'C' main steam line. Coincident with this indicated spike, all four channels on the 'C' steam flow detection circuit actuated, resulting in a Group 1 isolation logic initiation which caused a reactor scram. The licensee conducted troubleshooting and repair activities via forced outage 1F2801. On December 4, 2015, power was returned to approximately 100 percent and remained at full power as of December 31, 2015.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Winter Seasonal Readiness Preparations

a. Inspection Scope

The inspectors conducted a review of the licensee's preparations for winter conditions to verify that the plant's design features and implementation of procedures were sufficient to protect mitigating systems from the effects of adverse weather. Documentation for selected risk-significant systems was reviewed to ensure that these systems would remain functional when challenged by inclement weather. 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. Cold weather protection, such as heat tracing and area heaters, was verified to be in operation where applicable. The inspectors also reviewed corrective action program (CAP) items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures. Documents reviewed are listed in the Attachment to this report. The inspectors' reviews focused specifically on the following plant systems due to their risk significance or susceptibility to cold weather issues:

- Diesel Fuel Oil and Emergency Diesel Generator Systems.

This inspection constituted one winter seasonal readiness preparations 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:

- EDG-ESW Division 1 systems during Division 2 work window.

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 one partial system walkdown sample as defined in IP 71111.04–05.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

During the third quarter of 2015, the inspectors performed a full system walkdown of the Division I and II Emergency Filtration Train (EFT) to verify functional capability of the system. This inspection was documented in Section 1R04.2 of inspection report 05000263/2015003. In that report, the sample was erroneously listed as an inspection of the Division II EFT instead of the Division I and II EFTs.

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 the 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.

The documents reviewed were listed in the Attachment to the 2015-003 integrated Inspection Report for the Monticello Nuclear Generating Station. Credit for this inspection sample is being documented in 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 23-B: Intake Structure Corridor;
- Fire Zone 09: Control Room;
- Fire Zone 10: Administrative Building;
- Fire Zone 12A: Lower 4kV; and
- Fire Zones 13A, B, & C: Lube Oil Storage, Reactor Feedwater Pump, Turbine Building, 911' Motor Control Center.

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 five quarterly fire protection inspection samples as defined in IP 71111.05–05.

b. Findings

No findings were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On October 4, 2015, the inspectors observed a fire brigade activation following a simulated identification of fire and smoke in the radiation protection kitchen area and the connecting Fire Brigade Room in the Plant Administration Building. Based on this observation, the inspectors evaluated the readiness of the plant fire brigade to fight fires. As part of this drill, the inspectors observed an annual demonstration of the site's use of the Alternate Fire Brigade Room. The inspectors verified that the licensee staff identified deficiencies openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were:

- proper wearing of turnout gear and self-contained breathing apparatus;
- proper use and layout of fire hoses;
- employment of appropriate firefighting techniques;
- sufficient firefighting equipment brought to the scene;
- effectiveness of fire brigade leader communications, command, and control;
- search for victims and propagation of the fire into other plant areas;
- smoke removal operations;
- utilization of pre-planned strategies;
- adherence to the pre-planned drill scenario; and
- drill objectives.

Documents reviewed are listed in the Attachment to this report.

These activities constituted one annual fire protection inspection sample as defined in IP 71111.05–05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

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

a. Inspection Scope

On November 2, 2015, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification 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.

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 During Periods of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

On October 24, 2015, the inspectors observed operators performing control rod drive exercising activities in the control room. 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.

.2 Annual Operating Test Results (71111.11A)

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the Annual Operating Test, administered by the licensee from September 14, 2015, through October 30, 2015, required by Title 10 of the *Code of Federal Regulations* (10 CFR) 55.59(a). The results were compared to the thresholds established in Inspection Manual Chapter 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process," to assess the overall adequacy of the licensee's Licensed Operator Requalification Training (LORT) program to meet the requirements of 10 CFR 55.59. (02.02)

This inspection constituted one annual licensed operator requalification examination results sample as defined in IP 71111.11–05.

b. Findings

No findings were identified.

.3 Biennial Review (71111.11B)

a. Inspection Scope

The following inspection activities were conducted during the week of October 19, 2015, to assess: (1) the effectiveness and adequacy of the facility licensee's implementation and maintenance of its systems approach to training (SAT) based LORT program, put into effect to satisfy the requirements of 10 CFR 55.59; (2) conformance with the requirements of 10 CFR 55.46 for use of a plant referenced simulator to conduct operator licensing examinations and for satisfying experience requirements; and (3) conformance with the operator license conditions specified in 10 CFR 55.53. The documents reviewed are listed in the Attachment to this report.

- Licensee Requalification Examinations (10 CFR 55.59(c); SAT Element 4 as Defined in 10 CFR 55.4): The inspectors reviewed the licensee's program for development and administration of the LORT biennial written examination and annual operating tests to assess the licensee's ability to develop and administer examinations that are acceptable for meeting the requirements of 10 CFR 55.59(a).

  - The inspectors conducted a detailed review of two biennial requalification written examination versions to assess content, level of difficulty, and quality of the written examination materials. (02.03)

  - The inspectors conducted a detailed review of twenty Job Performance Measures (JPMs) and four simulator scenarios to assess content, level of difficulty, and quality of the operating test materials. (02.04)

  - The inspectors observed the administration of the annual operating test to assess the licensee's effectiveness in conducting the examinations, including the conduct of pre-examination briefings, evaluations of individual operator and crew performance, and post-examination analysis. The inspectors evaluated the performance of one operating crew in parallel with the facility evaluators during three dynamic simulator scenarios, and evaluated various licensed crew members concurrently with facility evaluators during the administration of several JPMs. (02.05)

  - The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the last requalification examinations and the training planned for the current examination cycle to ensure that they addressed weaknesses in licensed operator or crew performance identified during training and plant operations. The inspectors reviewed remedial training procedures and individual remedial training plans. (02.07)

- Conformance with Examination Security Requirements (10 CFR 55.49): The inspectors conducted an assessment of the licensee's processes related to examination physical security and integrity (e.g., predictability and bias) to verify compliance with 10 CFR 55.49, "Integrity of Examinations and Tests." The inspectors reviewed the facility licensee's examination security procedure, and observed the implementation of physical security controls (e.g., access restrictions and simulator input/output controls) and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the inspection period. (02.06)

