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

August 21, 2017

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—TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000263/2017007

Dear Mr. Gardner:

On July 14, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed a Triennial Fire Protection Inspection at your Monticello Nuclear Generating Plant. The enclosed inspection report documents the inspection results, which were discussed on July 14, 2017, with Mr. P. Gardner 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.

The 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 issue as a Non-Cited Violation in accordance with Section 2.3.2 of the NRC Enforcement Policy.

If you contest the violation or significance of this 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; and the NRC resident inspector at the Monticello Nuclear Generating Plant.

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

Sincerely,

/RA/

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

Docket No. 50–263
License No. DPR–22

Enclosure:
Inspection Report 05000263/2017007

cc: Distribution via LISTSERV®

Letter to Peter A. Gardner from Robert C. Daley dated August 21, 2017

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT—TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000263/2017007

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-263
License No:	DPR-22
Report No:	05000263/2017008
Licensee:	Xcel Energy, Northern States Power Company (Operator)
Facility:	Monticello Nuclear Generating Plant
Location:	Monticello, MN
Dates:	June 12 – July 14, 2017
Inspectors:	I. Hafeez, Reactor Inspector I. Khan, Reactor Inspector A. Shaikh, Senior Reactor Inspector (Lead)
Approved by:	Robert C. Daley, Chief Engineering Branch 3 Division of Reactor Safety

Enclosure

SUMMARY

Inspection Report 05000263/2017007; 06/12/2017–07/14/2017; Monticello Nuclear Generating Plant; 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 (IMC) 0609, "Significance Determination Process," dated April 29, 2015. Cross-cutting aspects were determined using IMC 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 November 1, 2016. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6, dated July 2016.

Cornerstone: Initiating Events

Green. The inspectors identified a finding of very-low significance (Green) and an associated Non-Cited Violation of License Condition 2.C.4 of the Monticello Nuclear Generating Plant, Unit No. 1, Renewed Facility Operating License for implementing an alternative compensatory measure that was adverse to safety shutdown. Specifically, the licensee approved the installation of a temporary fuel oil pump, in lieu of a continuous fire watch, which reduced the defense in depth of the Fire Protection Program.

The inspectors determined that the use of a temporary fuel oil pump in the event of a fire, in lieu of a continuous fire watch, constituted an adverse change to the Fire Protection Program, was contrary to License Condition 2.C.4 and a performance deficiency. The performance deficiency was more-than-minor because it affected the Protection Against External Factors attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the use of the alternative compensatory measure reduced the defense in depth of the Fire Protection Program by failing to provide compensatory measures to reduce the likelihood of occurrence of a fire and failing to provide prompt detection of a fire. In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," Table 2 the inspectors determined the finding affected the Initiating Events 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 determined that the finding represented a low degradation and was screened as having very-low safety significance (Green) in Task 1.3.1 of IMC 0609, Appendix F, because repair activities were in place that would have maintained safe shutdown (SSD) conditions and were reasonably achievable. This finding had a cross-cutting aspect in the Conservative Bias component of the Human Performance cross-cutting area. Specifically, the licensee implemented an alternate compensatory measure that only focused on the emergency diesel generator operability and hence, the post-SSD strategy of the plant without considering the

defense in depth requirements of their Fire Protection Program to prevent, detect, and suppress a fire that could affect equipment needed for SSD of the plant. (Section 1R05.11b)

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events and Mitigating Systems

1R05 Fire Protection (71111.05T)

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 (SSD) 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 shutdown 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 Title 10 of the *Code of Federal Regulations* (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 fire zones and B.5.b mitigating strategies selected for review during this inspection are listed below and in Section 1R05.13. The fire areas and fire zones selected constituted four inspection samples and the B.5.b mitigating strategies selected constituted two inspection samples, respectively, as defined in Inspection Procedure 71111.05T.

Fire Area	Fire Zone	Description
II	1A	Residual Heat Removal and Core Spray Pump Room, Division II
I	1B	Residual Heat Removal and Core Spray Pump Room, Division I
I	2B	Control Rod Drive Hydraulic Control Unit Area
X	30	Turbine Operating Floor

.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 of significance 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 U.S. Nuclear Regulatory Commission (NRC) Safety Evaluation Reports, and deviations from NRC Regulations and the National Fire Protection Association 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 of significance 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 National Fire Protection Association standards to verify that fire suppression and detection systems met license commitments.

b. Findings

No findings of significance 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 of significance 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 SSD. 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 Part 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 of significance 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 of significance 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 of significance were identified.

.9 Cold Shutdown Repairs

a. Inspection Scope

The licensee did not credit any repairs in order to achieve cold shutdown. Therefore, no reviews were performed by the inspectors for this procedure section.

b. Findings

No findings of significance were identified.

