



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

November 8, 2016

Adam C. Heflin, President and
Chief Executive Officer
Wolf Creek Nuclear Operating
Corporation
P.O. Box 411
Burlington, KS 66839

**SUBJECT: WOLF CREEK GENERATING STATION – NRC INTEGRATED INSPECTION
REPORT 05000482/2016003**

Dear Mr. Heflin:

On September 30, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Wolf Creek Generating Station. On October 19, 2016, the NRC inspectors discussed the results of this inspection with Jaime McCoy, Vice President, Engineering, and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the NRC Enforcement Policy.

If you contest the violation or significance of the NCV, 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 IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the Wolf Creek Generating Station.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV; and the NRC resident inspector at the Wolf Creek Generating Station.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," 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

A. Heflin

- 2 -

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/

Nicholas H. Taylor, Branch Chief
Project Branch B
Division of Reactor Projects

Docket No.: 50-482
License No.: NPF-42

Enclosure: Inspection Report
05000482/2016003
w/ Attachment: Supplemental Information

cc w/ encl: Electronic Distribution

A. Heflin

- 2 -

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/

Nicholas H. Taylor, Branch Chief
Project Branch B
Division of Reactor Projects

Docket No.: 50-482
License No.: NPF-42

Enclosure:
Inspection Report 05000482/2016003
w/ Attachment: Supplemental Information

DISTRIBUTION:
See next page

ML16314B839

ADAMS ACCESSION NUMBER:

<input checked="" type="checkbox"/> SUNSI Review By: NTaylor		ADAMS <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available		Keyword: NRC-002	
OFFICE	SRI/DRP/B	RI/DRP/B	C:DRS/PSB2	C:DRS/EB1	C:DRS/EB2	TL/DRS/IPAT			
NAME	DDodson	FThomas	HGepford	TFarnholtz	GWerner	THipschman			
SIGNATURE	/RA/	/RA/	/RA/	/RA/	/RA/	/RA/			
DATE	11/7/2016	11/07/2016	11/1/16	11/2/16	11/2/16	11/3/16			
OFFICE	C:DRS/OB	C:DRP/B							
NAME	VGaddy	NTaylor							
SIGNATURE	/RA/KDC for	/RA/							
DATE	11/01/16	11/8/16							

OFFICIAL RECORD COPY

Letter to Adam C. Heflin from Nicholas H. Taylor dated November 8, 2016

SUBJECT: WOLF CREEK GENERATING STATION – NRC INTEGRATED INSPECTION
REPORT 05000482/2016003

DISTRIBUTION:

Regional Administrator (Kriss.Kennedy@nrc.gov)
Deputy Regional Administrator (Scott.Morris@nrc.gov)
DRP Director (Troy.Pruett@nrc.gov)
DRP Deputy Director (Ryan.Lantz@nrc.gov)
DRS Director (Anton.Vegel@nrc.gov)
DRS Deputy Director (Jeff.Clark@nrc.gov)
Senior Resident Inspector (Douglas.Dodson@nrc.gov)
Resident Inspector (Fabian.Thomas@nrc.gov)
Administrative Assistant (Susan.Galemore@nrc.gov)
Branch Chief, DRP/B (Nick.Taylor@nrc.gov)
Senior Project Engineer, DRP/B (David.Proulx@nrc.gov)
Project Engineer, DRP/B (Steven.Janicki@nrc.gov)
Project Engineer, DRP/B (Jim.Melfi@nrc.gov)
Public Affairs Officer (Victor.Dricks@nrc.gov)
Project Manager (Balwant.Singal@nrc.gov)
Team Leader, DRS/IPAT (Thomas.Hipschman@nrc.gov)
Project Engineer, DRS/IPAT (Eduardo.Uribe@nrc.gov)
RITS Coordinator (Marisa.Herrera@nrc.gov)
ACES (R4Enforcement.Resource@nrc.gov)
Regional Counsel (Karla.Fuller@nrc.gov)
Congressional Affairs Officer (Jenny.Weil@nrc.gov)
RIV Congressional Affairs Officer (Angel.Moreno@nrc.gov)
RIV/ETA: OEDO (Jeremy.Bowen@nrc.gov)
RIV RSLO (Bill.Maier@nrc.gov)
ROPreports.Resource@nrc.gov
ROPassessment.Resource@nrc.gov

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000482

License: NPF-42

Report: 05000482/2016003

Licensee: Wolf Creek Nuclear Operating Corporation

Facility: Wolf Creek Generating Station

Location: 1550 Oxen Lane NE
Burlington, KS 66839

Dates: July 1 through September 30, 2016

Inspectors: D. Dodson, Senior Resident Inspector
F. Thomas, Resident Inspector
M. Bloodgood, Operations Engineer
G. Guerra, CHP, Emergency Preparedness Inspector
C. Steely, Operations Engineer

Approved By: Nicholas H. Taylor
Chief, Project Branch B
Division of Reactor Projects

Enclosure

SUMMARY

IR 05000482/2016003; 07/01/2016 – 09/30/2016; Wolf Creek Generating Station; Maintenance Effectiveness

The inspection activities described in this report were performed between July 1 and September 30, 2016, by the resident inspectors at Wolf Creek Generating Station and inspectors from the NRC's Region IV office. One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green non-cited violation of Technical Specification 5.4.1.a, for the licensee's failure to adequately adjust testing and preventive maintenance activities in accordance with Procedure AP 16B-003, "Planning and Scheduling Preventive Maintenance," Revision 5. Specifically, the licensee did not adjust a preventive maintenance task for a General Electric HEA 86 lockout relay and test the relay in accordance with vendor recommendations and industry operating experience, which resulted in the NB0215 186/M lockout relay associated with the B essential service water pump motor breaker failing as-found testing on August 2, 2016. The inspectors identified a Green non-cited violation of Technical Specification 5.4.1.a, for the licensee's failure to adequately adjust testing and preventive maintenance activities in accordance with Procedure AP 16B-003, "Planning and Scheduling Preventive Maintenance," Revision 5. Specifically, the licensee did not adjust a preventive maintenance task for a General Electric HEA 86 lockout relay and test the relay in accordance with vendor recommendations and operating experience, which resulted in the NB0215 186/M lockout relay associated with the B essential service water pump motor breaker failing as-found testing on August 2, 2016. The licensee's corrective actions included replacing the armature assembly associated with the relay and retesting the relay satisfactorily. Additional corrective actions to address the preventive maintenance activities are expected as a result of Condition Reports 108440 and 108548.

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, with the NB0215 186/M lockout relay failed on or before August 2, 2016, the safety-related 4160 volt NB02 bus was susceptible to locking out as a result of an overcurrent condition. In accordance with NRC Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined this finding is not a deficiency affecting the design or qualification of a mitigating structure, system, or component that maintained its operability or functionality; the finding does not represent a loss of system and/or function; the finding does not represent an actual loss of function of at least a single train for greater than its Technical Specification-allowed outage time; and the finding does not represent an actual loss of function of one or more non-Technical Specification trains of equipment designated as high safety-significant.

The finding has a cross-cutting aspect in the area of problem identification and resolution, operating experience, because the organization did not systematically and effectively evaluate relevant internal and external operating experience in a timely manner. This issue is indicative of current performance because the station did not take corrective actions to address the station's failure to adequately consider operating experience, the station did not recognize the need to revise the testing and maintenance strategy following the August 2, 2016, failure, and the same failure would be expected to occur [P.5]. (Section 1R12)

PLANT STATUS

Wolf Creek Generating Station began the inspection period operating at full power. On July 5, 2016, operators reduced power to approximately 68 percent after load swings were observed on the main generator and the La Cygne transmission line was disconnected from Wolf Creek. On July 6, 2016, operators increased power to approximately 85 percent and completed main turbine valve cycle testing. Plant power was restored to approximately full power later on July 6, 2016. On September 2, 2016, reactor coolant system unidentified leakage was calculated to be greater than 1 gallon per minute, Technical Specification 3.4.13 was entered, and a plant shutdown was completed, after which the licensee remained shut down to begin refueling outage 21.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment (71111.04)

Partial Walk-Down

a. Inspection Scope

The inspectors performed partial system walk-downs of the following risk-significant systems:

- July 13, 2016, centrifugal charging pump A
- August 2, 2016, emergency diesel generator A

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. They visually verified that critical portions of the systems and/or trains were correctly aligned for the existing plant configuration.