- Conformance with Operator License Conditions (10 CFR 55.53): The inspectors reviewed the facility licensee's program for maintaining active operator licenses and to assess compliance with 10 CFR 55.53(e) and (f). The inspectors reviewed the procedural guidance and the process for tracking on-shift hours for licensed operators, and which control room positions were granted watch-standing credit for maintaining active operator licenses. Additionally, medical records for 12 licensed operators were reviewed for compliance with 10 CFR 55.53(l). (02.08)

- Conformance with Simulator Requirements Specified in 10 CFR 55.46: The inspectors assessed the adequacy of the licensee's simulation facility (simulator) for use in operator licensing examinations and for satisfying experience requirements. The inspectors reviewed a sample of simulator performance test records (e.g., transient tests, malfunction tests, scenario based tests, post-event tests, steady state tests, and core performance tests), simulator discrepancies, and the process for ensuring continued assurance of simulator fidelity in accordance with 10 CFR 55.46. The inspectors reviewed and evaluated the discrepancy corrective action process to ensure that simulator fidelity was being maintained. Open simulator discrepancies were reviewed for importance relative to the impact on 10 CFR 55.45 and 55.59 operator actions as well as on nuclear and thermal hydraulic operating characteristics. (02.09)

- Problem Identification and Resolution (10 CFR 55.59(c); SAT Element 5 as Defined in 10 CFR 55.4): The inspectors assessed the licensee's ability to identify, evaluate, and resolve problems associated with licensed operator performance (a measure of the effectiveness of its LORT program and their ability to implement appropriate corrective actions to maintain its LORT Program up-to-date). The inspectors reviewed documents related to licensed operator performance issues (e.g., recent examination and inspection reports including cited and non-cited violations; U.S. Nuclear Regulatory Commission (NRC) End-of-Cycle and Mid-Cycle reports; NRC plant issue matrix; licensee event reports; licensee condition/problem identification reports including documentation of plant events and review of industry operating experience). The inspectors also sampled the licensee's quality assurance oversight activities, including licensee training department self-assessment reports. (02.10)

This inspection constituted one biennial licensed operator requalification program inspection 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:

- Residual Heat Removal System (RHR); and
- Condensate Storage System.

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

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

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

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

b. Findings

No findings were identified.

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

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

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

- Sodium Hypochlorite System repairs following pipe break;
- 12 Control Rod Drive pump high discharge pressure with 11 Control Rod Drive vibrations; and
- 12 RHR min flow valve failing to open when securing from Torus Cooling.

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 three 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:

- Emergency Diesel Generator (EDG) Droop settings during isochronous mode;
- Division II 250 Vdc Battery Room Ventilation (V-EF-40B);
- Source Range Monitor (SRM) Functional Test; and
- 'A' Core Spray Line Leak.

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 four samples as defined in IP 71111.15–05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- 11 Core Spray Discharge Line Drain (CS-18-1) PMT; and
- 11 RHR Pump Discharge Check Valve (RHR-2-1) PMT.

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

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Forced Outage 1F2801 due to Reactor Scram from Group 1 Isolation

a. Inspection Scope

On November 23, 2015, at 10:40 a.m., a trip of the #11 reactor recirculation pump occurred. Thirty-six seconds later, a large spike in steam flow on the ‘C’ main steam line was indicated. Coincident with this spike, all four channels on the ‘C’ steam line flow detection circuit actuated, resulting in a Group 1 isolation logic initiation. As a result of the initiation logic, an automatic reactor scram occurred at 10:41, placing the plant in Mode 3 (Hot Standby). The licensee placed the plant in Mode 4 (Cold Shutdown) to perform troubleshooting and repair activities via forced outage 1F2801. After completion of these activities, the licensee re-started the plant on November 30, 2015 with a return to approximately 100 percent power on December 4, 2015.

The inspectors observed or reviewed the scope of work included in the forced outage, shutdown and cooldown operations, outage equipment configuration, control and monitoring of decay heat removal, control of containment, startup and testing activities, and identification and resolution of problems identified as a result of the forced 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.

1EP4 Emergency Action Level and Emergency Plan Changes (IP 71114.04)

a. Inspection Scope

The regional inspectors performed an in office review of the latest revisions to the Emergency Plan and Emergency Action Levels (EALs).

The licensee transmitted the Emergency Plan and EAL revisions to the NRC pursuant to the requirements of 10 CFR, Part 50, Appendix E, Section V, "Implementing Procedures." The NRC review was not documented in a Safety Evaluation Report, and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection.

This EAL and Emergency Plan Changes inspection constituted one sample as defined in Inspection Procedure 71114.04.

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 November 16, 2015 to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the 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 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)

The inspection activities supplement those documented in NRC Inspection Report 05000263/2015002 and constitute one complete sample as defined in Inspection Procedure (IP) 71124.01–05.

.1 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

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.

b. Findings

No findings were identified.

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

a. Inspection Scope

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

b. Findings

No findings were identified.

2RS2 Occupational As-Low-As-Reasonably-Achievable Planning and Controls (71124.02)

The inspection activities supplement those documented in NRC Inspection Report 05000263/2015002 and constitute one complete sample as defined in IP 71124.02–05.

.1 Radiological Work Planning (02.02)

a. Inspection Scope

The inspectors selected the following work activities of the highest exposure significance.

- RWP 155515; Drywell Nozzle/General Inservice Inspection (ISI) Activities;
- RWP 155519; Drywell Seal Cooler Piping Modification; and
- RWP 155508; Drywell SRV Remove/Replace.

The inspectors reviewed the as-low-as-reasonably-achievable (ALARA) work activity evaluations, exposure estimates, and exposure mitigation requirements. The inspectors determined whether the licensee reasonably grouped the radiological work into work activities based on historical precedence, industry norms, and/or special circumstances.