.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 of significance 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

Implementation of Inadequate Alternate Compensatory Measure for Degraded Fire Barrier

Introduction: The inspectors identified a finding of very-low significance (Green) and associated Non-Cited Violation (NCV) of License Condition 2.C.4 of the Monticello Nuclear Generating Plant, Unit No. 1, Renewed Facility Operating License. The licensee implemented an alternative compensatory measure that was determined to be adverse to safety shutdown. Specifically, the licensee approved the installation of a temporary fuel oil pump, in lieu of a continuous fire watch, which reduced the defense in depth of the Fire Protection Program.

Background: The inspectors reviewed Fire Protection Engineering Evaluation (FPEE) FPEE-14-002, Revision 2, Establish Alternate Compensatory Measures for the replenishment of Emergency Diesel Generator (EDG) Fuel Oil and Alternate Nitrogen, which approved an alternative compensatory measure for a non-conforming fire barrier in Fire Area 15E. Fire Area 15E contains redundant SSD Equipment, diesel fuel oil transfer pumps P-11 and P-77, without separation as required by Section III.G.2 of 10 CFR Part 50, Appendix R. This issue was identified during the 2014 Triennial Fire Protection Inspection (Inspection Report 05000263/2017008), and the licensee entered this issue into the Corrective Action Program (CAP) as CAP 01394150, NRC TIA 2012-03 Final Response EDG Fuel Oil Supply. The inspectors reviewed Operations Manual Section B.08.05-05 Step G.2 and determined it required a continuous fire watch to be established in Fire Area 15E due to the condition described in CAP 01394150. The

inspectors reviewed FPEE-14-002 and determined that this evaluation approved installation of a temporary fuel oil pump in the event of a fire in lieu of a continuous fire watch. The inspectors determined that this alternative compensatory measure failed to meet the objectives of a continuous fire watch, namely reducing the likelihood of the occurrence of a fire and providing prompt detection of a fire. The use of the alternative compensatory measure reduced the defense in depth of the Fire Protection Program, and, therefore, was determined to be adverse to SSD.

Analysis: License Condition 2.C.4 states that **NSPM** may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain SSD in the event of a fire. The inspectors determined that the use of a temporary fuel oil pump in the event of a fire, in lieu of a continuous fire watch, constituted an adverse change to the Fire Protection Program, was contrary to License Condition 2.C.4 and a performance deficiency. Specifically, the alternative compensatory measure reduced the defense in depth of the Fire Protection Program by failing to provide a means to reduce the likelihood of a fire and failing to provide for detection of a fire. The inspectors determined that the performance deficiency was more-than-minor because it affected the Protection Against External Factors attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the use of the alternative compensatory measure reduced the defense in depth of the Fire Protection Program by failing to provide compensatory measures to reduce the likelihood of occurrence of a fire and failing to provide prompt detection of a fire.

In accordance with Inspection Manual Chapter 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” Table 2 the inspectors determined the finding affected the Initiating Events 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 determined that the finding represented a low degradation and was screened as having very-low safety significance (Green) in Task 1.3.1 of Inspection Manual Chapter 0609, Appendix F, because repair activities were in place that would have maintained SSD conditions and were reasonably achievable. The licensee entered this issue into the CAP as CAP 501000000439, “2017 FP TRI: Inappropriate Alt Comp Meas.” The licensee implemented a modification in 2015 to install a permanent fire barrier to provide separation between diesel oil pumps P-11 and P-77.

This finding had a cross-cutting aspect in the Conservative Bias component of the Human Performance cross-cutting area. Specifically, the licensee implemented an alternate compensatory measure that only focused on the EDG operability and hence, the post-SSD strategy of the plant without considering the defense in depth requirements of their Fire Protection Program to prevent, detect, and suppress a fire that could affect equipment needed for SSD of the plant.

Enforcement: License Condition 2.C.4 states that **NSPM** may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain SSD in the event of a fire.

Contrary to the above, from April 23, 2014, to July 1, 2015, the licensee implemented an alternative compensatory measure that adversely affected the ability to achieve and maintain SSD in the event of a fire. Specifically, the alternative compensatory measure reduced the defense in depth of the Fire Protection Program by failing to provide a means to reduce the likelihood of a fire and failing to provide detection for a fire.

Because this violation was of very-low safety significance and it was entered into the licensee's CAP as Action Request 501000000439, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000263/2017007-01, Inappropriate Alternative Compensatory Measure)**

.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 of significance 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)
3.4.10	Portable Sprays (Table A.8-5.10)
3.4.5	Makeup to Condensate Storage Tank (Table A.8-5.5)

b. Findings

No findings of significance were identified.

