



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
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LISLE, IL 60532-4352

March 11, 2016

Mr. Kevin Davison
Site Vice President
Prairie Island Nuclear Generating Plant
Northern States Power Company, Minnesota
1717 Wakonade Drive East
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2
TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000282/2016008;
05000306/2016008

Dear Mr. Davison:

On February 12, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a Triennial Fire Protection Inspection at your Prairie Island Nuclear Generating Plant, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on February 12, 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.

NRC inspectors documented one finding of very-low safety significance (Green) in this report. This finding was determined to involve a violation of NRC requirements. However, because of its very-low safety significance, and because the issue was entered into your Corrective Action Program, the NRC is treating the issues as a Non-Cited Violation in accordance with Section 2.3.2 of the NRC Enforcement Policy.

If you contest the subject or severity of the Non-Cited-Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Prairie Island Nuclear Generating Plant.

K. Davison

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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/

Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-282, 50-306
License Nos. DPR-42, DPR-60

Enclosure:
IR 05000282/2016008; 05000306/2016008

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-282; 50-306
License Nos: DPR-42; DPR-60

Report No: 05000282/2016008; 05000306/2016008

Licensee: Northern States Power Company, Minnesota

Facility: Prairie Island Nuclear Generating Plant, Units 1 and 2

Location: Welch, MN

Dates: January 12 through February 12, 2016

Inspectors: I. Hafeez, Reactor Inspector
M. Jeffers, Reactor Inspector
D. Szwarc, Senior Reactor Inspector, Lead

Approved by: Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Enclosure

SUMMARY

Inspection Report 05000282/2016008, 05000306/2016008; 01/12/2016 – 02/12/2016; Prairie Island Nuclear Generating Plant, Units 1 and 2; Routine Triennial Fire Protection Baseline Inspection.

This report covers an announced triennial fire protection baseline inspection. The inspection was conducted by Region III inspectors. One finding was identified by the inspectors. The finding was considered a Non-Cited Violation of U.S. Nuclear Regulatory Commission (NRC) regulations. The significance of most findings is indicated by their color (i.e. greater than Green, or Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process," dated April 29, 2015. Cross-cutting aspects were determined using Inspection Manual Chapter 0310, "Aspects Within the Cross Cutting Areas." Findings for which the Significance Determination Process does not apply may be Green or be assigned a severity level after NRC management review. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated February 4, 2015. 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.

Cornerstone: Mitigating Systems

Green. The inspectors identified a finding of very-low safety significance (Green), and an associated Non-Cited Violation of Technical Specifications Section 5.4.1.d for the licensee's failure to maintain Procedure F5 Appendix B. Specifically, the licensee failed to update the procedure to reflect physical changes made in the plant that resulted in the licensee not being able to perform the procedure as written. The licensee entered the issue into their Corrective Action Program, and planned to update drawings and label components in the field and include the proper tools to accomplish the actions specified in the procedure.

The inspectors determined that the performance deficiency was more than minor because the licensee's failure to maintain Procedure F5 Appendix B would have resulted in a delay in achieving and maintaining cold shutdown. The finding was of very-low safety significance because it did not impact the licensee's ability to reach hot shutdown. The finding did not have a cross-cutting aspect associated with it because it was not reflective of current performance. (Section 1R05.9b)

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events and Mitigating Systems

1R05 Fire Protection (71111.05T)

The licensee was in transition to National Fire Protection Association (NFPA) 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition," as incorporated by Title 10, *Code of Federal Regulations* (CFR), Part 50.48(c). The NFPA 805 standard establishes a comprehensive set of requirements for Fire Protection Programs at nuclear power plants. The standard incorporates both deterministic and risk-informed, performance-based concepts. The deterministic aspects of the standard are comparable to traditional requirements. However, the transition to a risk-informed, performance-based Fire Protection Program requires an in-depth nuclear safety circuit analysis for equipment identified for nuclear safety functions such as safe shutdown (SSD). Because the conversion and licensing process to NFPA 805 was expected to identify and address a variety of issues that were normally the subject of the triennial fire protection baseline inspection, the Nuclear Regulatory Commission (NRC) modified the Enforcement Policy for licensees in transition to NFPA 805. As part of the transition to NFPA 805, certain findings not associated with findings of high safety significance that meet the four criteria established by Section A of the NRC's Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48) receive enforcement discretion in accordance with the NRC's Enforcement Policy.