The inspectors assessed whether the licensee's planning identified appropriate dose mitigation features, considered alternate mitigation features, and defined reasonable dose goals. The inspectors evaluated whether the licensee's ALARA assessment has taken into account decreased worker efficiency from use of respiratory protective devices and/or heat stress mitigation equipment (e.g., ice vests). The inspectors determined whether the licensee's work planning considered the use of remote technologies (e.g., teledosimetry, remote visual monitoring, and robotics) as a means to reduce dose and the use of dose reduction insights from industry operating experience and plant-specific lessons learned. The inspectors assessed the integration of ALARA requirements into work procedure and radiation work permit documents.

The inspectors compared the results achieved (dose rate reductions and person-rem used) with the intended dose established in the licensee's ALARA planning for these work activities. The inspectors compared the person-hour estimates provided by maintenance planning and other groups to the radiation protection group with the actual work activity time requirements and evaluated the accuracy of these time estimates. The inspectors assessed the reasons (e.g., failure to adequately plan the activity and failure to provide sufficient work controls) for any inconsistencies between intended and actual work activity doses.

The inspectors determined whether post-job reviews were conducted and if identified problems were entered into the licensee's CAP.

b. Findings

No findings were identified.

.2 Verification of Dose Estimates and Exposure Tracking Systems (02.03)

a. Inspection Scope

The inspectors reviewed the assumptions and basis (including dose rate and man-hour estimates) for the current annual collective exposure estimate for reasonable accuracy for select ALARA work packages. The inspectors reviewed applicable procedures to determine the methodology for estimating exposures from specific work activities and the intended dose outcome.

The inspectors evaluated whether the licensee established measures to track, trend, and, if necessary, to reduce occupational doses for ongoing work activities. The inspectors assessed whether trigger points or criteria were established to prompt additional reviews and/or additional ALARA planning and controls.

The inspectors evaluated the licensee's method of adjusting exposure estimates, or re-planning work, when unexpected changes in scope or emergent work were encountered. The inspectors assessed whether adjustments to exposure estimates (intended dose) were based on sound radiation protection and ALARA principles or if they were just adjusted to account for failures to control the work. The inspectors evaluated whether the frequency of these adjustments called into question the adequacy of the original ALARA planning process.

b. Findings

No findings were identified.

.3 Source Term Reduction and Control (02.04)

a. Inspection Scope

The inspectors used licensee records to determine the historical trends and current status of significant tracked plant source terms known to contribute to elevated facility aggregate exposure. The inspectors assessed whether the licensee had made allowances or developed contingency plans for expected changes in the source term as the result of changes in plant fuel performance issues or changes in plant primary chemistry.

b. Findings

No findings were identified.

.4 Radiation Worker Performance (02.05)

a. Inspection Scope

The inspectors observed radiation worker and radiation protection technician performance during work activities being performed in radiation areas, airborne radioactivity areas, or high radiation areas. The inspectors evaluated whether workers demonstrated the ALARA philosophy in practice (e.g., workers are familiar with the work activity scope and tools to be used, workers used ALARA low-dose waiting areas) and whether there were any procedure compliance issues (e.g., workers are not complying with work activity controls). The inspectors observed radiation worker performance to assess whether the training and skill level was sufficient with respect to the radiological hazards and the work involved.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.06)

a. Inspection Scope

The inspectors evaluated whether problems associated with ALARA planning and controls are being identified by the licensee at an appropriate threshold and, were properly addressed for resolution in the licensee's CAP.

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—Residual Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) - RHR System performance indicator for the period from the 4th quarter 2014 through the 3rd quarter 2015. 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, issue reports, MSPI derivation reports, event reports and NRC Integrated Inspection Reports for the period of October 01, 2014 through September 30, 2015 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 residual heat removal system sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index—Cooling Water Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Cooling Water Systems performance indicator for the period from the 4th quarter 2014 through the 3rd quarter 2015. 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 October 01, 2014 through September 30, 2015 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 cooling water 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 part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's CAP at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Attributes reviewed included: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's CAP as a result of the inspectors' observations are included in the Attachment to this report.

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

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

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

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

b. Findings

No findings were identified.

.3 Annual Follow-up of Selected Issues: Underground Cable Vault Water Intrusion

a. Inspection Scope

During a review of items entered in the licensee's CAP in November, the inspectors recognized a number of corrective action items associated with water intrusion to underground cable vaults, which had been identified throughout 2015, including one where a corrective action evaluation had not been properly assigned to the Cable Program Owner. This inspection focused on a review of CAP issues identified since January 1, 2015 utilizing the guidance of Inspection Procedure 71152, Section 03.06 and Table 1.

In addition, during the third quarter of 2015, the inspectors performed a follow-up inspection in regard to a past operability evaluation associated with a refueling outage inspection of the drywell to torus vacuum breakers. This inspection was documented in section 4OA3.5 of inspection report 05000263/2015003. In that report, the review was erroneously listed as a "semi-annual trend" inspection sample as defined in IP 71152–05. The review should have instead been listed as an "annual in-depth" sample as defined in IP 71152–05. The documents reviewed were listed in the Attachment to the 2015–003 integrated Inspection Report for the Monticello Nuclear Generating Station. Credit for this inspection sample is being documented in this report.

This review and the erroneously credited sample as stated above, constituted two in-depth problem identification and resolution samples as defined in IP 71152–05.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 Operation of an Independent Spent Fuel Storage Facility Installation at Operating Plants (60855.1)

a. Operations of an ISFSI

Inspection Scope

The inspector conducted document reviews, held discussions with licensee staff, and performed a walk-down of the Independent Spent Fuel Storage Installation (ISFSI) to verify compliance with the applicable Certificate of Compliance (CoC), TSs, Final Safety Analysis Report (FSAR), and approved ISFSI procedures. During the walk-down, the material condition of the ISFSI pad and Horizontal Storage Modules (HSMs) was evaluated.

The ISFSI stores both NUHOMS 61 BT and BTH canisters in HSMs. The inspectors toured the ISFSI to assess the material condition of the pad and HSMs. Site procedures were reviewed to verify that adequate controls were in place to monitor the dose resulting from the operation of the ISFSI. The inspector reviewed several routine surveys performed by the licensee around the pad and conducted independent surveys to verify dose rates. Additionally, the inspector reviewed the associated procedures for unloading a dry fuel storage canister, should that be necessary.