These activities constituted two partial system walk-down samples as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

Quarterly Inspection

a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on six plant areas important to safety:

- July 19, 2016, fire areas A-2 and A-4, safety injection pump rooms A and B, elevation 1,974 feet
- August 1, 2016, fire area ESWC, essential service water vertical loop chase, elevation 1,974 feet through 2087 feet
- August 15, 2016, fire areas C-13, C-14, and C-35, control building and communications corridor – trains A and B safety related electrical equipment air conditioning units, elevation 2,016 feet
- September 27, 2016, fire area RB-6, reactor building – general area, elevation 2,068 feet
- September 27, 2016, fire area RB-10, reactor building – general area, elevation 2,047 feet
- September 28, 2016, fire area C-16, control building and communications corridor – trains A and B safety related battery and switchboard rooms, elevation 2,016 feet

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constituted six quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On July 20, 2016, the inspectors completed an inspection of the station's ability to mitigate flooding due to internal causes. After reviewing the licensee's flooding analysis, the inspectors chose two plant areas containing risk-significant structures, systems, and components (SSCs) that were susceptible to flooding:

- Auxiliary feedwater pipe chase room 1206
- Auxiliary feedwater pipe chase room 1207

The inspectors reviewed plant design features and licensee procedures related to internal flooding. The inspectors walked down the selected areas to inspect the design features, including the material condition of seals, drains, and flood barriers. The inspectors evaluated whether operator actions credited for flood mitigation could be successfully accomplished.

These activities constituted completion of one flood protection measures sample, as defined in Inspection Procedure 71111.06.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

On September 14, 2016, the inspectors completed an inspection of the readiness and availability of risk-significant heat exchangers. The inspectors observed the licensee's inspection of the ultimate heat sink and the material condition of the ultimate heat sink. Additionally, the inspectors walked down the ultimate heat sink to observe its performance and material condition and verified that the ultimate heat sink was receiving the required maintenance.

These activities constituted completion of one heat sink performance annual review sample, as defined in Inspection Procedure 71111.07.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On July 7, 2016, and September 8, 2016, the inspectors observed a portion of an annual requalification test for licensed operators and simulator training for an operating crew, respectively. The inspectors assessed the performance of the operators and the evaluators' critique of their performance. The inspectors also assessed the modeling and performance of the simulator during the requalification activities and simulator training activities.

These activities constituted completion of two quarterly licensed operator requalification program samples, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

The inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity and risk due to control rod parking and chemical and volume control system inservice check valve testing. The inspectors observed the operators' performance of the following activities:

- July 5, 2016, performance of STS AC-001, "Main Turbine Valve Cycle Test," and reactor power ascension from 68 percent power
- August 18, 2016, control rod parking and chemical and volume control system inservice check valve testing

In addition, the inspectors assessed the operators' adherence to plant procedures, including the conduct of operations procedure and other operations department policies.

These activities constituted completion of one quarterly licensed operator performance sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.3 Biennial Review

a. Inspection Scope

The licensed operator requalification program involves two training cycles that are conducted over a 2-year period. In the first cycle, the annual cycle, the operators are administered an operating test consisting of job performance measures and simulator scenarios. In the second part of the training cycle, the biennial cycle, operators are administered an operating test and a comprehensive written examination.

To assess the performance effectiveness of the licensed operator requalification program, the inspectors reviewed both the written examination and operating test quality and observed licensee administration of an annual requalification test while onsite. The operating tests observed included five job performance measures and two scenarios that were used in the current biennial requalification cycle. These observations allowed the inspectors to assess the licensee's effectiveness in conducting the operating test to ensure operator mastery of the training program content and to determine if feedback of performance analyses into the requalification training program was being accomplished.

On July 26, 2016, the licensee informed the inspectors of the completed cycle results for Wolf Creek Generating Station for both the written examinations and the operating tests:

- 9 of 9 crews passed the simulator portion of the operating test
- 53 of 53 licensed operators passed the simulator portion of the operating test

- 53 of 53 licensed operators passed the job performance measure portion of the operating test
- 51 of 53 licensed operators passed the written examination

Two individuals failed the written examination. One individual was remediated, retested, and passed their retake examinations. One individual was not remediated and the individual's license was terminated by the licensee.

The inspectors observed examination security measures in place during administration of the exams (including controls and content overlap) and reviewed any remedial training and re-examinations, if necessary. The inspectors also reviewed medical records of six licensed operators for conformance to license conditions and the licensee's system for tracking qualifications and records of license reactivation for four operators.

The inspectors reviewed simulator performance for fidelity with the actual plant and the overall simulator program of maintenance, testing, and discrepancy correction.

The inspectors completed one inspection sample of the biennial licensed operator requalification program.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed three instances of degraded performance or condition of safety-related SSCs:

- August 2, 2016, NB0215 186/M lockout relay failed to trip during as-found testing
- August 8, 2016, train B 480 VAC electrical power distribution subsystem, excessive voltage
- September 19, 2016, trains A and B safety injection system, unplanned outages

The inspectors reviewed the extent of condition of possible common cause SSC failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the SSCs. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance and conditions in accordance with the Maintenance Rule.

These activities constituted completion of three maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of Technical Specification 5.4.1.a, for the licensee's failure to adequately adjust testing and preventive maintenance activities in accordance with Procedure AP 16B-003, "Planning and Scheduling Preventive Maintenance," Revision 5. Specifically, the licensee did not adjust a preventive maintenance task for a General Electric HEA 86 lockout relay and test the relay in accordance with vendor recommendations and operating experience, which resulted in the NB0215 186/M lockout relay associated with the B essential service water pump motor breaker failing as-found testing on August 2, 2016.

Description. During performance of Procedure STN NB-215, "DPEF01B Feeder Breaker Trip Circuit Verification," Revision 1A on August 2, 2016, while the B essential service water pump and breaker were out of service for maintenance, the 186/M lockout relay failed to trip during as-found testing. The lockout relay provides protection to the B essential service water pump motor and 4160 volt safety-related bus NB02 in the event of an overcurrent condition. If the lockout relay fails to actuate and trip the B essential service water pump motor breaker, it could result in damage to the 'B' essential service water pump motor or cause the NB02 bus to lockout due to an overcurrent condition on the bus, which would be recognized by the NB02 bus protection circuitry.

During the test in accordance with Section 8.2, "NB0215 186/M Lockout Relay Tests," of STN NB-215, a direct current test voltage of 82.5 volts is momentarily applied. The relay is expected to actuate at 80 volts or less, but it is considered within tolerance if it actuates at less than or equal to 87.5 volts, and the licensee determined that it is acceptable for the relay to actuate up to 95 volts. During the performance of STN NB-215 on August 2, 2016, the test voltage was increased up to 125 volts, but the relay did not trip. The licensee did not test the relay past this point and replaced the armature assembly associated with the relay, calibrated it, and retested it prior to returning the relay and system to service.

This test was last performed successfully using Procedure RNM C-1301, "Miscellaneous Relay and Meter Equipment," Revision 6, on August 10, 2009, and the NB0215 186/M lockout relay passed. The current testing and preventive maintenance task is performed every six years, and the August 2, 2016, test was conducted within the grace period for the current preventive maintenance task frequency.

The inspectors reviewed applicable vendor documentation, GEH-2058, "Auxiliary Relays," Revision E, for type HEA61 relays. This vendor documentation states, "During any scheduled outage of the equipment and preferably at yearly intervals, the relay should be tripped electrically to insure that it is in good operating condition, and that all the circuits are complete so that the breakers can be tripped." The inspectors also reviewed Wolf Creek corrective action document Performance Improvement Request (PIR) 2003-2708, which evaluated OE16724 – General Electric Type HEA Lockout Relay Test Interval. The PIR discussed contact made with General Electric, "HEA relays tend to be sluggish during the first operation when tested on a 3 to 5 year interval. The problem applies to the whole family of HEA relays, and General Electric recommends testing yearly." Wolf Creek's lockout relays were tested on a 6-year frequency.