The purpose of the fire protection triennial baseline inspection was to conduct a design-based, plant specific, risk-informed, onsite inspection of the licensee's Fire Protection Program's defense-in-depth elements used to mitigate the consequences of a fire. The Fire Protection Program shall extend the concept of defense-in-depth to fire protection in plant areas important to safety by:

- preventing fires from starting;
- rapidly detecting, controlling and extinguishing fires that do occur;
- providing protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by fire suppression activities will not prevent the safe-shutdown of the reactor plant; and
- taking reasonable actions to mitigate postulated events that could potentially cause loss of large areas of power reactor facilities due to explosions or fires.

The inspectors' evaluation focused on the design, operational status, and material condition of the reactor plant's Fire Protection Program, post-fire SSD systems, and B.5.b mitigating strategies. The objectives of the inspection were to assess whether the licensee had implemented a Fire Protection Program that: (1) provided adequate controls for combustibles and ignition sources inside the plant; (2) provided adequate fire detection and suppression capability; (3) maintained passive fire protection features in good material condition; (4) established adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems or features; (5) ensured that procedures, equipment, fire barriers and systems exist so that the post-fire capability to safely shut down the plant was ensured; (6) included feasible and

reliable operator manual actions when appropriate to achieve SSD; and (7) identified fire protection issues at an appropriate threshold and ensured these issues were entered into the licensee's Problem Identification And Resolution Program.

In addition, the inspectors' review and assessment focused on the licensee's post-fire SSD systems for selected risk significant fire areas. Inspector emphasis was placed on determining that the post-fire SSD capability and the fire protection features were maintained free of fire damage to ensure that at least one post-fire SSD success path was available. The inspectors' review and assessment also focused on the licensee's B.5.b-related license conditions and the requirements of 10 CFR Part 50.54 (hh)(2). Inspector emphasis was to ensure that the licensee could maintain or restore core cooling, containment, and spent fuel pool cooling capabilities utilizing the B.5.b mitigating strategies following a loss of large areas of power reactor facilities due to explosions or fires. Documents reviewed are listed in the Attachment to this report.

The fire areas and B.5.b mitigating strategies selected for review during this inspection are listed below and in Section 1R05.13. The fire areas selected constituted five inspection samples and the B.5.b mitigating strategies selected constituted one inspection sample, respectively, as defined in Inspection Procedure 71111.05T.

Fire Area	Description
13	Control Room
31	Train "A" Hot Shutdown Panel and Air Compressor/AFW Room
71	Unit 2 Containment
97	D5 Basement
101	D5 Diesel Generator Room

.1 Protection of Safe Shutdown Capabilities

a. Inspection Scope

For each of the selected fire areas, the inspectors reviewed the fire hazards analysis, SSD analysis, and supporting drawings and documentation to verify that SSD capabilities were properly protected.

The inspectors also reviewed the licensee's design control procedures to ensure that the process included appropriate reviews and controls to assess plant changes for any potential adverse impact on the Fire Protection Program and/or post-fire SSD analysis and procedures.

b. Findings

No findings were identified.

.2 Passive Fire Protection

a. Inspection Scope

For the selected fire areas, the inspectors evaluated the adequacy of fire area barriers, penetration seals, fire doors, electrical raceway fire barriers, and fire rated electrical cables. The inspectors observed the material condition and configuration of the installed barriers, seals, doors, and cables. The inspectors reviewed approved construction details and supporting fire tests. In addition, the inspectors reviewed license documentation, such as NRC safety evaluation reports, and deviations from NRC regulations and NFPA standards to verify that fire protection features met license commitments.