Condition reports and the associated follow-up actions were reviewed to determine whether corrective actions were adequate and conducted in a timely manner to correct the issues. In addition, a number of documents related to 72.48, "Changes, Tests, and Experiments," were reviewed, specifically those associated with the operation of an ISFSI.

b. Findings

Introduction: An unresolved item (URI) was identified by the inspectors regarding whether the appropriate cask FSAR revision was being used for the cask amendments in-service.

Description: The inspectors identified that the licensee loaded and currently monitored the first campaign dry fuel storage casks in accordance with NUHOMS CoC 1004, amendment 9. The licensee then loaded and currently monitored the second campaign dry fuel storage casks to CoC 1004, amendment 10. Amendment 9 to CoC 1004 was initially issued with FSAR revision 10 and amendment 10 was issued with FSAR revision 11. Using the 10 CFR 72.48, "Changes, Tests, and Experiments," process, the licensee reconciled both amendments' FSARs into one FSAR. Specifically, both casks were being monitored to NUHOMS FSAR revision 12. The inspectors questioned whether it was acceptable to have two different cask amendments being monitored by one FSAR. NRC Region III requested assistance from the NRC's Office of Nuclear Materials Safety and Safeguards to determine whether a regulatory requirement would prohibit this action. Guidance was also requested on whether the FSARs were specific to an amendment in-service or if the latest FSAR revision could be used with an older amendment. **(URI 07200058/2015001-01).**

.2 Correction to Integrated and Power Uprate NRC Inspection Report 05000263/2015003

On November 4, 2015, MNGP NRC Integrated and Power Uprate NCR Inspection Report 05000263/2015003 was issued. Section 1R04.2, 'Semi-Annual Complete System Walkdown', stated "The week of September 3, 2015, the inspectors performed a complete system alignment inspection of Division II of the Emergency Filtration Train to verify the functional capability of the system." However, it should have stated "The week of September 3, 2015, the inspectors performed a complete system alignment inspection of Divisions I and II of the Emergency Filtration Train to verify the functional capability of the system."

Additionally, the second paragraph of Section 4OA2.5.a, 'Selected Issue Follow-Up Inspection: Drywell to Torus Vacuum Breaker Past Operability' stated "This review constituted one semi-annual trend inspection sample as defined in IP 71152–05." However, it should have stated "This review constituted one in-depth problem identification and resolution sample as defined in IP 71152–05."

4OA6 Management Meetings

.1 Exit Meeting Summary

On January 5, 2016, the inspectors presented the inspection results to Mr. P. Gardner, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The inspection results for the areas of radiological hazard assessment and exposure controls; and occupational ALARA planning and controls with Mr. P. Gardner, Site Vice President, on October 2, 2015.
- The licensed operator requalification program biennial review with Mr. H. Hanson, Jr., Plant Manager, and others of your staff on October 23, 2015. The licensee acknowledged the issues presented. The inspectors confirmed that none of the training material provided to the inspectors for this inspection was considered proprietary.
- The Annual Review of EAL and Emergency Plan Changes with the Licensee's Senior Emergency Preparedness Coordinator, Mr. S. Genschaw, on December 9, 2015.
- The operation of an ISFSI inspection conducted an exit meeting on January 5, 2016. The inspectors presented the inspection results to members of the licensee management and staff. Licensee personnel acknowledged the information presented.

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

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

P. Gardner, Site Vice President
K. Scott, Site Operations Director
H. Hanson, Jr., Plant Manager
T. Witschen, Operations Manager
R. Stadtlander, Operations
M. Lingenfelter, Director of Engineering
T. Erickson, System Engineering Manager
J. Peterson, System Engineering
J. Becka, Project Supervisor
G. Allex, General Superintendent, Operations Training
T. Shortell, General Manager Nuclear Training
S. Spillum, Supervisor, Training
J. Jackson, Training Instructor
K. Jepson, HU and Org. Effectiveness Manager
B. Olson, Maintenance Manager
S. Quiggle, Chemistry Manager
C. England, Radiation Protection Manager
S. Genschaw, Senior Emergency Preparedness Coordinator
P. Vitalis, Health Physicist
R. Wilkins, LOR Program Coordinator
W. Flaga, Supervisor, NOS
R. Uglow, Assessor, NOS
A. Ward, Regulatory Affairs Manager
S. O'Connor, Analyst, Regulatory Affairs
A. Kuoba, Regulatory Affairs Analyst

U.S. Nuclear Regulatory Commission

K. Riemer, Chief, Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

07200058/2015001-01; URI; CoC 1004 FSAR Revision Control (Section 4OA5)

Closed

None

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 Adverse Weather Protection (71111.01)

- 0192; Diesel Fuel Quality Check; Revision 35
- ASTM D2500–11; Standard Test Method for Cloud Point of Petroleum Products; October 22, 2015
- ASTM D975–15b; Detailed Requirements for Diesel Fuel Oils; October 22, 2015
- CAP 1500530; EC 23085 Did Not Document Comparison to EE 10220 for Diesel Fuel Oil Cloud Point
- EC 10220; Revise MPS–049 Monticello Fuel Oil Specification; August 23, 2007
- MN14–51679–S10; Evaluation of Tornado Missile Protection for FOST T–44 and Buried Commodities; Revision 0
- MPS–0049; Monticello Fuel Oil Specification; Revision 3
- MPS–814; Monticello Fuel Oil Specification; Revision 1
- NF–36672; Standby Diesel Generators Arrangement & Piping; Revision 76
- NF–36760; Grading, Drainage, & Utilities Details; Revision 78
- NH–36051; P&ID Diesel Oil System; Revision 84
- OSP–DOL–0543; Fuel Oil Receiving Quality Check; Revision 15

Section 1R04 Equipment Alignment (71111.04)

- 2206; Plant Prestart Checklist—EDG Emergency Service Water System; Revision 4
- 3799; Scaffold Evaluation—EDG–ESW Scaffold; September 1, 2015
- B.08.01.02–01; EDG Emergency Service Water Function and General Description of System; Revision 8
- B.08.01.02–02; EDG Emergency Service Water Description of Equipment; Revision 3
- B.08.01.02–05; EDG Emergency Service Water System Operation; Revision 19
- NH–36664; P&ID RHR Service Water System & Emergency Service Water Systems; Revision 88
- NH–36665; P&ID Service Water System & Make-up Intake Structure; Revision 97