The inspectors also reviewed industry operating experience from June 19, 2012, which was evaluated by Wolf Creek Condition Report 54212. The industry operating

experience made two recommendations that included determining “the total population of General Electric HEA 86 relays and the subset of General Electric HEA 86 relays that are not normally actuated each cycle or within the [preventive maintenance] frequency.” Additionally, the event report recommended, “Any that can be tested on line should be tested as soon as practicable. The functional test should be an electrical trip that actuates the relay coil. Replace any test failure with modified [General Electric] HEA 86 relays or suitable alternative.” Corrective actions did not identify any necessary changes to the testing or maintenance activities for the NB0215 186/M lockout relay.

The inspectors noted that Section 6.2, “Establishing [Preventive Maintenance] Activities,” of Procedure AP 16B-003, “Planning and Scheduling Preventive Maintenance,” Revisions 2 through 7, provided direction for implementing the preventive maintenance program including consideration of vendor recommendations and operating experience. The inspectors determined that the August 2003 and June 2012 operating experience documents were not adequately evaluated, in that the licensee’s relay testing and preventive maintenance activities were not adjusted after considering vendor recommendations and industry experience. The failure to appropriately adjust testing and maintenance activities for HEA relays resulted in the failure of the 186/M lockout relay on August 2, 2016. Additionally, neither the licensee’s evaluation of Condition Report 106164, which was written to address the equipment failure on August 2, 2016, nor any other condition report identified the need to revise the testing and preventive maintenance frequency.

The licensee’s corrective actions for the August 2, 2016, relay failure included replacing the armature assembly associated with the relay, retesting the relay satisfactorily, and returning the relay and system to service. The station entered the equipment condition into the corrective action program as Condition Report 106164, and the licensee entered Condition Reports 108440 and 108548 into the corrective action program to address the inspectors’ concerns associated with the need to revise the testing and preventive maintenance activity frequency for the subject relay.

Analysis. The inspectors determined that the failure to adequately adjust a testing and preventive maintenance task for the NB0215 186/M General Electric HEA 86 lockout relay in accordance with Procedure AP 16B-003, “Planning and Scheduling Preventive Maintenance,” was a performance deficiency. This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, with the NB0215 186/M lockout relay failed on or before August 2, 2016, and the safety-related 4160 volt NB02 bus was susceptible to locking out as a result of an overcurrent condition. The inspectors evaluated the finding using Exhibit 2, “Mitigating Systems Screening Questions,” of Inspection Manual Chapter 0609, Appendix A, “Significance Determination Process (SDP) for Findings At-Power,” issued June 19, 2012, and determined this finding is not a deficiency affecting the design or qualification of a mitigating structure, system, or component that maintained its operability or functionality; the finding does not represent a loss of system and/or function; the finding does not represent an actual loss of function of at least a single train for greater than its Technical Specification-allowed outage time; and the finding does not represent an actual loss of function of one or more non-Technical Specification trains of equipment designated as high safety-significant. Therefore, the inspectors determined the finding was of very low safety significance (Green).

The inspectors determined that the finding has a cross-cutting aspect in the area of problem identification and resolution, operating experience, because the organization did not systematically and effectively evaluate relevant internal and external operating experience in a timely manner. Specifically, PIR 2003-2708 and Condition Report 54212 documented vendor recommendations and industry operating experience regarding HEA relay failures, and neither the vendor recommendations nor the industry operating experience were effectively implemented and institutionalized through changes to station processes, procedures, equipment, and training programs, and testing and preventive maintenance activities were not adequately adjusted. This issue is indicative of current performance because the station did not take corrective actions to address the station's failure to adequately consider operating experience, the station did not recognize the need to revise the testing and maintenance strategy following the August 2, 2016, failure, and the same failure would be expected to occur [P.5].

Enforcement. Technical Specification 5.4.1.a, requires, in part, that procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2. Section 9.b of Appendix A to Regulatory Guide 1.33, Revision 2, requires that preventive maintenance schedules be developed to specify inspections of equipment and inspection or replacement of parts that have a specific lifetime. The licensee established Procedure AP 16B-003, "Planning and Scheduling Preventive Maintenance," which provides direction for implementing the preventive maintenance program to meet the Regulatory Guide 1.33 requirement. Section 6.2 of Procedure AP 16B-003 requires, in part, that preventive maintenance activities be developed by considering vendor recommendations and operating experience. Contrary to the above, until October 16, the licensee did not ensure that preventive maintenance activities were developed by considering vendor recommendations and operating experience. Specifically, the licensee did not ensure that adequate preventive maintenance activities were developed for the NB0215 186/M lockout relay by considering vendor recommendations to trip the relay electrically during any scheduled outage of the equipment and operating experience documented in PIR 2003-2708 and Condition Report 54212. As a result, the NB0215 186/M lockout relay failed on or before August 2, 2016, and the safety-related 4160 volt NB02 bus was susceptible to locking out as a result of an overcurrent condition. The licensee entered this condition into its corrective action program as Condition Reports 106164, 108440, and 108548. The licensee replaced the relay armature assembly and retested the relay satisfactorily. Additional corrective actions to address the preventive maintenance activities are expected as a result of Condition Reports 108440 and 108548. This violation is being treated as a non-cited violation consistent with Section 2.3.2 of the Enforcement Policy: NCV 05000482/2016003-01, "Failure to Adequately Adjust Testing and Preventive Maintenance for Safety-Related Lockout Relays."

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

a. Inspection Scope

The inspectors reviewed three risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- July 15, 2016, condensate storage tank valve housing lift near the condensate storage tank and auxiliary building
- July 19, 2016, planned A safety injection pump maintenance
- August 10, 2016, planned maintenance on train B motor driven auxiliary feedwater pump

The inspectors verified that these risk assessments were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessments and verified that the licensee implemented appropriate risk management actions based on the result of the assessments.

The inspectors also observed portions of three emergent work activities that had the potential to affect the functional capability of mitigating systems:

- July 1, 2016, unplanned maintenance on the non-safety auxiliary feedwater pump
- July 6, 2016, weekly risk assessment and emergent reactor power changes in response the La Cygne transmission line out of service
- August 15, 2016, unplanned maintenance on the train B class 1E electrical air conditioning unit

The inspectors verified that the licensee appropriately developed and followed a work plan for these activities. The inspectors verified that the licensee took precautions to minimize the impact of the work activities on unaffected SSCs.

These activities constituted completion of six maintenance risk assessments and emergent work control inspection samples, as defined in Inspection Procedure 71111.13.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed four operability determinations that the licensee performed for degraded or nonconforming SSCs:

- July 1, 2016, operability determination of auxiliary feedwater system equipment while the condensate storage tank valve house was removed
- August 2, 2016, operability determination of B essential service water traveling screen foot sprocket and collar set screw degradation

- August 10, 2016, operability determination of shutdown and control bank rod insertion limits in the cycle 21 safety analysis
- August 15, 2016, operability determination of Class 1E electrical equipment air conditioning unit SGK05B out of service as a result of a clogged condensation drain line

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded SSC to be operable, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability. The inspectors verified that the licensee had considered the effect of other degraded conditions on the operability of the degraded SSC.

The inspectors reviewed operator actions taken or planned to compensate for degraded or nonconforming conditions. The inspectors verified that the licensee effectively managed these operator workarounds to prevent adverse effects on the function of mitigating systems and to minimize their impact on the operators' ability to implement abnormal and emergency operating procedures.