The inspectors walked down accessible portions of the selected fire areas to observe material condition and the adequacy of design of fire area boundaries (including walls, fire doors, and fire dampers) to ensure they were appropriate for the fire hazards in the area.

The inspectors reviewed the installation, repair, and qualification records for a sample of penetration seals to ensure the fill material was of the appropriate fire rating and that the installation met the engineering design.

b. Findings

No findings were identified.

.3 Active Fire Protection

a. Inspection Scope

For the selected fire areas, the inspectors evaluated the adequacy of fire suppression and detection systems. The inspectors observed the material condition and configuration of the installed fire detection and suppression systems. The inspectors reviewed design documents and supporting calculations. In addition, the inspectors reviewed license basis documentation, such as, NRC safety evaluation reports, deviations from NRC regulations, and NFPA standards to verify that fire suppression and detection systems met license commitments.

b. Findings

No findings were identified.

.4 Protection from Damage from Fire Suppression Activities

a. Inspection Scope

For the selected fire areas, the inspectors verified that redundant trains of systems required for hot shutdown would not be subject to damage from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems including the effects of flooding. The inspectors conducted walkdowns of each of the selected fire areas to assess conditions such as the adequacy and condition of floor drains, equipment elevations, and spray protection.

b. Findings

No findings were identified.

.5 Alternative Shutdown Capability

a. Inspection Scope

The inspectors reviewed the licensee's systems required to achieve alternative SSD to determine if the licensee had properly identified the components and systems necessary to achieve and maintain SSD conditions. The inspectors also focused on the adequacy of the systems to perform reactor pressure control, reactivity control, reactor coolant makeup, decay heat removal, process monitoring, and support system functions.

The inspectors conducted selected area walkdowns to determine if operators could reasonably be expected to perform the alternate SSD procedure actions and that equipment labeling was consistent with the alternate SSD procedure. The review also looked at operator training as well as consistency between the operations shutdown procedures and any associated administrative controls.

b. Findings

No findings of significance were identified

.6 Circuit Analyses

a. Inspection Scope

The inspectors verified that the licensee performed a post-fire SSD analysis for the selected fire areas and the analysis appropriately identified the structures, systems, and components important to achieving and maintaining safe shutdown. Additionally, the inspectors verified that the licensee's analysis ensured that necessary electrical circuits were properly protected and that circuits that could adversely impact SSD due to hot shorts, shorts to ground, or other failures were identified, evaluated, and dispositioned to ensure spurious actuations would not prevent SSD.

The inspectors' review considered fire and cable attributes, potential undesirable consequences, and common power supply/bus concerns. Specific items included the credibility of the fire threat, cable insulation attributes, cable failure modes, and actuations resulting in flow diversion or loss of coolant events.

The inspectors also reviewed cable raceway drawings for a sample of components required for post-fire SSD to verify that cables were routed as described in the cable routing matrices.

The inspectors reviewed circuit breaker coordination studies to ensure equipment needed to conduct post-fire SSD activities would not be impacted due to a lack of coordination. Additionally, the inspectors reviewed a sample of circuit breaker maintenance records to verify that circuit breakers for components required for post-fire SSD were properly maintained in accordance with procedural requirements.

The inspectors verified for cables that are important to SSD, but not part of the success path, and that do not meet the separation/protection requirements of Section III.G.2 of 10 CFR 50, Appendix R, that the circuit analysis considered the cable failure modes. In addition, the inspectors have verified that the licensee has either: (1) determined that there is not a credible fire scenario (through fire modeling), (2) implemented feasible and reliable manual actions to assure SSD capability, or (3) performed a circuit fault analysis demonstrating no potential impact on SSD capability exists.

b. Findings

No findings were identified.

.7 Communications

a. Inspection Scope

The inspectors reviewed, on a sample basis, the adequacy of the communication system to support plant personnel in the performance of alternative SSD functions and fire brigade duties. The inspectors verified that plant telephones, page systems, sound powered phones, and radios were available for use and maintained in working order. The inspectors reviewed the electrical power supplies and cable routing for these systems to verify that either the telephones or the radios would remain functional following a fire.

b. Findings

No findings were identified.