Section 1R05 Fire Protection (71111.05)

- 2176; Fire Drill Procedure; Revision 27
- A.3–09; Fire Strategy for Fire Zone 09—Control Room; Revision 10
- A.3–10; Fire Strategy for Fire Zone 10—Admin Building; Revision 16
- A.3–12–A; Fire Strategy for Fire Zone 12–A—Lower 4kV Bus Area (13 & 15); Revision 17
- A.3–13–A; Fire Strategy for Fire Zone 13–A—Lube Oil Storage Tank Room; Revision 5
- A.3–13–B; Fire Strategy for Fire Zone 13–B—RX Feedpump and Lube Oil Reservoir Room; Revision 13
- A.3–13–C; Fire Strategy for Fire Zone 13–C—Turbine Building 911’ Elevation East MCC Area; Revision 10
- A.3–23–B; Fire Strategy for Fire Zone 23–B—Intake Structure Corridor; Revision 7
- CAP 1464922; Inappropriate Use of Fire Door Shim Materials

- CAP 1470646; Fire Extinguisher Mounded Less Than 4 Inches From Floor
- CAP 1473674; Fire Penetrations Found Degraded in Cable Spreading Room
- CAP 1490689; Ceiling I-Beam on 3rd Floor EFT Missing Fireproofing
- CAP 1495603; Poor Radio Signal During Fire Brigade Drill
- CAP 1495604; Phone Needs to Be Installed in Alternate Fire Brigade Room
- CAP 1495605; Compressed Gas Cylinders Not Shown on Fire Strategy
- CAP 1495607; Drill Termination Guidance Not Clear
- CAP 1495608; Pre-Fire Strategy Book Not Located in the Alternate Fire Brigade Room
- Drill Guide 10.02; Fire Brigade Drill Guide—Fire Brigade Room Fire; October 4, 2015
- USAR Appendix J–05; Updated Fire Hazards Analysis; Revision 33P

Section 1R11 Licensed Operator Requalification Program (71111.11)

- 0074; Control Rod Drive Exercise; Revision 63
- 2013 Biennial Requalification Examination RO–1B; Form 0; Revision 0
- 2013 Biennial Requalification Examination SRO–1B; Form 0; Revision 0
- 2013 Biennial Requalification Examination SRO–1BR; Form 0; Revision 0
- 2013 Biennial Requalification Examination SRO–1BR; Form 0; Revision 0
- 2013 Biennial Requalification Examination SRO–2B; Form 0; Revision 0
- 2013 Biennial Requalification Examination SRO–2BR; Form 0; Revision 0
- 2013 Biennial Requalification Examination SRO–3B; Form 0; Revision 0
- 2013 Biennial Requalification Examination SRO–3BR; Form 0; Revision 0
- 2142; Monticello Active NRC SRO/RO Qualification Checklist; April 17, 2014
- 2142; Monticello Active NRC SRO/RO Qualification Checklist; December 26, 2013
- 2142; Monticello Active NRC SRO/RO Qualification Checklist; January 27, 2015
- 2142; Monticello Active NRC SRO/RO Qualification Checklist; July 21, 2014
- 2142; Monticello Active NRC SRO/RO Qualification Checklist; June 12, 2014
- 2142; Monticello Active NRC SRO/RO Qualification Checklist; November 5, 2014
- 2142–01; Monticello Active NRC Fuel Handling SRO Qualification Checklists; April 17, 2015
- 2142–01; Monticello Active NRC Fuel Handling SRO Qualification Checklists; February 27, 2015
- 2300; Reactivity Adjustment; Revision 16
- Action Request (AR) 01420318; Torus Vacuum Breaker Work Performed with Inadequate Post-Maintenance Testing; February 25, 2014
- Attachment to the 2300 Procedure for Reactivity Maneuver—Lower Flow for CRD Exercise; Revision 0
- CAP 1390981; Licensed Operator Change in Condition; July 24, 2013
- CAP 1396033; Licensed Operator Change in Condition; September 9, 2013
- CAP 1396506; LOR Exam Security Challenged During Simulator Evaluation, September 12, 2013
- CAP 1398914; Licensed Operator Administrative No Solo Not Implemented; September 27, 2013
- CAP 1398930; Follow-up was Not Conducted on a LO as Ordered by MRO; September 27, 2013
- CAP 1407710; LOR BRQ Scenario Critical Task Question; November 22, 2013
- CAP 1410358; Licensed Operator Change in Medical Condition; December 11, 2013
- CAP 1410410; Unclear Guidance for HPCI Operability; December 11, 2013
- CAP 1418445; Exam Material Found Uncontrolled in Copy Machine; February 11, 2014
- CAP 1423695; MELLA+ Just-In-Time-Training Issues; March 21, 2014
- CAP 1427312; NRC Exam Security Question Regarding In-plant Cameras; April 17, 2014.