These activities constituted completion of five operability and functionality review samples, which included one operator work-around sample, as defined in Inspection Procedure 71111.15.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed two permanent plant modifications that affected risk-significant SSCs:

- August 30, 2016, station black out diesel generator permanent electrical feed to non-safety auxiliary feedwater pump
- August 30 and 31, 2016, revision of SYS GK-122, "Manual CRVIS Line-Up," impacting the control room air conditioning unit 4A control room discharge isolation damper

The inspectors reviewed the design and implementation of the modifications. The inspectors verified that work activities involved in implementing the modifications did not adversely impact operator actions that may be required in response to an emergency or other unplanned event. The inspectors verified that post-modification testing was adequate to establish the operability or functionality of the SSCs as modified.

These activities constituted completion of two samples of permanent modifications, as defined in Inspection Procedure 71111.18.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed seven post-maintenance testing activities that affected risk-significant SSCs:

- July 13, 2016, B centrifugal charging pump
- July 25, 2016, A pressure relief isolation valve breaker
- August 3, 2016, B emergency diesel generator and fuel oil transfer pump
- August 10, 2016, B auxiliary feedwater pump
- August 31, 2016, train B auxiliary building and control room pressure testing
- September 21, 2016, post-accident monitoring nuclear instrumentation testing
- September 22, 2016, intermediate range nuclear instrument cable testing

The inspectors reviewed licensing- and design-basis documents for the SSCs and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected SSCs.

These activities constituted completion of seven post-maintenance testing inspection samples, as defined in Inspection Procedure 71111.19.

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

On September 2, 2016, reactor coolant system unidentified leakage was calculated to be greater than 1 gallon per minute, Technical Specification 3.4.13 was entered, and a plant shutdown was completed, after which the licensee remained shut down to begin refueling outage 21. During the station's refueling outage that was in progress at the end of the inspection period, the inspectors evaluated the licensee's outage activities. The inspectors verified that the licensee considered risk in developing and implementing the outage plan, appropriately managed personnel fatigue, and developed mitigation strategies for losses of key safety functions. This verification included the following:

- Review of the licensee's outage plan prior to the outage

- Monitoring of shut-down and cool-down activities
- Verification that the licensee maintained defense-in-depth during outage activities
- Observation and review of reduced-inventory and mid-loop activities
- Observation and review of fuel handling activities

These activities constituted partial completion of one refueling outage sample, as defined in Inspection Procedure 71111.20.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed four risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the SSCs were capable of performing their safety functions:

In-service tests:

- September 6, 2016, STS MT-008, "Spring Loaded Safety Valve Settings," Revision 25

Reactor coolant system leak detection tests:

- September 1 and 2, 2016, STS BB-006, "Water Inventory Balance Using the NPIS Computer," Revision 14

Other surveillance tests:

- July 28, 2016, STS IC-211A, "Actuation Logic Test Train A Solid State Protection System," Revision 36A
- August 31, 2016, STN AP-102, "NSAFP Full Flow Test," Revision 7

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the test satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected SSCs following testing.

These activities constituted completion of four surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert and Notification System Evaluation (71114.02)

a. Inspection Scope

The inspector verified the adequacy of the licensee's methods for testing the primary and backup alert and notification system. The inspector also reviewed the licensee's program for identifying emergency planning zone locations requiring tone alert radios and for distributing the radios, and reviewed audits of distribution records. The inspector interviewed licensee personnel responsible for the maintenance of the primary and backup alert and notification system and reviewed a sample of corrective action system reports written for alert and notification system problems. The inspector compared the licensee's alert and notification system testing program with criteria in NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1; FEMA Report REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants," and the licensee's current FEMA-approved alert and notification system design report, dated May 7, 2008.

These activities constituted completion of one alert and notification system evaluation sample as defined in Inspection Procedure 71114.02.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization Staffing and Augmentation System (71114.03)

a. Inspection Scope

The inspector verified the licensee's emergency response organization on-shift and augmentation staffing levels were in accordance with the licensee's emergency plan commitments. The inspector reviewed documentation and discussed with licensee staff the operability of primary and backup systems for augmenting the on-shift emergency response staff to verify the adequacy of the licensee's methods for staffing emergency response facilities, including the licensee's ability to staff pre-planned alternate facilities. The inspector also reviewed records of emergency response organization augmentation tests and events to determine whether the licensee had maintained a capability to staff emergency response facilities within emergency plan timeliness commitments.

These activities constituted completion of one emergency response organization staffing and augmentation testing sample as defined in Inspection Procedure 71114.03.

b. Findings

No findings were identified.

1EP5 Maintenance of Emergency Preparedness (71114.05)

a. Inspection Scope

The inspector reviewed the following for the period November 2014 to July 2016:

- After-action evaluation reports for licensee drills and exercises;
- Independent audits and surveillances of the licensee's emergency preparedness program;
- Self-assessments of the emergency preparedness program conducted by the licensee;
- Licensee evaluations of changes made to the emergency plan and emergency plan implementing procedures;
- Drill and exercise performance issues entered into the licensee's corrective action program;
- Emergency preparedness program issues entered into the licensee's corrective action program;
- Maintenance records for equipment supporting the emergency preparedness program; and
- Emergency response organization and emergency planner training records.

The inspector reviewed summaries of corrective action program reports written by the licensee between November 2014 and July 2016 associated with emergency preparedness and selected 23 to review against program requirements, to determine the licensee's ability to identify, evaluate, and correct problems in accordance with planning standard 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E, IV.F. The inspector verified that the licensee accurately and appropriately identified and corrected emergency preparedness weaknesses during critiques and assessments.

The inspector reviewed one licensee evaluation of the impact of changes to the emergency plan and implementing procedures to determine the licensee's ability to identify reductions in the effectiveness of the emergency plan in accordance with the requirements of 10 CFR 50.54(q)(3) and 50.54(q)(4). The inspector verified that the evaluation of proposed changes to the licensee emergency plan appropriately identified the impact of the changes prior to being implemented.

The inspector reviewed records pertaining to the maintenance of equipment and facilities used to implement the emergency plan against program requirements to determine the licensee's ability to maintain equipment in accordance with the requirements of 10 CFR 50.47(b)(8) and 10 CFR Part 50, Appendix E, IV.E. The inspector verified that equipment and facilities were maintained in accordance with the commitments of the licensee's emergency plan.

These activities constituted completion of one sample of the maintenance of the licensee's emergency preparedness program as defined in Inspection Procedure 71114.05.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

Training Evolution Observation

a. Inspection Scope

On July 7 and August 11, 2016, the inspectors observed simulator-based licensed operator requalification training that included implementation of the licensee's emergency plan. The inspectors verified that the licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the evaluators and entered into the corrective action program for resolution.

These activities constituted completion of two training observation samples, as defined in Inspection Procedure 71114.06.

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: High Pressure Injection Systems (MS07)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of July 1, 2015, through September 12, 2016, to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for high pressure injection systems, as defined in Inspection procedure 71151.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index: Cooling Water Support Systems (MS10)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of July 1, 2015, through September 12, 2016, to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for cooling water support systems, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Drill/Exercise Performance (EP01)

a. Inspection Scope

The inspector reviewed the licensee's evaluated exercises and selected drill and training evolutions that occurred between October 2015 and June 2016 to verify the accuracy of the licensee's data for classification, notification, and protective action recommendation opportunities. The inspector reviewed a sample of the licensee's completed classifications, notifications, and protective action recommendations to verify their timeliness and accuracy. The inspector used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the drill/exercise performance indicator as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.4 Emergency Response Organization Drill Participation (EP02)

a. Inspection Scope

The inspector reviewed the licensee's records for participation in drill and training evolutions between October 2015 and June 2016 to verify the accuracy of the licensee's data for drill participation opportunities. The inspector verified that all members of the licensee's emergency response organization in the identified key positions had been counted in the reported performance indicator data. The inspector reviewed the

licensee's basis for reporting the percentage of emergency response organization members who participated in a drill. The inspector reviewed drill attendance records and verified a sample of those reported as participating. The inspector used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the emergency response organization drill participation performance indicator as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.5 Alert and Notification System Reliability (EP03)

a. Inspection Scope

The inspector reviewed the licensee's records of alert and notification system tests conducted between October 2015 and June 2016 to verify the accuracy of the licensee's data for siren system testing opportunities. The inspector reviewed procedural guidance on assessing alert and notification system opportunities and the results of periodic alert and notification system operability tests. The inspector used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the alert and notification system reliability performance indicator as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

40A2 Problem Identification and Resolution (71152)

Routine Review

a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program and periodically attended the licensee's condition report screening meetings. The inspectors verified that licensee personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

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

Plant Events

a. Inspection Scope

For the plant events listed below, the inspectors reviewed and/or observed plant parameters, reviewed personnel performance, and evaluated performance of mitigating systems. The inspectors communicated the plant event to appropriate regional personnel, and compared the event details with criteria contained in IMC 0309, "Reactive Inspection Decision Basis for Reactors," issued October 28, 2011, for consideration of potential reactive inspection activities. As applicable, the inspectors verified that Wolf Creek staff made appropriate emergency classification assessments and properly reported the events in accordance with 10 CFR Parts 50.72 and 50.73. The inspectors reviewed Wolf Creek's follow-up actions related to the events to assure that Wolf Creek implemented appropriate corrective actions commensurate with their safety significance.