.8 Emergency Lighting

a. Inspection Scope

The inspectors performed a plant walkdown of selected areas in which a sample of operator actions would be performed in the performance of alternative SSD functions. As part of the walkdowns, the inspectors focused on the existence of sufficient emergency lighting for access and egress to areas and for performing necessary equipment operations. The locations and positioning of the emergency lights were observed during the walkdown and during review of manual actions implemented for the selected fire areas.

b. Findings

No findings were identified.

.9 Cold Shutdown Repairs

a. Inspection Scope

The inspectors reviewed the licensee's procedures to determine whether repairs were required to achieve cold shutdown and to verify that dedicated repair procedures, equipment, and material to accomplish those repairs were available onsite. The inspectors also evaluated whether cold shutdown could be achieved within the required

time using the licensee's procedures and repair methods. The inspectors also verified that equipment necessary to perform cold shutdown repairs was available onsite and properly staged.

b. Findings

Failure to Maintain Cold Shutdown Repair Procedure

Introduction: The inspectors identified a finding of very-low safety significance (Green), and an associated Non-Cited Violation (NCV) of Technical Specifications Section 5.4.1.d for the licensee's failure to maintain Procedure F5 Appendix B. Specifically, the licensee failed to update the procedure to reflect physical changes made out in the plant that resulted in the licensee not being able to perform the procedure as written.

Description: The licensee's Procedure F5 Appendix B, "Control Room Evacuation (Fire)," Revision 54, provided directions for performing numerous repairs that were required to achieve and maintain cold shutdown. The inspectors reviewed a sample of these repairs, including actions to lift and install leads in order to establish auxiliary building control of the 11 and 21 fan coil units. These actions were contained in Attachments R and S of the procedure.

During a walkthrough of Procedure F5 Appendix B with plant personnel, a plant operator and an electrical maintenance technician were unable to demonstrate that they could successfully complete Attachments R and S. Steps B1 and B2 of Attachment S instructed operators to lift wires from terminal blocks 1 and 2 and to attach one of the wires on a terminal in terminal block 2. However, the terminals and terminal blocks were not labeled. The associated drawing NF-40590-1, "Wiring Diagram Bus-1 Motor Control Center 2X," Revision 76, also did not identify the terminal blocks and terminal points. Similar concerns were present in Attachment R. The licensee had replaced many of the terminations with environmentally qualified splices and did not update the procedure to reflect these changes. Additional tools and materials may have been required in order to make the required connections. The inspectors concluded that because the licensee had 72 hours to repair the systems necessary to achieve and maintain cold shutdown the licensee would be able to eventually perform the repairs with additional assistance during the 72 hour time period.

The licensee entered these issues into their Corrective Action Program (CAP) as action request (AR) 1511315, "Terminal Blocks and Terminals not Labelled in TB1740", dated February 5, 2016; AR 1511336, "F5 Appendix B Attachment S does not Reflect Current Configuration," dated February 5, 2016; and AR 1511621, "Adequate Length of Wire for F5 Appendix B Attachment R," dated February 9, 2016. The licensee planned to update the drawings and label components in the field and include the proper tools and extension cable to be able to make the proper connections.

Analysis: The inspectors determined that the licensee's failure to maintain Procedure F5 Appendix B was contrary to Technical Specification 5.4.1.d and was a performance deficiency. Specifically, the licensee made modifications out in the plant and did not update the procedure to reflect the physical equipment located in the plant.

The performance deficiency was determined to be more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of Protection Against External Factors (Fire), and affected the cornerstone objective of ensuring the

availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to maintain Procedure F5 Appendix B would have resulted in a delay in achieving and maintaining cold shutdown.

In accordance with Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," Table 2 the inspectors determined the finding affected the Mitigating Systems cornerstone. The finding degraded fire protection defense-in-depth strategies, and the inspectors determined, using Table 3, that it could be evaluated using Appendix F, "Fire Protection Significance Determination Process."