- CAP 1446848; MFLCPR Exceeded During Start of 12 Reactor Recirc Pump; September 16, 2014
- CAP 1455229; MTC Exam Security Doors Left Open; November 8, 2014
- CAP 1488676; 71111.11 Focused Self-Assessment AFI—Remedial Documentation; August 5, 2015
- CAP 1488682; 71111.11 Focused Self-Assessment ENH—Documentation on Make-up Forms; August 5, 2015
- CAP 1489529; Exam Security Near Miss; August 12, 2015
- CAP 1490007; Reactivity Focused Self-Assessment: AFI for Adverse Reactivity Transient Events; August 17, 2015
- CAP 1491418; EKG Not Reliable/Obsolete; August 27, 2015
- CAP 1493751; Near Miss Change in LO Medical Condition; September 18, 2015
- CAP 1495714; 0533 Surveillance Error for September 2015; October 5, 2015
- CAP 1495867; Procedure Adherence/Implementation Issues During SHC Spill
- FP–SAT–40; Implementation Phase; Revision 13
- FP–T–SAT–71; NRC Exam Security Requirements; Revision 9
- FP–T–SAT–73; Licensed Operator Requalification Program Examinations; Revision 11
- JPMs (20); Various Dates
- Lesson Plan MT–LOR–13F–001L; In-Field Engagement; November 22, 2013
- Lesson Plan MT–LOR–13F–004L; Safety Function Determination Program; February 11, 2014
- Lesson Plan MT–LOR–14B–006L; ODMI; March 21, 2014
- Lesson Plan MT–LOR–14C–001L; Conservative Decision Making; May 19, 2014
- Lesson Plan MT–LOR–14C–004L; Minor Maintenance and Online Schedule (SRO Only); May 20, 2014
- Lesson Plan MT–LOR–14C–007L; Reactor Physics; May 19, 2014
- Lesson Plan MT–LOR–14D–004L; Operability; July 10, 2014
- Lesson Plan MT–LOR–14F–003L; ARTS; November 5, 2014
- Lesson Plan MT–LOR–15A–001L; Shutdown Tech Specs & Risk Management; January 9, 2015
- Lesson Plan MT–LOR–15B–006L; Operability Determination Procedure Changes; March 4, 2015
- Lesson Plan MT–LOR–15B–008L; OE Review; February 27, 2015
- Lesson Plan MT–LOR–15C–005L; Significant Industry Events; June 5, 2015
- Lesson Plan MT–LOR–15C–006L; Reactivity Management; June 5, 2015
- Lesson Plan MT–LOR–15D–001L; Online Configuration Risk Management; July 24, 2015
- Lesson Plan MT–LOR–JIT–018S; Cycle 28 Startup Just-In-Time-Training; May, 22, 2015
- Lesson Plan MT–LOR–JIT–2014–003S; Reactivity Manipulations Just-In-Time-Training; Revision 0
- Lesson Plan MT–LOR–JIT–2014–004L; Changes to the Operations Decision Making Process; Reviewed on October 22, 2015.
- Licensed Operator Requalification Exam Performance Tracking Spreadsheet; October 14, 2015
- LM–0317 Attendance Rosters; December 2, 2013, Through September 30, 2015
- Monticello Training Center Memorandum; Drill and Exercise Performance (DEP) Near Miss; Revision 0
- Operations Licensed Operator Organization Chart; June, 16, 2016
- OWI–01.05; Conduct of Training; Revision 35
- OWI–01.08; NRC License Maintenance Responsibilities; Revision 22

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- QF–1060–04; Qualification Revocation Form; January 27, 2015
- QF–1060–04; Qualification Revocation Form; October 3, 2014
- QF–1081–01, Simulator Test Procedure Cycle 27:
    - Heatup From Cold Shutdown to Hot Standby to Rated Power N–01; April 10, 2013
    - Unit Startup from Hot Standby to Rated Power, N–02; April 10, 2013
    - Turbine/Generator Startup and Generator Sync, N–03; April 10, 2013
    - Operations at Hot Standby, N–05; April 9, 2013
    - Unit Shutdown From Rated Power to Hot Standby and Cooldown to Cold Shutdown Conditions, N–08; April 9, 2013
    - Unit Performance Testing N–09; November 28, 2013
    - Core Stability and Power Distribution, CP–01; May 20, 2013
    - Poison Effects After a Scram, CP–02A; April 10, 2013
    - Poison Effects Following Reactor Startup, CP–02B; April 13, 2013
    - Poison Effects Following a Reactor Power Change CP–02C; April 9, 2013
    - Shutdown Margin Demonstration, CP–07; November 28, 2013
    - SBLC Injection from 100 Percent Power, CP–08; April 10, 2013
    - BOC Reactor Critical Verification CP–09; November 28, 2013
    - Manual Scram, T–01; April 17, 2013
    - Simultaneous Trip of All Feed Water Pumps, T–02; April 17, 2013
    - Dual Recirculation Pump Trip, T–04; April 17, 2013
    - Single Recirculation Pump Trip, T–05; April 17, 2013
    - Turbine Trip—No Auto Scram, T–06; April 17, 2013
    - Maximum Power Ramp Rate, T–07; April 17, 2013
    - DBA LOCA—Loss of Offsite Power, T–08; April 17, 2013
    - Maximum Steam Rupture in Containment, T–09; April 17, 2013
    - Simulator Change Request Log; October 23, 2015
    - Completed Simulator Change Requests; October 23, 2015
- QF104004; Remediation Training Forms; October 14, 2014
- QF104015; Self Study/Make-up Training Form; August 26, 2015
- QF104015; Self Study/Make-up Training Form; January 27, 2015
- QF104015; Self Study/Make-up Training Form; May 7, 2014
- QF104015; Self Study/Make-up Training Form; September 25, 2014
- RQ–SS–128; Licensed Operator Requalification Simulator Guide; Revision 1
- Simulator Exercise Guide #MT–LOR–14C–005S; Cycle 14C Normal/Abnormal Scenario Simulator Exercise Guide; May 21, 2014
- Simulator Exercise Guide #MT–LOR–JIT–014S; Recirc Seal Failure Shutdown JITT; December 12, 2013
- Simulator Exercise Guide #RQ–SS–123; Stuck Open SRV Requiring Reactor Scram with Loss of Reactor Level Instrumentation; Revision 1
- Simulator Exercise Guide #RQ–SS–82; RCIC Failure, Loss of CRD, SDV Failure, Blowdown; Revision 4
- Simulator Scenarios (4); Various Dates
- Written Examinations (2); Various Dates

Section 1R12 Maintenance Effectiveness (71111.12)

- 0000–H; Operations Daily Log—Part H; Revision 97
- 2154–02; Condensate Storage System Prestart Valve Checklist; Revision 26
- B.08.09–03; Condensate Storage System—Instrumentation and Controls; Revision 5
- B.08.09–04; Condensate Storage System—References; Revision 23