- Excessive unidentified reactor coolant system leakage resulting in commencement of technical specification required shutdown on September 2, 2016 (event notice 52218)
- Seismic monitor triggered on September 3, 2016, due to seismic event during plant shutdown

These activities constituted completion of two event follow-up samples, as defined in Inspection Procedure 71153.

b. Findings

No findings were identified.

4OA5 Other Activities

World Association of Nuclear Operators (WANO)/Institute of Nuclear Power Operations (INPO) Report Review

a. Inspection Scope

The inspectors reviewed the final report for the WANO/INPO assessment conducted in September 2015. The inspectors evaluated this report to ensure that NRC perspectives of Wolf Creek Nuclear Operating Corporation performance were consistent with any issues identified during the assessments. The inspectors also reviewed this report to determine whether any significant safety issues were identified that required further NRC follow-up.

b. Findings

No findings were identified.

40A6 Meetings, Including Exit

Exit Meeting Summary

The inspectors presented the inspection results to Mr. C. Reasoner, Site Vice President, and other members of the licensee's staff of the results of the licensed operator requalification program inspection on June 30, 2016. The final results of the inspection were telephonically presented to Mr. R. Meyer, Licensed Supervising Instructor, Simulator and Exam Group, and other members of your staff on August 8, 2016. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On August 4, 2016, the inspector presented the results of the onsite inspection of the emergency preparedness program to Mr. A. Heflin, President and Chief Executive Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspector had been returned or destroyed.

On October 19, 2016, the inspectors presented the inspection results to Mr. J. McCoy, Vice President, Engineering, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Acree, Licensed Instructor
T. Baban, Manager, System Engineering
W. Brown, Superintendent, Security Operations
T. Broyles, Manager, Information Services
D. Campbell, Superintendent, Maintenance
J. Dagenette, Emergency Planning
M. Dale, Emergency Planning
T. Damashek, Simulator Fidelity Coordinator
T. East, Superintendent, Emergency Planning
J. Edwards, Manager, Operations
D. Erbe, Manager, Security
R. Fincher, Manager, Quality
R. Flannigan, Manager, Nuclear Engineering
J. Fritton, Oversight
B. Gagnon, Supervisor, Security
N. Good, Licensing Engineer
C. Gross, Manager, Chemistry
C. Hafenstine, Manager, Regulatory Affairs
A. Heflin, President and Chief Executive Officer
S. Henry, Manager, Integrated Plant Scheduling
R. Hobby, Licensing Engineer
J. Isch, Superintendent, Operations Work Controls
J. Knapp, Superintendent, Operations Training
B. Lee, Licensed Supervising Instructor, Operator Requalification
D. Mand, Manager, Design Engineering
J. McCoy, Vice President, Engineering
R. Meyer, Licensed Supervising Instructor, Simulator and Exam Group
W. Muilenburg, Supervisor, Licensing
L. Ratzlaff, Manager, Maintenance
C. Reasoner, Site Vice President
A. Servaes, Licensed Instructor
M. Skiles, Manager, Radiation Protection
T. Slenker, Supervisor, Operations Support
S. Smith, Plant Manager
M. Storts, Engineer
A. Stueve, Engineer
A. Stull, Vice President and Chief Administrative Officer
M. Tate, Superintendent, Security Operations
J. Yunk, Manager, Training

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000482-2016003-01 NCV Failure to Adequately Adjust Testing and Preventive Maintenance for Safety-Related Lockout Relays (Section 1R12)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CKL BG-120	Chemical and Volume Control System Normal Valve Lineup	41
CKL BG-130	Chemical and Volume Control System Switch and Breaker Lineup	31A
CKL JE-120	Emergency Fuel Oil System Lineup	19
CKL KJ-121	Diesel Generator NE01 and NE02 Valve Checklist	39
STS BG-100B	Centrifugal Charging System "B" Train Inservice Pump Test	51
SYS BG-201	Shifting Charging Pumps	66
SYS EG-120	Component Cooling Water System	39

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-12BG03	Piping and Instrumentation Diagram Chemical & Volume Control System	48
M-12JE01	Piping and Instrumentation Diagram Emergency Fuel Oil System	19
M-12KJ01	Piping and Instrumentation Diagram Standby Diesel Generator "A" Cooling Water System	13
M-12KJ02	Piping and Instrumentation Diagram Standby Diesel Generator "A" Intake Exhaust. F.O. and Start . Air Sys.	22
M-12KJ03	Piping and Instrumentation Diagram Standby Diesel Generator "A" Lube Oil System	17
M-13BG02	Piping Isometric CVCS-Max. Charging Flow "A" & "B" Train-Auxiliary Bldg.	11
M-13BG09	Small Piping Isometric CVCS Seal Water Injection Auxiliary Building	15

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-12BG03	Piping and Instrumentation Diagram Chemical & Volume Control System	48
M-13BG10	Small Piping Isometric RC PP Seal Water Return & Excess Letdown Flow-Auxiliary Bldg.	2

Condition Reports

106338

Section 1R05: Fire Protection

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 10-102	Control of Combustible Materials	19
AP 10-106	Fire Preplans	17

Condition Reports

106124 106133 106335

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision</u>
E-1F9905	Fire Hazard Analysis	7

Section 1R06: Flood Protection Measures

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 10-104	Breach Authorization	35

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-120103	Symbols and Legend for System Flow and Piping and Instrumentation Diagrams	1
M-12FC02	Piping & Instrumentation Diagram Auxiliary Turbines Auxiliary Feedwater Pump Turbine	23
M-12LE01	Piping and Instrumentation Diagram Turb. Bldg. and Aux. Feedwater Pump Rooms Oily Waste System	8

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-13FC06	Small Piping Isometric Auxiliary Feedwater Pump Turbine Drains – Aux. Bldg.	8
M-13LE01	Piping Isometric Oily Waste Sump Discharge Tendon Access & Aux. Building	3
M-17LF01	Plumbing and Drainage System Notes, Symbols and Schedules	2
M-17LF02	Plumbing and Drainage System Details	2
M-OP1151	Drainage Systems (LE) Auxiliary Building El. 1974'-0", El. 1989'-0" & El. 2000'-0" Area 5	6

Condition Reports

90879	100653	100654	100655	106165
-------	--------	--------	--------	--------

Work Orders

08-303899-000	15-397860-000	16-416247-000	16-416247-001	16-416247-002
---------------	---------------	---------------	---------------	---------------

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision</u>
FL-01	Flooding of the Auxiliary Building	2
FL-04	Summary of Flood Levels in All Aux. Bldg Rooms Due to Pipe Break or Crack	2
LE-M-002	Flood Level in Auxiliary Building Rooms 1206 & 1207 Due to Pipe Break	1

Section 1R07: Heat Sink Performance

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STN MT-004	Ultimate Heat Sink Dam Surveillance Vertical Movement And Sedimentation	5