The inspectors screened the finding using IMC 0609, Appendix F, Attachment 1, "Part 1: Fire Protection Significance Determination Process Phase 1 Worksheet," dated September 20, 2013. The inspectors answered "yes" to Question 1.3.1, "Is the reactor able to reach and maintain safe shutdown (either hot or cold) condition?" in Task 1.3.1 of IMC 0609, Appendix F. The finding did not impact the licensee's ability to reach hot shutdown. Therefore, the inspectors determined that the finding screened as having very-low safety significance (Green).

The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of current performance. The licensee completed the modification that made these changes more than 3 years ago.

Enforcement: Technical Specification Section 5.4.1.d states, in part, that "written procedures shall be established, implemented, and maintained covering the following activities: Fire Protection Program implementation." Procedure F5 Appendix B, "Control Room Evacuation (Fire)," Revision 54 was a procedure required for Fire Protection Program implementation. Attachments R and S of Procedure F5 Appendix B contained several steps for terminating and lifting wires on terminal blocks.

Contrary to the above, between November 19, 2012, and February 12, 2016, the licensee failed to maintain written procedures covering Fire Protection Program implementation. Specifically, step C in Attachment R of Procedure F5 Appendix B required electrical maintenance personnel to terminate a wire on terminal block 1 when the length of wire may not be adequate and would require installation of an extension cable (jumper). Steps B1 and B2 in Attachment S of Procedure F5 Appendix B required wires to be lifted from several terminals from terminal blocks 1 and 2 coming from several different cables, however many of these terminations were replaced with environmentally qualified splices and the procedure did not reflect the physical equipment out in the field. Therefore, the procedure could not be implemented as written.

This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy because it was of very-low safety significance and was entered into the licensee's CAP as ARs 1511315, 151336, and 1511621. The finding impacted the plant's ability to reach cold shutdown and not hot standby and therefore no immediate compensatory actions were required to ensure safety. **(NCV 05000282/2016008-01; 05000306/2016008-01, Failure to Maintain Cold Shutdown Repair Procedure)**

.10 Compensatory Measures

a. Inspection Scope

The inspectors conducted a review to verify that compensatory measures were in place for out-of-service, degraded or inoperable fire protection and post-fire SSD equipment, systems, or features (e.g., detection and suppression systems, and equipment, passive fire barriers, pumps, valves or electrical devices providing SSD functions or capabilities). The inspectors also conducted a review of the adequacy of short term compensatory measures to compensate for a degraded function or feature until appropriate corrective actions were taken.

b. Findings

No findings were identified.

.11 Review and Documentation of Fire Protection Program Changes

a. Inspection Scope

The inspectors reviewed changes to the approved Fire Protection Program to verify that the changes did not constitute an adverse effect on the ability to safely shutdown. The inspectors also reviewed the licensee's design control procedures to ensure that the process included appropriate reviews and controls to assess plant changes for any potential adverse impact on the Fire Protection Program and/or post-fire SSD analysis and procedures.

b. Findings

No findings were identified.

.12 Control of Transient Combustibles and Ignition Sources

a. Inspection Scope

The inspectors reviewed the licensee's procedures and programs for the control of ignition sources and transient combustibles to assess their effectiveness in preventing fires and in controlling combustible loading within limits established in the fire hazards analysis. A sample of hot work and transient combustible control permits were also reviewed. The inspectors performed plant walkdowns to verify that transient combustibles and ignition sources were being implemented in accordance with the administrative controls.

b. Findings

No findings were identified.

.13 B.5.b Inspection Activities

a. Inspection Scope

The inspectors reviewed the licensee’s preparedness to handle large fires or explosions by reviewing selected mitigating strategies. This review ensured that the licensee continued to meet the requirements of their B.5.b related license conditions, and 10 CFR 50.54(hh)(2) by determining that:

- Procedures were being maintained and adequate;
- Equipment was properly staged, maintained, and tested;
- Station personnel were knowledgeable and could implement the procedures; and
- Additionally, inspectors reviewed the storage, maintenance, and testing of B.5.b related equipment.

