



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BLVD
ARLINGTON, TEXAS 76011-4511

February 10, 2014

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

SUBJECT: WOLF CREEK GENERATING STATION – NRC INTEGRATED INSPECTION
REPORT 05000482/2013005

Dear Mr. Heflin:

On December 31, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Wolf Creek Generating Station and on December 31, 2013, the NRC inspectors discussed the results of this inspection with Russell Smith, Site Vice President, and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented three findings of very low safety significance (Green) in this report. Two of these findings involved violations of NRC requirements; one of the findings did not involve a violation of NRC requirements.

If you contest the violations or significance of these non-cited violations, 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.

Mr. Heflin

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In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Neil O'Keefe, Chief
Project Branch B
Division of Reactor Projects

Docket Nos.: 50-482
License Nos: NPF-42

Enclosure: Inspection Report 05000482/2013005
w/ Attachment: Supplemental
Information

cc w/ encl: Electronic Distribution

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SUNSI Rev Compl.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ADAMS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Reviewer Initials	NFO
Publicly Avail.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sensitive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sens. Type Initials	NFO
SRI:DRP/B	RI:DRP/B	C:DRS/EB1	C:DRS/EB2	C:DRS/OB	
CPeabody	RStroble	TFarnholtz	GMiller	VGaddy	
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02/03/2014	N/A	02/03/2014	02/03/2014	02/04/2014	
C:DRS/PSB1	C:DRS/PSB2	C:DRS/TSB	BC:DRP/B		
MHaire	HGepford	RKellar	NOKeefe		
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000482

License: NPF-42

Report: 05000482/2013005

Licensee: Wolf Creek Nuclear Operating Corporation

Facility: Wolf Creek Generating Station

Location: 1550 Oxen Lane SE
Burlington, Kansas

Dates: September 29 through December 31, 2013

Inspectors: C. Peabody, Senior Resident Inspector
R. Stroble, Resident Inspector
G. Apper, Operations Engineer
G. George, Senior Reactor Inspector
J. Laughlin, Emergency Preparedness Inspector
G. Skaggs Ryan, Reactor Inspector
Paul Elkmann, Senior Emergency Preparedness Inspector
Gilbert Guerra, CHP, Emergency Preparedness Inspector
Raja Stroble, Resident Inspector
Nnaerika Okonkwo, Reactor Inspector

Approved By: Neil O'Keefe
Chief, Project Branch B
Division of Reactor Projects

SUMMARY

IR 05000482/2013005; 09/29/2013 – 12/31/2013; WOLF CREEK GENERATING STATION; Integrated Resident and Regional Report; Licensed Operator Requalification Program; Maintenance Risk Assessments and Emergent Work Control, Problem Identification and Resolution.

The inspection activities described in this report were performed between September 29, 2013, and December 31, 2013, by the resident inspectors at Wolf Creek Generating Station and three inspectors from the NRC's Region IV office. Four findings of very low safety significance (Green) are documented in this report. Three of these findings involved violations of NRC requirements; one of the findings did not involve 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, "Components Within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC's 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: Initiating Events

- Green. The inspectors identified a Green non-cited violation of 10 CFR 50.65(a)(4) for the failure to assess risk associated with an emergent maintenance activity performed on one of the offsite power circuit components inside the Wolf Creek switchyard. Specifically, Wolf Creek arranged for the transmission system maintenance companies to recharge SF6 gas in a 13.8kV breaker actively feeding the train A Class 1E distribution system, without performing risk management actions to verify the readiness of onsite power sources. Loss of SF6 pressure would have caused this breaker to automatically open. This issue was entered into the corrective action program as Condition Report 00077139.

The inspectors determined that failure to assess risk associated with an emergent maintenance activity in accordance with station procedure AP 22C-003, "Online Nuclear Safety and Generation Risk Assessment," Step 6.1.9 was a performance deficiency. The performance deficiency was more than minor because it affects the switchyard activities area of the protection against external factors attribute of the Initiating Events Cornerstone. Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," was used to assess the significance of the finding because the finding resulted from the licensee's underestimate of plant risk. The regional senior reactor analyst performed a bounding analysis of the incremental core damage probability and determined that the finding was of very low safety significance (Green) because the bounding analysis indicated that the effect of the finding on plant operations was less than the Green/White threshold.

The inspectors determined that the finding did not have a cross-cutting aspect because the performance deficiency was caused by an inadequate procedure change in 1998, which was not representative of current performance. (Section 1R13)

Cornerstone: Mitigating Systems

- Green. The inspector reviewed a self-revealing finding associated with licensed operator performance on the annual requalification operating tests. Specifically, 2 of 8 crews (25 percent) failed the simulator scenario portion of the operating test; and 11 of 46 licensed operators (23 percent) either failed the scenario or failed the job performance measure portions of the operating tests. The licensee remediated and retested the staff prior to returning them to licensed duties. Wolf Creek entered this finding into their corrective action program as Condition Report 75336.