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
S-0080	Ultimate Heat Sink Plan & Sections	16

Work Orders

15-409222-000 15-409921-000

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision</u>
C-404	Periodic Surveillance of Safety Related Water Control Structures and Reservoir	8
WR-WC-UH-1	Area Capacity – Ultimate Heat Sink	1
WR-WC-UH-1A	Elevation-Area-Capacity of UHS	0
Z065-C-001	Evaluation of Annual UHS Sediment Measurements	10

Section 1R11: Licensed Operator Requalification Program

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AI 28A-100	Condition Report Resolution	10A
AI 30B-015	Licensed Operator Requalification Examination Guidelines	10A
AI 30C-001	Continued Assurance of Simulator Fidelity	16A
AI 30C-004	Simulator Real Time Capacity Testing	5B
AI 30C-005	Simulator Steady State Testing	9A
AI 30C-007	Simulator Core Testing	3
AI 30C-008	Scenario Based Testing	2A
AI 30C-010	Post Event Testing	1
AI 30E-002	Evaluation	42
AI 30E-013	Written and Oral Examinations	24
AI 30E-015	Just-In-Time Training	11
AI 30E-023	Remediation	3
AI 30E-23-01	Remediation Plan	2
AP 15C-002	Procedure Use and Adherence	42
AP 15C-003	Procedure User's Guide for Abnormal Plant Conditions	33
AP 21-001	Conduct of Operations	77
AP 22-001	Conduct of Pre-Job and Post-Job Briefs	19
AP 30B-001	Licensed Operator Requalification Training Program	28

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EPP 06-006	Protective Action Recommendations	9
GEN 00-004	Power Operation	86
GEN 00-008	RCS Level Less Than Reactor Vessel Flange Operations	29
OFN MA-038	Rapid Plant Shutdown	28
STN SF-001	Control Rod Parking	18A
STS AC-001	Main Turbine Valve Cycle Test	52
STS BG-210	CVCS Inservice Check Valve Test	33

Condition Reports

70423	76993	76995	88178	94596
96734	99058	99576	100662	101655
102267	106525	106526		

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	Reactivity Maneuver Plan	July 6, 2016
	Simulator Differences List	April 13, 2016
	Simulator Steady State Testing	
	Transient Test 3 – Simultaneous Closure of All Main Steam Isolation Valves	
	Transient Test 5 – Trip of a Single RCP	
	Transient Test 7 – Maximum Rate of Power Ramp	
	Week 0 – SRO and RO Written Examination	
	Week 0 – 5 JPMs, 2 Scenarios	
	Week 1 – 5 JPMs, 2 Scenarios	
	Week 4 – 5 JPMs, 2 Scenarios	
	Week 7 – 5 JPMs, 2 Scenarios	
APF 06-002-01	Emergency Action Levels	17A
DTI 212	Maintaining Simulator Setup Current with the Plant	1
DTIF 212-01	Maintaining Simulator Setup Checklist and Index Sheets	April 11, 2016
LR5004009	Mid Loop Operations	6

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
Scenario 16-11	2016 Biennial Requalification Exam	0
Scenario 16-12	2016 Biennial Requalification Exam	0

Section 1R12: Maintenance Effectiveness

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 16B-003	Planning and Scheduling Preventive Maintenance	7
MGE E00P-05	Insulation Resistance Testing	23
MPE E009-01	Siemens Breaker Cubicle Maintenance, Testing and Swapping	5
MPE E009Q-01	13.8 KV and 4.16 KV Switchgear Inspection and Testing	34A
STN NB-215	DPEF01B Feeder Breaker Trip Circuit Verification	1A
STS KJ-015B	Manual/Auto Fast Start, Sync & Loading of EDG NE02	42
STS NB-005	Breaker Alignment Verification	29
SYS NG-132	Energizing NG02, NG04 and NG06E	22
SYS NG-332	Deenergizing NG02, NG04 and NG06E	20

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
E-K3EF01A	Schematic Diagram Essential Service Water Pump B	12
KD-7496	One Line Diagram	59

Condition Reports

29718	54212	54926	64870	64999
65676	66396	66398	77718	83510
85417	85309	88661	95773	97335
98587	98588	100088	100380	100384
100629	100716	102162	104411	104413
104869	106164	106180	106211	106273
106286	108440	108548		

Work Orders

08-303899-000

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
54926	Functional Failure Determination Checklist	August 16, 2012
64870	Functional Failure Determination Checklist	May 16, 2013
64999	Functional Failure Determination Checklist	April 4, 2013
65676	Functional Failure Determination Checklist	April 17, 2013
66396	Functional Failure Determination Checklist	April 28, 2013
74290	Functional Failure Determination Checklist	November 27, 2013
77718	Functional Failure Determination Checklist	January 25, 2014
83510	Functional Failure Determination Checklist	August 7, 2014
85309	Functional Failure Determination Checklist	July 23, 2014
85417	Functional Failure Determination Checklist	July 23, 2014
88661	Functional Failure Determination Checklist	November 12, 2014
90187	Functional Failure Determination Checklist	January 5, 2015
93127	Functional Failure Determination Checklist	April 1, 2015
93146	Functional Failure Determination Checklist	April 1, 2015
93357	Functional Failure Determination Checklist	April 1, 2015
97335	Functional Failure Determination Checklist	July 26, 2015
98434	Functional Failure Determination Checklist	August 25, 2015
106164	Functional Failure Determination Checklist	August 30, 2016
EM-01	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016
EM-02	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016
EM-03	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
EM-04	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016
EM-05	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016
EM-06	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016
EM-07	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016
EM-08	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016
EM-09	Maintainence Rule Final Scope Evaluation	Printed September 19, 2016
GEH-2058	Auxiliary Relays	E
NB-01	Maintenance Rule Final Scope Evaluation	Printed September 27, 2016
NB-02	Maintenance Rule Final Scope Evaluation	Printed September 27, 2016
NB-03	Maintenance Rule Final Scope Evaluation	Printed September 27, 2016
NB-04	Maintenance Rule Final Scope Evaluation	Printed September 27, 2016
NB-05	Maintenance Rule Final Scope Evaluation	Printed September 27, 2016
NG	System Health Report	April 1, 2016 through June 30, 2016
NG-01	Maintenance Rule Final Scope Evaluation	August 9, 2016
NG-02	Maintenance Rule Final Scope Evaluation	August 9, 2016
NG-03	Maintenance Rule Final Scope Evaluation	August 9, 2016

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
NG-04	Maintenance Rule Final Scope Evaluation	August 9, 2016
PIR 2003-2708		

Section 1R13: Maintenance Risk Assessment and Emergent Work Controls

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AI 14-011	Lifting and Rigging	7
AI 22C-013	Protected Equipment Program	17
AP 14-001	Control of Heavy Loads, Lifting, and Rigging	4
AP 21G-001	Control of Locked Component Status	70
AP 22C-003	On-Line Nuclear Safety and Generation Risk Assessment	22
AP 22C-007	Risk Management and Contingency Planning	11
AP 26C-004	Operability Determination and Functionality Assessment	32
GEN 00-004	Power Operation	86
STN AP-101	NSAFP Recirc Test	11
STN EM-001A	Train A Leakage Inspection Program of Safety Injection System	2A
STN EM-201	Safety Injection System Valve Test	11A
STS EM-100A	Safety Injection Pump "A" Inservice Pump Test	39
STS EM-201A	Safety Injection System Train A Inservice Valve Test	7
SYS GK-200	Non-Functional Class 1E A/C Unit	35

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-12BG03	Piping and Instrumentation Diagram Chemical & Volume Control System	48
M-12EJ01	Piping and Instrumentation Diagram Residual Heat Removal System	52
M-12EM01	Piping & Instrumentation Diagram High Pressure Coolant Injection System	42
M-12EM02	Piping & Instrumentation Diagram High Pressure Coolant Injection System	21

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-12EM03	Piping & Instrumentation Diagram High Pressure Coolant Injection System Test Line	2
M-13GK01	Small Piping Isometric Room Coolers And Compressors Vents and Drains – Aux. Bldg.	14