- B.08.09–05; Condensate Storage System—System Operation; Revision 28
- B.08.09–06; Condensate Storage System—Figures; Revision 1
- CAP 1274055; Division II Keep-fill Pressure Less Than 40 Psig
- CAP 1436441; RHR/CSP (a)(1) Lacked Some Pertinent Information
- CAP 1474638; Water Shortage during Reactor Cavity Flood-up
- CAP 1475814; CST Radioactivity Greater Than Administrative Limits in II.05
- CAP 1479398; Unexpected Low Level CST Annunciator
- CAP 1479415; TB Normal Waste Sump
- CAP 1493218; 'A' CS Discharge Pressure Low
- CAP 1496737; NRC Question on MRE for 'A' CS Discharge Pressure Low
- CAP 1497740; NRC Question on MRule Function for Inventory Level
- Maintenance Rule System Basis Document—Residual Heat Removal (RHR) System; Revision 7
- MRE 1274055; Division II RHR Discharge Keepfill Pressure Low; Draft Revision (Corrective Action)
- MRE 1274055; Division II RHR Discharge Keepfill Pressure Low; July 07, 2014
- NH–36039; P&ID Condensate & Demineralized Water Storage System; Revision 93

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

- A.2–101; Classification of Emergencies; Revision 9
- A.4–002; Toxic Gas Release; Revision 14
- A.4–011; Chlorination System; Revision 14
- B.01.03–03; CRD Hydraulic System; Revision 12
- B.01.03–04; CRD Hydraulic System; Revision 41
- B.01.03–05; CRD Hydraulic System—System Operation; Revision 044
- B.03.04–01; Residual Heat Removal System, Revision 12
- B.03.04–02; Residual Heat Removal System, Revision 19
- B.03.04–05; Residual Heat Removal System—System Operation, Revision 77
- CAP 01506931; CV–1995 Failed To Open During RHR Quarterly
- CAP 01506933; RHR–86 Valve Handwheel Bushing Stripped
- CAP 1495579; SHC Piping Broken Off Causing Spill in Berm Area
- CAP 1495654; SHC Spill NRC Follow Up Questions
- CAP 1495663; Notifications Following SHC Spill Event
- CAP 1500129; Vibration Levels Continue to Increase on 11CRD pump
- CAP 1501349; #12 CRD Pump has High Discharge Pressure, PI–4375B
- Credible failure Mechanisms Support/Refute Evaluation for 12 RHR Min Flow Failure
- FS–10–121A Component Maintenance Log (11RHR Pump Min Flow Control) 2003 OpEx
- Monticello Station Log Entries for Sodium Hypochlorite System Break; October 3 through October 6, 2015
- NH–36244; Control Rod Hydraulic System P&ID; Revision 83
- NH–36245; P&ID Control Rod Hydraulic Drive System; Revision 79
- NH–36246; P&ID Residual Heat Removal System (Loop 'B')
- NX–7905–46–19; Elementary Diagram Residual Heat Removal System (Min Flow Valve Schematic)
- Technical Specification 3.5.1; Emergency Core Cooling System (ECCS) and Reactor Core Isolation Cooling System (RCIC)—ECCS (Operating)
- Technical Specification Bases B 3.5.1; Emergency Core Cooling system (ECCS) and Reactor Core Isolation Cooling System (RCIC)—ECCS (Operating), Revision 34

Section 1R15 Operability Determinations and Functional Assessments (71111.15)

- CAP 1496761; Potential Non-Conservative Tech Spec for EDG Voltage
- CAP 1497015; No Formal Bases for Lower EDG TS SR Voltage Limit
- CAP 1506155; Pin Hole Leak on Core Spray System
- CAP 1506162; Pin Hole Leak on Core Spray Line
- EC 26300; Engineering Calculation—Determination of EDG Voltage Regulator Setting to Accommodate Droop; Revision 0
- OPR 01496761–01; Prompt Operability Determination—11 and 12 EDG; Revision 0
- OSP–NIS–0047; SRM Functional Test; Revision 4
- OWI–03.02; Safety Related and Fire Protection Related System Operability Determination and Verification; Revision 21

Section 1R19 Post-Maintenance Testing (71111.19)

- CAP 1468781; Document FP–E–MR–09 RMAs for 11 RHR Pump Unavailable >72 Hrs
- CAP 1468960; AR to Document RHR 2–1 Close Test Decision and Verification
- CAP 1469177; Results of PMT for RHR 2–1 Indicate Further Work Needed
- CAP 1474128; PCV–2458 “A” Core Spray Pressure Station Isolation Valves Leaking By
- CAP 1506155; Pin Hole Leak on Core Spray System
- CAP 1506162; Pin Hole Leak on Core Spray Line
- Operational Logs; December 17–18
- Operational Logs; December 7–13
- P&ID NH–36247; Residual Heat Removal System
- P&ID NH–36248; Core Spray System
- PMT: OPS–CS–18–1, (WO 536897–03)
- PMT: OPS–PMT for RHR–2–1, (WO 521918–03)
- Work Plan/Package: MECH—CS–18–1, Repair Leak Identified on Core Spray Piping (WO 536897–01)
- Work Plan/Package: MECH—RHR–2–1, Perform Repairs to RHR–2–1 USI NG Valve (WO 521918–01)

Section 1R20 Refueling and Other Outage Activities (71111.20)

- 2167; Plant Startup; Revision 88
- 2204; Plant Shutdown; Revision 62
- 2204–03; Shutdown Checklist Transition from Mode 3 to Mode 4; Revision 1
- 2300; Reactivity Adjustment; Revision 17
- 3–B–45; RHR High Reactor Pressure; Revision 5
- B.03.04–05; Residual Heat Removal; Revision 77
- C.3; Shutdown Procedure; Revision 77
- C.4–8.03.04.A; Loss of Normal Shutdown Cooling; Revision 15
- FP–OP–FER–01; Event Response Procedure; Revision 5
- NH–36246; P&ID Residual Heat Removal System; Revision 84
- Operational Logs; November 23–28, 2015

Section 1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

- 10CFR50.54(q) Evaluation Number MT–2015–306; dated July 17, 2015
- 10CFR50.54(q) Evaluation Number MT–2015–314; dated July 24, 2015

- A.2–002; Monticello On-Shift Staffing Analysis; Revision 1
- A.2–111; Activation and Operation of Alternative Facilities During a Security Threat; Revision 3
- A.2–410; Out-Of-Plant Surveys; Revision 25
- A.2–802; Activation and Operation of the EOF; Revision 18
- A.2–805; Technical Support in the EOF; Revision 11
- A.2–809; EOF Security; Revision 12
- A.2–812; Off-Site Agency Liaison at the EOF; Revision 8
- Monticello Nuclear Generating Plant Emergency Plan; Revision 46