The inspectors reviewed the licensee’s B.5.b related license conditions and evaluated selected mitigating strategies to ensure they remain feasible in light of operator training, maintenance/testing of necessary equipment and any plant modifications. In addition, the inspectors reviewed previous inspection reports for commitments made by the licensee to correct deficiencies identified during performance of Temporary Instruction 2515/171 or subsequent performances of these inspections.

The B.5.b mitigating strategies selected for review during this inspection are listed below. The offsite and onsite communications, notifications/emergency response organization activation, initial operational response actions and damage assessment activities identified in Table A.3-1 of Nuclear Energy Institute 06-12, “B.5.b Phase II and III Submittal Guidance,” Revision 2 are evaluated each time due to the mitigation strategies’ scenario selected.

NEI 06-12, Revision 2, Section	Licensee Strategy (Table)
3.5	Disposition of Site-Specific Enhancement Strategies – Depressurize the Reactor Coolant System Using Pressurizer Power Operated Relief Valves

b. Findings

One finding was identified which is discussed in Inspection Report 05000282/2016407; 05000306/2016407.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The inspectors reviewed the licensee’s CAP procedures and samples of corrective action documents to verify that the licensee was identifying issues related to the Fire Protection Program at an appropriate threshold and entering them in the CAP. The inspectors reviewed selected samples of condition reports, design packages, and fire protection system non-conformance documents.

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On February 12, 2016, the inspectors presented the inspection results to Mr. K. Davison, 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.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

K. Balakrishnan, Fire Protection Program Engineer
E. Blondin, Director Engineering
P. Brunsgaard, Manager, Program Engineering
T. Conboy, Director Site Operations
K. Davison, Site Vice-President
K. Hernandez, Engineering Supervisor
P. Johnson, Regulatory Analyst
P. Kramer, Operations
W. Paulhardt, Plant Manager
M. Pearson, Manager, Regulatory Affairs
R. Sullivan, Fire Marshall

U.S. Nuclear Regulatory Commission

R. Daley, Branch Chief, EB3
L. Haeg, Senior Resident Inspector
M. Smith, Acting Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000282/2016008-01; NCV Failure to Maintain Cold Shutdown Repair Procedure
05000306/2016008-01 (Section 1R05.9b)

Discussed

None

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
AR	Action Request
CAP	Corrective Action Program
CFR	<i>Code of Federal Regulations</i>
IMC	Inspection Manual Chapter
NCV	Non-Cited Violation
NFPA	National Fire Protection Association
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records
SSD	Safe Shutdown

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.

CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
GEN-PI-026	Safe Shutdown Analysis for Compliance with 10 CFR 50, Appendix R	6
GEN-PI-052	Safe Shutdown Equipment for Compliance with 10 CFR 50, Appendix R	4
GEN-PI-054	10 CFR 50, Appendix R, Plant Response & System Time Constraints	2
GEN-PI-055	10 CFR 50 Appendix R Manual Action Feasibility Study	1