Condition Reports

66605	66841	105564	105614	105615
105625	106303	106322	106416	107185

Work Orders

13-366479-000	13-378954-000	14-390199-000	15-405362-000	15-405970-000
15-408584-000	15-409609-000	15-409615-000	15-409616-000	15-409617-000
15-409618-000	16-411165-000	16-416523-000	16-416523-001	13-366479-000

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	Control Room Turnover Checklist	August 12, 2016
15-400938-053	Rigging and Hoisting Checklist	July 14, 2016
16-302	Control Room Risk Assessment Log/Work Schedule; Risk Assessment Dates – July 7, 2016, through July 10, 2016	June 9, 2016
16-305	Control Room Risk Assessment Log/Work Schedule; Risk Assessment Dates – July 25, 2016, through July 31, 2016	July 24, 2016
16-307	Control Room Risk Assessment Log/Work Schedule; Risk Assessment Dates – August 8, 2016, through August 14, 2016	August 9, 2016
16-308	Control Room Risk Assessment Log/Work Schedule; Risk Assessment Dates – August 15, 2016, through August 21, 2016	August 1, 2016
16-308	Daily Operational Focus Senior Leadership Review Team People Solving Problems	August 16, 2016
M-622.1-00061	Instruction Manual For Package Air Conditioner Units	W42
WCNOC-4	Report on Control of Heavy Loads	18

Section 1R15: Operability Evaluations

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AI 22A-001	Operator Work Arounds/Operator Burdens/Control Room Deficiencies	12
AP 19E-004	Reload Core Configurations	0
GEN 00-005	Minimum Load to Hot Standby	87

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-020-0K037	General Arrangement Model 45A Traveling Water Screen, 8'-0" Wide x 43'-0" Centers	W08
M-020-0K057	FMC/Foot Section Assembly for 8'-0 Wide Water Screen	W01

Condition Reports

79425	89251	105567	106183	106289
106296	106416	106417	106425	106438
107042				

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	Control Room WRWO Log	September 10, 2016
014512	Safety-Related Power For Temp Fans Between SGK05A & B Areas	3
015147	ESW Traveling Water Screen Sprocket Set	1
APF 21-001-02	Control Room Turnover Checklist, Days	September 9, 2016
APF 21-001-04	Auxiliary Building Ops Relief Checklist, Nights	September 10, 2016
APF 21-001-05	Turbine Building Ops Relief Checklist, Nights	September 10, 2016
APF 21-001-06	Site Operator Relief Checklist, Nights	September 10, 2016
APF 21-001-09	Fire Brigade Leader Relief Checklist, Nights	September 10, 2016

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
CR 105567	Basic Engineering Disposition – Auxiliary Building Water Intrusion Via Penetration P125W2312 or CST Sump Drain	June 30, 2016
E-1F9910	Post-Fire Safe Shutdown Area Analysis	14
EQSD-1	Equipment Qualification Design Basis Document	9
M-020-0K015	Instruction Manual for Traveling Water Screens	W21
OE-EF-16-002	FEF01B – ESW Traveling Water Screens	0
OE-EF-16-002	FEF01B – ESW Traveling Water Screens	1
OE NB-16-004	Operability Evaluation associated with CR 106417	0
OE SF-16-003	Operability Evaluation – SF/Rod Control System	0
SCA-16-0008	ESW Traveling Screen Footshaft Collar Setscrew	0
Various	Operational Issues Database	September 10, 2016

Section 1R18: Plant Modifications

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STN AP-102	NSAFP Full Flow Test	7
SYS AP-122	Non-Safety Aux Feed Pump Operation	8
SYS AP-124	Non-Safety Aux Feed Pump Operation On Recirc	1
SYS GK-122	Manual CRVIS Line-Up	22

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
KD-7496	One Line Diagram	60
M-12AP01	Piping & Instrumentation Diagram Condensate Storage And Transfer System	14
M-12GK01	Piping & Instrumentation Diagram Control Building HVAC	13

Condition Reports

106373	106725
--------	--------

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
14776	Field Change Notice-SBO Feed For Non-Safety Auxiliary Feedwater Pump	3
16-1517	Document Revision Request	August 30, 2016
50.59 Evaluation 2016-0002	Dedicated Operator to Support Maintenance Activity on GKD0081	August 30, 2016
Basic Engineering Disposition	Required Function of GKD0081	August 30, 2016
STN AP-102	NSAFP Full Flow Test	Performed August 31, 2016

Section 1R19: Post-Maintenance Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AI 16-007	Electrical Safety Manual	10
AP 12-003	Foreign Material Exclusion	15
AP 16E-002	Post Maintenance Testing Development	18A
AP 24E-001	Identification and Control of Materials, Parts, and Components	16
STS AL-102	MDAFW Pump B Inservice Pump Test	45A
STS AL-201B	MDAFW Pump B Inservice Check Valve Test	16A
STS BG-100B	Centrifugal Charging System "B" Train Inservice Pump Test	51
STS IC-433	Channel Calibration Nuclear Instrumentation System Post Accident Monitoring N61	17
STS JE-001B	Emergency Diesel Fuel Oil System Train B Test	12
STS KJ-015B	Manual/Auto Fast Start, Sync & Loading of EDG NE02	42
STS MT-024A	Functional Test of 480 and 120 Volt Molded Case Circuit Breakers	14
STS PE-004	AUX Building And Control Room Pressure Test	16
STS PE-061	Control Room/Control Building Habitability Test	1
SYS GK-122	Manual CRVIS Line-Up	21
SYS GK-200	Non-Functional Class IE A/C Unit	35

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
E-13GK13A	Schematic Diagram Class IE Electrical Equipment A/C Unit	7
M-622.1A-00002	SGK05A & SGK05B Air Conditioner Electrical Schematic	W13
M-622.1-00003	IE Electrical Equipment Air Handling Unit Layout SGK05A(3-4-1) & SGK05B(3-4-1)	W16
M-12AL01	Piping & Instrumentation Diagram Auxiliary Feedwater System	28
M-12GK01	Piping & Instrumentation Diagram Control Building H.V.A.C.	13
M-12GK02	Piping & Instrumentation Diagram Control Building H.V.A.C.	22
M-12GK03	Piping & Instrumentation Diagram Control Building H.V.A.C.	20
M-13GK01	Small Piping Isometric Room Coolers And Compressors Vents And Drains – Aux. Bldg.	14
M-1H1521	Heating, Ventilating, & Air Cond. Auxiliary Building El. 204.7'-6" Area 2	9

Condition Reports

106157 106725 106740

Work Orders

15-400229-001 15-406641-019 15-407224-000 16-417261-000

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
16-0044	Wolf Creek Nuclear Operating Corporation - Essential Required Reading	July 21, 2016
APF 21-001-02	Control Room Turnover Checklist	32
STS AL-102	MDAFW Pump B Inservice Pump Test	Performed August 10, 2016
STS AL-210B	MDAFW Pump B Inservice Check Valve Test	Performed August 10, 2016

Section 1R20: Refueling and Other Outage Activities

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 14A-003	Scaffold Construction and Use	24
AP 22B-001	Outage Risk Management	18A
GEN 00-008	RCS Level Less Than Reactor Vessel Flange Operations	30
GEN 00-009	Refueling	38

Condition Reports

107125 107138

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision</u>
APF 22B-001-04	Mode 4	8
APF 22B-001-05	Mode 5 Loops Filled	12
APF 22B-001-06	Mode 5, Loops <u>Not</u> Filled <u>OR</u> Mode 6 RCS Inventory Between Reactor Vessel Flange (indicated Level of 100.1 In.) <u>AND</u> 23FT. Above Vessel Flange (Indicated Level of 376 In.)	10
APF 22B-001-07	Mode 5 or 6, RCS Lowered Inventory (Indicated Level At Or Below 100.1 in. <u>And</u> Higher than 3 Ft. Below the Reactor Vessel Flange) <u>OR</u> RCS Reduced Inventory – Below 3 Ft. Below Vessel Flange (indicated Level of <64.1 In.)	9
APF 22B-001-08	Mode Mode 6 ≥23ft. Above Vessel Flange (Indicated Level ≥376.0”) and Core Alterations	9
APF 22B-001-09	No Mode - Defueled	9
APF 22B-001-10	Shutdown Safety Function Status & Assessment Summary	9