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 of significance were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On August 3, 2017, 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.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

A. Kouba, Regulatory Affairs Engineer
B. Dixon, Engineering Supervisor
M. Lingenfelter, Site Engineering Director
A. Ward, Regulatory Affairs Manager
P. Young, Program Engineering Manager
P. Nordmeir, Fire Protection Program Owner/Fleet Lead
J. Johnson, Fire Protection Systems Engineer
P. Gardner, Site Vice President

U.S. Nuclear Regulatory Commission

R. Daley, Branch Chief, EB3
D. Krause, Resident Inspector
P. Zurawski, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000263/2017007-01	NCV	Inadequate Fire Barrier Inspection Procedure (Section 1R05.2b)

Closed

05000263/2017007-02	NCV	Implementation of Inadequate Alternate Compensatory Measure for Degraded Fire Barrier (Section 1R05.11b)
05000263/2017007-01	NCV	Inadequate Fire Barrier Inspection Procedure (Section 1R05.2b)

Discussed

None

LIST OF ACRONYMS USED

CAP	Corrective Action Program
CFR	*Code of Federal Regulations*
EDG	Emergency Diesel Generator
IMC	Inspection Manual Chapter
NCV	Non-Cited Violation
NRC	U.S. Nuclear Regulatory Commission
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 of 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

Number	Description or Title	Revision
05-084	Combustible Loading Calculation	002A

CORRECTIVE ACTION PROGRAM DOCUMENTS ISSUED DURING INSPECTION

Number	Description or Title	Date
501000000439	2017 Fire Protection Inappropriate Alt Comp Measure	07/10/2017
501000000489	2017 Fire Protection 0275-02 description error	07/11/2017
501000000492	2017 Fire Protection Inspection Battery Room Door Testing	07/11/2017
501000000146	2017 Fire Protection Inspection Fire hose Hydrostatic Test	06/28/2017
501000000232	2017 Fire Protection Inspection Operators Had Trouble Locating ASDS Panel Keys	06/28/2017
01560947	2017 Fire Protection Inspection Location Description for RHR Aux Compressor	06/13/2017
015660992	2017 Fire Protection Inspection USAR J.05 Typo	06/13/2017
501000000338	Grout Installation Fire Watch Requirements	07/05/2017
501000000416	8053 Procedure has Incorrect Terminology	07/05/2017

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED DURING INSPECTION

Number	Description or Title	Date
01427709	Crack in Fire Penetration FZ-3395	04/21/2014
01426153	Fire Hazard Found in Reactor Building	04/09/2014
01426122	Combustible Loading Issues Identified in B RHR Room	04/09/2014
01426116	Fire Penetrations Have Cosmetic Cracks	04/09/2014
01488072	Radio dead-zone areas in the Plant need to be identified	07/13/2015

DRAWINGS

Number	Description or Title	Date or Revision
NH-36246	Residual Heat Removal(A)	03/20/2012
NH-36248	Core Spray(A)	03/20/2012
NH-85509	P&ID Service Condensate System Radwaste Building	80
NQ-193744-1-1	Plant Administration Building Fire Main	B
NX-16991-14	Fire Hazards Analysis, Plan View Administration Building Elevation 928'-0"	A
NX-7823-4-11C	11 RHR CTMT Spray INBD ISOL MO-2029, Scheme B3333	76
NX-7905-46-14E	11 RHR CTMT Spray OTBD ISOL MO-2020, Scheme B3339	78
NX-7905-46-15E	11 RHR CTMT Spray INBD ISOL MO-2022, Scheme B3709	76

DRAWINGS

Number	Description or Title	Date or Revision
NX-7905-46-16	Residual Heat Removal System Elementary Diagram (10-6)	77
FS-0014	Nelson Firestop Concrete Floor or Wall Cables	3
FS-0001	Nelson Firestop Concrete Floor or Wall Metallic Pipe or Conduit	2
FS-0008	Nelson Firestop Concrete Floor or Wall Metallic Pipe or Conduit	4
NQ-158852	Schematic of Pre-Action Fire Protection Systems	A