CORRECTIVE ACTION PROGRAM DOCUMENTS ISSUED DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
1508467	Door 430 does not Self-Close	01/12/2016
1508468	Door 436 Door Knob is Damaged/Bent	01/12/2016
1508469	2 Trash Cans Overfilled	01/12/2016
1508501	Typo in Procedure H68, B.5.B Program	01/13/2016
1508547	Padlock was Found to be Frozen	01/13/2016
1508548	Lock on the Storage Box was Found to be Frozen	01/13/2016
1508593	EDMG Trailers - Grease and Lube Expiration Dates	01/13/2016
1508596	Poor Housekeeping - North Warehouse B5b Equipment	01/13/2016
1508599	Equipment Incorrectly Identified as B.5.b in CAPs	01/13/2016
1508746	EDMG-2 Procedure does not Reflect Current Configuration	01/14/2016
1508747	Need for Minimum Extinguisher Spares Identified	01/14/2016
1508748	Existing PCR will not Correctly Update EDMG-2	01/14/2016
1509825	Potential Appendix R Repair	01/25/2016
1510010	Question on Containment Cables Qualification	01/26/2016
1510011	Missing Compliance Strategy in Appendix R Calculation	01/26/2016
1510206	Question if Extinguishers in Containment during Maintenance Outages	01/27/2016
1510314	EL 22 No indication Lights on	01/28/2016
1510409	Appendix R Exemption Credited IEEE-383 Qualified Cable	01/29/2016
1510462	Appendix R Crimper Tool Found Out of Calibration	01/29/2016
1510466	F5 Appendix D Attachment 5, Improvement Recommendations	01/29/2016
1510509	AFWP Sprinkler Support Locations Incorrect on Drawing	01/29/2016
1511315	Terminal Blocks and Terminals not Labelled in TB1740	02/05/2016
1511336	F5 Appendix B Attachment S does not Reflect Current Configuration	02/05/2016
1511621	Adequate Length of Wire for F5 Appendix B Attachment R	02/09/2016
1511637	Appendix R Calculation Unnecessary Time Constraint	02/09/2016
1511674	F5 App D Attachment 13 not Referenced	02/09/2016
1511683	Editorial Change Identified for F5 Appendix B Procedure	02/09/2016
1511686	AFWP Code Deviation not in NFPA Code Review	02/09/2016

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
1045012	Appendix R Compliance Issues with Fire Area 31 and 32	08/17/2006
1165361	10CFR50 Appendix R Non-Compliance in Fire Area 31 and 32	01/14/2009
1343132	FP Sprinkler System Internal Inspection	12/28/2012
1506852	Unsat Fire Drill Performance	12/26/2015

DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
B28B-01	Auxiliary Feedwater System	11
NE-116785, Sh. 22	21 Aux Feedwater Pump Bus 25 Cubicle 10 Logic Diagram	B
NE-116785, Sh. 23	21 Aux Feedwater Pump Bus 25 Cubicle 10 Electrical Diagram	76
NE-40008, Sh. 21	TD Aux FW Steam Gen Valves Control Circuits	BS
NE-40009, Sh. 105	Reactor Letdown Line Isolation CV SFGD B Train CV-31255 Logic Diagram	76
NE-40406, Sh. 16	MD Aux FW Condensate Valves Control Circuits	76
NE-40406, Sh. 58	MD Aux FW Steam Gen Valves Control Circuits	AG
NE-40409, Sh. 69	Miscellaneous Condensate Logic Circuits	78
NE-40409, Sh. 81-1	22 TD Aux FW Pump Main Steam Supply Valve CV-31999 Logic Diagram	76
NF040175-1	Penetration Cabinets 1136 & 1137 Wiring Diagrams	78
NF-116701	Fire Detection Plan D5/D6 Building Ground Floor & Upper Deck	B
NF-118266	D5/D6 Building Fire Protection Plan At EL. 695'-0"	A
NF-118267	D5/D6 Building Fire Protection Plan At EL. 707'-0"	A
NF-40107-2	Ground Floor Plan Turbine Room Class I Area	76
NF-40174-4	Penetration Cabinets 1134 & 1135 Wiring Diagrams	78
NF-40189-1	Wiring Diagram Bus-1 Motor Control Center 1X	J
NF-40322-3	Interlock Logic Diagram Main Steam System – Unit 1	W
NF-40570-1	Wiring Diagram Bus-1 Motor Control Center 2A	79
NF-40590-1	Wiring Diagram Bus-1 Motor Control Center 2X	76
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ENGINEERING CHANGE PACKAGE

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WORK ORDERS

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455561-01	Change Batteries in 2 Portable EDMG Carts	04/09/2013
480773-01	SP 1192 – SFGDS Electrical / Mechanical Penetrations Surveillance Inspection	12/14/2014
503574-17	Replacement of Penetration 1488	11/01/2015
518848-01	Quarterly Emergency Plan Equipment Test	10/22/2015
521578-01	Sp1323 11 Battery Monthly Inspection	12/10/2015
522377-01	Sp1323 12 Battery Monthly Inspection	12/22/2015

K. Davison

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Sincerely,

/RA/

Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-282, 50-306
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