Section 1EP6 Drill Evaluation (71114.06)

- RQ–SS–128; Licensed Operator Requalification Simulator Guide; Revision 1

Section 2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

- I.03.34; Lower Limit of Detection Determination; Revision 14
- R.07.02; Area Posting, Special Status Signs, Hot Spot Stickers and Scaffold Control; Revision 49
- R.12.02; Radiation Protection Key Control; Revision 34
- R.13.12; Response to Alarms; Revision 7

Section 2RS2 Occupational ALARA Planning and Controls (71124.02)

- Station ALARA Committee Meeting Minutes; Various Records; Various Dates
- FP–RP–SEN–02; Radiological Work Planning and Controls; Revision 3
- Radiological Work Assessment Form—Work in Progress; Various Records; Various Dates
- Monticello Nuclear Generating Plant 2015 Outage Report; Undated
- Monticello Five-Year Collective Radiation Exposure Reduction Plan 2015–2019; Revision 0
- CAP 1417105; ALARA Opportunity on Abandoned #11 Recirc Heat Exchanger; January 31, 2014
- CAP 1474478; ALARA Improvement Identified on Refuel Floor; April 14, 2015
- CAP 1424217; NRC Green ALARA Finding; March 26, 2014
- CAP 1439816; WO 492171, Exceeded Estimated Dose; July 24, 2014
- CAP 1466351; ALARA WIP Identifies Dose Estimate Issues; February 15, 2015
- Report 2015–01–016; NOS Observation Report Radiation Protection; March 23, 2015 to April 30, 2015
- Self-Assessment for Inspection Procedure 71124.02; September 15, 2015
- R.01.07; Urgent Work RWP Preparation; Revision 4

Section 4OA1 Performance Indicator Verification (71151)

- FP–PA–PI–02; NRC/INPO/WANO Performance Indicator Reporting; Revision 11
- FP–R–PI–01; Preparation of NRC Performance Indicators; Revision 4
- Maintenance Rule Database (Heat Removal Systems and Cooling Water Systems Systems); October 2014 through September 2015
- Monticello Station Log Entries; October 2014 through September 2015
- MSPI Deviation Report; MSPI Cooling Water Systems; October 2014 through September 2015
- MSPI Deviation Report; MSPI Heat Removal Systems; October 2014 through September 2015
- NEI 99–02; Regulatory Assessment PI Guideline; Revision 7
- PRA–CALC–05–003; MSPI Basis Document; Revision 5

Section 4OA2 Identification and Resolution of Problems (71152)

- CAP 1489802; Water Found in MCC–124 Feeder Cables in Cable Vault NMH304
- CAP 1489944; Four Manholes/Vaults Found with Water Inside
- CAP 1494332; Evaluation was Not Assigned to Cable Program Owner
- CE 1494332; Evaluation was Not Assigned to Cable Program Owner; October 21, 2015
- PMCR 1505012; Create PM to Inspect Cable Vaults for Water Intrusion; Undated

Section 4OA5.1 Other Activities (60855.1)

- 0000–H; Operations Daily Log-Part H; Revision 97
- 4AWI–02.07.02, ISFSI UFSAR and Monticelllo 72.212 Evaluations Report Control; Revision 5
- 9506; Dry Shielded Canister Sealing; Revision 12
- 9507; DSC Transport from Refuel Floor to ISFSI; Revision 15
- 9508; DSC Transfer from Transfer Cask to HSM; Revision 14
- 9509; DSC Transfer from HSM to Transfer Cask; Revision 11
- 9510; DSC Transport from ISFSI to Refuel Floor; Revision 11
- 9511; DSC Canister Unsealing; Revision 8
- 9512; DSC Unloading; Revision 9
- 9513 HSM Equilibrium Temperature Monitoring; Revision 5
- Apparent Cause Evaluations—AR 01429133; Adverse Trend in ISFSI Procedure Compliance Quality; August 15, 2014
- CoC 1004 FSAR; Revision 12
- CoC 1004; Amendment 10
- CoC 1004; Amendment 9
- ISFSI—Program Review IP 60855.1—Inspection Readiness
- ISFSI Organization Chart
- Miscellaneous 10 CFR 72.48 Screenings
- Miscellaneous ISFSI Related Corrective Action Documents from October 2013 through December 2015
- Miscellaneous Offsite Dose Data; 2013–2015
- Monticello Nuclear Generating Plant ISFSI 10 CFR 72.212 Evaluations Report; Revision 4
- NOS Observation Report 2014–02–004
- NUH–03–10102; Specification for Generic Temperature Monitoring of NUHOMS HSM Model 202 Loaded with a DSC Containing 24kW Total Maximum Decay Heat Load; Revision 1
- NUH–61BTH–10100; Specification for Generic Temperature Monitoring of NUHOMS HSM–H Loaded with 61 BTH DSC with up to 31.2 kW Total Decay Heat Load; Revision 0
- Ops Man B.10.01–05; Operations Manual; Revision 2
- Radiation Protection Survey Record; ISFSI Pad; June 3, 2014
- Radiation Protection Survey Record; ISFSI Pad; October 11, 2013
- Radiation Protection Survey Record; ISFSI Pad; October 6, 2015
- WO 00511973; Special Nuclear Material Physical Inventor; November 1, 2015

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
ALARA	As-Low-As-Is-Reasonably-Achievable
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
EAL	Emergency Action Levels
EDG	Emergency Diesel Generator
FSAR	Final Safety Analysis Report
HSM	Horizontal Storage Module
IP	Inspection Procedure
ISI	Inservice Inspection
ISFSI	Independent Spent Fuel Storage Installation
JPM	Job Performance Measure
LORT	Licensed Operator Requalification Training
MSPI	Mitigating Systems Performance Index
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
PI	Performance Indicator
PM	Post-Maintenance
PMT	Post-Maintenance Testing
RHR	Residual Heat Removal
SAT	Systems Approach to Training
SRM	Source Range Monitor
SSC	Structure, System and Component
TS	Technical Specification
USAR	Updated Safety Analysis Report
URI	Unresolved Item
Vdc	Volts Direct Current
WO	Work Orders

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Sincerely,

/RA/

Kenneth Riemer, Chief
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