PROCEDURES

Number	Description or Title	Date or Revision
0275-03	Fire Door Inspection	41
0273-02	Fire Barrier Wall, Damper and Floor Inspection	40
2204	Plant Shutdown	70
2B4328-A1	Cable and Raceway Information System Electrical Cable Schedule from C-03 to C-292	06/28/2017
A.8-05.05	Make Up to CST	5
A.8-05.10	Portable Sprays	6
B.03.04-05	Operations Manual Section: Residual Heat Removal System	83
B3309-C03/1	Cable and Raceway Information System Electrical Cable Schedule from C-03 to C-292	06/28/2017
B3333-C41/1	Cable and Raceway Information System Electrical Cable Schedule from B3309 to C-03	06/27/2017
C41-JX105D/3	Cable and Raceway Information System Electrical Cable Schedule from C-41 to JX105D	06/27/2017
0275-02	Fire Barrier Wall, Damper, and Floor Inspection	40
0275-03	Fire Door Inspections	41
1216-01	Fire Door Inspections	58
4024-PM	Fire Door Maintenance	52
A.3-02-C	Fire Zone 2-C West HCU Area Strategy A.3-02-C	12
A.3-02-B	Fire Zone 2-B West HCU Area Strategy A.3-02-C	13
0274	Fire Hose Hydrostatic Test – Interior Hose Stations	30
C.4-B.08.05.A	Plant Fire	32
8053	Fire Barrier Penetration Sealing and Visual Inspection	35
8053-01	Fire Barrier Penetration Utility Sealing	11
A.8-01.01	Extensive Damage Mitigation Strategy Overview	7
A.8-03.01	Initial Response Actions	5
A.8-05.05	Make Up to CST	5
A.8-03.01	Initial Response Actions	5
A.8-05.10	Portable Sprays	6

WORK ORDERS

Number	Description or Title	Date or Revision
00532058	IC-V-EF-31, Inspect, Clean and Test Smoke Detector	8
00532057	IC-RE-1, Inspect, Clean and Test Smoke Detector	8
00551198	OSP-FIR-1489; B.5.b Quarterly Equipment Inventory	04/25/2017
00553313	OPS-FIR, 1216-01 Fire Door Inspections- Daily	04/25/2017
00548794	OSP-P507 Engine Run Test, #12 Portable Diesel Water Pump	06/07/2017
00548793	OSP-P507 Engine Run Test, #11 Portable Diesel Water Pump	03/23/2017
00548397	Quarterly PM for Portable Diesel Generator	03/08/2017
00540051-01	1061 EMERG LIGHTING QTRLY OPER ABILITY TEST	09/27/2016
00549800-01	1061 EMERG LIGHTING QTRLY OPER ABILITY TEST	03/07/2017
00553313-01	1216-01 Fire Door Inspections – Daily	05/30/2017
0054946-01	PM 4024 (Inspect Fire Doors – Accessible Only)	02/13/2017
00533867-01	0275-02 Fire Barrier Wall/Damper/Flr Insp-SCAF	04/10/2017
00502605-01	0275-03 Fire Door Inspections	05/16/2016
00491058-01	0275-02 Fire Barrier Wall/Damper/Flr Insp-Scaf	04/04/2015
00463677-01	MECH-FIR, 0274 Fire Hose Hydro Test Interior Hose STA	11/14/2014
0034403	0275-01 Fire Barrier Penetration Vis Insp	05/19/2009
00414101	ENG-FIR, ENG 0275-01 Fire Barrier Penetration Seal Vis Insp	05/14/2011
00441332-01	0275-01 Fire Barrier Penetration Seal Vis Insp	03/21/2013
00491059-01	0275-01 Fire Barrier Penetration Seal Vis Insp	04/11/2015
00470489-01	Inspect/Repair Fire Penetration RB-516 in A RHR Room	12/21/2012
00546861-01	P-507 – OSP-FIR-0609 Pump Flow Test	05/30/2017
00553371-01	P-507 – OSP-FIR-0609 Engine Run Test	05/30/2017
00551198-01	1490 – B.5.B Equipment Quarterly Inventory	04/19/2017

OTHER DOCUMENTS

Number	Description or Title	Date or Revision
FPEE-16-002	Alternate Compensatory Measure for Non-Functional Fire Doors 3, 9, 31, and 414	2
Strategy A.3-07-A	125V Division I Battery Room	7
Strategy A.3-07-C	125V Division II Battery Room	8
QF-1128	Time Critical Operator Actions	1
Strategy A.3-01-A	Fire Zone 1-A #12 RHR & Core Spray Pump Room	8
Strategy A.3-01-B	Fire Zone 1-B #11 RHR & Core Spray Pump Room	9
Strategy A.3-02-B	Fire Zone 2-B East HCU Area	13
Strategy A.3-09	Fire Zone Control Room	10
Strategy A.3-11	Fire Zone 11 Admin Bldg HVAC Room	12
Strategy A.3-30	Fire Zone 30 Turbine Deck	15
NFPA-80	National Fire Protection Association	2007 Edition
LCN 4010 Series	LCN Closers	03/03/2007

OTHER DOCUMENTS

Number	Description or Title	Date or Revision
MPS-0924	Installation of Electrical and Mechanical Penetration Seals	9
03-5917	Fire Qualification Test on Retrofit Penetration Seals	06/30/1980
LCN 4010	LCN 4010 Series Closer Vendor Manual	April 2006
E-81N301	Oversize Door Frame Certification	11/23/1983