Section 1R22: Surveillance Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ALR 117	SBO DG Local Alarm Response	0
AP 29E-001	Program Plan For Containment Leakage Measurement	15
AP 29G-001	RCS Unidentified Leak Rate Monitoring Program	5

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OFN BB-007	RCS Leakage High	18
STN AP-102	NSAFP Full Flow Test	7
STS BB-006	RCS Water Inventory Balance Using the NPIS Computer	14
STS CR-001	Shift Log for Modes 1, 2, & 3	97
STS IC-211A	Actuation Logic Test Train A Solid State Protection System	36A
STS MT-008	[Steam Generator] Spring Loaded Safety Valve Settings	25
SYS KU-121	Energizing NB01 From Station Blackout Diesel Generators	4
SYS KU-124	SBO Generator Local or Manual Operation	2

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-12AB02	Piping & Instrumentation Diagram Main Stream System	16
M-12BB01	Piping & Instrumentation Diagram Reactor Coolant System	12

Condition Reports

95553	105668	106763	106804	106822
106859	106862	106867		

Work Orders

15-406204-000	15-406207-000	15-406208-000	15-406209-000	15-406210-000
15-406211-000	15-406212-000	15-406213-000	16-411417-000	

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
52218	Event Notification Report: Technical Specification Required Shutdown	September 2, 2016
M-022-00001	Station Blackout Diesel Generator Kohler Instruction Manual	W02

Section 1EP2: Alert Notification System Testing

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	2014 Tone Alert Radio Audit Report	December 4, 2014
	2015 Tone Alert Radio Audit Report	December 2, 2015
ANS Report	WCNOC REP-10 Design Review Report	May 7, 2008
EPP 06-019	Alert and Notifications System Sirens	9
EPP 06-022	Tone Alert Radio Maintenance/Compensating Measures	5A

Section 1EP3: Emergency Response Organization Augmentation Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Date</u>
14-Q4	Quarterly Callout Test	December 14, 2014
15-Q1	Quarterly Callout Test	February 10, 2015
15-Q2	Quarterly Callout Test	June 17, 2015
15-Q3	Quarterly Callout Test	September 30, 2015
15-Q4	Quarterly Callout Test	December 13, 2015
16-Q1	Quarterly Callout Test	March 28, 2016
Drill	Unannounced Callout Drill Report	May 4, 2016

Section 1EP5: Correction of Emergency Preparedness Weaknesses and Deficiencies

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
AI 26A-003	Regulatory Evaluations (Other Than 10CFR50.59)	16
AP 06-002	Radiological Emergency Response Plan	18
AP 06-004	Equipment Important to Emergency Response	4
AP 17C-024	Emergency Planning Responsibilities	13
AP 17C-028	Emergency Response Duties and Responsibilities	15
AP 28A-100	Corrective Action Program	22a
EPP 06-009	Drill and Exercise Requirements	10

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
RA 14-0122	Annual Emergency Planning Review; includes: Annual Evacuation Time Estimate Update Review Annual On-Shift Staffing Analysis Review	December 8, 2014
RA 15-0098	Annual Emergency Planning Review; includes: Annual Evacuation Time Estimate Update Review Annual On-Shift Staffing Analysis Review	December 7, 2015

Condition Reports

85703	86306	88447	89360	89606
89831	90728	91773	94541	94739
95958	96306	97232	97396	97410
100702	101392	101484	101650	101858
101859	102885	105010	106171	106177
106178	106230	106223		

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Date</u>
15-03-EP	Quality Assurance Audit Report (Emergency Preparedness)	June 29, 2015
15-SA-01	Semi-Annual Health Physics Drill	February 15, 2015
15-SA-02	Semi-Annual Health Physics Drill	July 28, 2015
16-05-EP	Quality Assurance Audit Report (Emergency Preparedness)	June 21, 2015
16-SA-01	Semi-Annual Health Physics Drill	February 17, 2016
16-SA-02	Semi-Annual Health Physics Drill	June 22, 2016
Drill	2015 Site Medical Drill	September 17, 2015
Drill	2016 Site Medical Drill	July 13, 2016
QA-2015-0151	Assessment: E-Plan Drill Performance Observations	December 11, 2015
QA-2016-0213	Assessment: E-Plan Drill Report Review	June 29,, 2016
QH-2014-0916	Quick Hit Review: NRC Performance Indicator	November 20, 2014
QH-2014-0919	Quick Hit Review: Emergency Planning New Rule Implementation	November 4, 2014
QH-2015-1004	Quick Hit Review: Fukushima Response Implementation Lessons Learned Workshop	March 16, 2015

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Date</u>
QH-2016-1252	Quick Hit Review: 2015 Industry HAB Evaluated Exercises	March 16, 2016
QS-2014-0727	Assessment: Fourth Quarter Emergency Planning Department Assessment	December 30, 2014
QS-2015-0102	Surveillance: TSC Readiness	April 13, 2015
QS-2015-0134	Surveillance: August 11 ERO Drill	August 31, 2015
QS-2015-0145	Surveillance: Security Event Response	November 4, 2015
QS-2015-1411	Surveillance: 08/11/2015 EPlan Drill	August 20, 2015
QS-2016-1565	Surveillance: Emergency Siren	January 12, 2016
Review	Letters of Agreement	December 15, 2015
Test	Monthly Communications Test	November 2014 through July 2016

Condition Reports

85703	86306	88447	89360	89606
89831	90728	91773	94541	94739
95958	96306	97232	97396	97410
100702	101392	101484	101650	101858
101859	102885	105010	106171	106177
106178	106230	106223		

Section 1EP6: Drill Evaluation

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EPP 06-006	Protective Action Recommendations	9

Condition Reports

106425

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	2016 E-Plan Schedule	June 6, 2016
77899	Scheduled Offering Roster – Simulator LR4414101	0

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
AIF 30B-015-05	Shift Engineer Simulator Performance Evaluation Summary Sheet - SM Time for New Shift Manager Quals – LR4414101	0A
AIF 30B-015-11	E-Plan Simulator Performance Evaluation Summary Sheet – SM Time for New Shift manager Quals – LR4414101	2
APF 06-002-01	Emergency Action Levels	17A
EPF 06-007-01	Wolf Creek Generating Station Emergency Notification – August 11, 2016	12E
LR4407001	Cycle 17-1 Practice CPE	1
LR4414101	SM Time For New Shift Manager Quals	0
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	7
Scenario 16-11	2016 Biennial Requalification Exam	0
Scenario 16-12	Biennial Requalification Exam	0

Section 40A1: Performance Indicator Verification

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AI 26A-004	Emergency Planning Performance Indicators	8

Condition Reports

107112

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	MSPI Derivation Report	July 2016
BG-07	MSPI Unavailability For Chemical & Volume Control System BG-07, Train A Data	
BG-07	MSPI Unavailability For Chemical & Volume Control System BG-07, Train B Data	
EM	System Health Report	April 1, 2016 through June 30, 2016
EM-01	MSPI Unavailability For High Pressure Coolant Injection System EM-01, Train A Data	

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
EM-01	MSPI Unavailability For High Pressure Coolant Injection System EM-01, Train B Data	
EG-01	MSPI Unavailability For Component Cooling Water System EG-01, Train A Data	
EG-01	MSPI Unavailability For Component Cooling Water System EG-01, Train B Data	
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	7

Section 40A3: Event Follow-Up

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ALR 00-098D	OBE	15A
ALR 00-098B	SSE	14
ALR 00-098E	Seismic Recorder On	15
APF 06-002-01	Emergency Action Levels	17A
OFN SG-003	Natural Events	30

Condition Reports

106904

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
APF 20-002-01	Post-Trip/Event Review Data Package	September 2, 2016