In accordance with Inspection Procedure 71111.11, each of the following was a performance deficiency against expected licensed operator knowledge and abilities: 1) Greater than 20 percent of the crews failing their scenarios; and 2) greater than 20 percent of the licensed operator staff failing their operating tests. Using the Inspection Manual Chapter 0612, Appendix B, "Issue Screening," the inspector determined that the finding was more than minor because the performance deficiency was associated with the Mitigating Systems Cornerstone attribute of human performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspector determined that this finding could be evaluated using Inspection Manual Chapter 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process." This finding was of very low safety significance (Green) because the finding was related to the requalification exam results, did not result in a failure rate of greater than 40 percent, and the licensed operators were remediated prior to returning to shift. This finding has a cross-cutting aspect in the area of human performance associated with resources, because the licensee failed to ensure that personnel were adequately trained to assure nuclear safety [H.2(b)]. (Section 1R11.3)

- Green. A self-revealing non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," was identified for failure to preclude repetition of a significant condition adverse to quality. Specifically, the licensee failed to determine the cause of the train A Class 1E air conditioner slug flow in the refrigerant prior to experiencing multiple failures and plant shutdowns. The licensee eventually determined that the probable cause of the failures was the failure to adequately chemically clean the system following the failure of a charcoal filter, in that some charcoal and cleaning agent was not removed following the work activity. The remaining debris fouled the lubricating oil and instrumentation, causing four failures. This issue was entered into the corrective action program as Condition Report 78709.

Failure to preclude repetitive failures of the train A Class 1E air conditioner, a significant condition adverse to quality, is a performance deficiency. The performance deficiency is more than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically

the leftover debris in the system resulted in a subsequent maintenance outage to replace rapidly degrading components. Using the Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because the finding did 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 did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The inspectors determined that the cause of the finding had a cross-cutting aspect in the area of human performance. The licensee did not ensure complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components. Specifically applicable housekeeping requirements detailed in station procedure AP-12-002 "Internal/External System Cleanliness" were not met during the chemical cleaning of system piping on May 8, 2013, [H.2(c)]. (Section 4OA2.3.b.)

PLANT STATUS

The beginning of the inspection period coincided with the unit being restarted from an unplanned outage to repair a Class 1E air conditioning unit. The same air conditioner failed again on October 18, 2013, and the plant shutdown and cooled down to Mode 5. The unit restarted on October 28, 2013, and operated at full power for the remainder of the inspection period.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Seasonal Extreme Weather - Offsite and Alternate AC Power Systems

a. Inspection Scope

On October 7, 2013, the inspectors completed an inspection of the station's off-site and alternate-ac power systems. The inspectors inspected the material condition of these systems, including transformers and other switchyard equipment to verify that plant features and procedures were appropriate for operation and continued availability of off-site and alternate-ac power systems. Specifically the inspectors reviewed final installation and closeout of a plant modification to add Station Blackout Diesel Generators. The inspectors reviewed applicable station procedure revisions to verify that adequate guidance was provided to operators. The inspectors walked down the station blackout diesel generators and associated vital switchgear to verify the installed configuration met design specifications.

These activities constituted one sample of readiness for seasonal extreme weather of off-site and alternate-ac power systems, as defined in Inspection Procedure 71111.01

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

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

- October 15, 2013, high pressure coolant injection train A during centrifugal charging pump B planned maintenance outage
- October 16, 2013, residual heat removal train A during residual heat removal pump B planned maintenance outage
- November 20, 2013, B emergency diesel generator during A emergency diesel generator and essential service water planned maintenance outage

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 were correctly aligned for the existing plant configuration.

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

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 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 four plant areas important to safety:

- October 10, 2013, main control room, 2047' control building, fire area C-27
- October 10, 2013, cable chase room, 2047' control building, fire area C-30
- November 4, 2013, 4kV switchgear B room, 2000' control building, fire area C-10
- November 6, 2013, power transformers and switchyard

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 four quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

.2 Annual Inspection

a. Inspection Scope

On October 11, 2013, the inspectors completed their annual evaluation of the licensee's fire brigade performance. This evaluation included observation of fire drill conducted routinely as part of the licensee's fire protection program in accordance with 10 CFR 50 Appendix R Section (III)(I)(3)(b).

The inspectors evaluated the capability of the fire brigade members, the leadership ability of the brigade leader, the brigade's use of turnout gear and fire-fighting equipment, and the effectiveness of the fire brigade's team operation. The inspectors also reviewed whether the licensee's fire brigade met NRC requirements for training, dedicated size and membership, and equipment.

These activities constituted one annual inspection sample, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope – (triennial inspection)

The inspectors reviewed licensee programs to verify heat exchanger performance and operability for the following heat exchangers:

- Diesel generator cooling water system B
- Safety injection pump room cooler A
- Auxiliary feedwater pump room cooler A

The inspectors verified whether testing, inspection, maintenance, and chemistry control programs are adequate to ensure proper heat transfer. The inspectors verified that the periodic testing and monitoring methods, as outlined in commitments to the NRC Generic Letter 89-13, utilized proper industry heat exchanger guidance. Additionally, the inspectors verified that the licensee's chemistry program ensured that biological fouling was properly controlled between tests. The inspectors reviewed previous maintenance records of the heat exchangers to verify that the licensee's heat exchanger inspections adequately addressed structural integrity and cleanliness of their tubes. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of three of the triennial heat sink inspection samples as defined in Inspection Procedure 71111.07-05.

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 December 2, 2013, the inspectors observed a portion of annual requalification training for licensed operators. The inspectors assessed the performance of the operators and the evaluators' critique of their performance.

These activities constitute completion of one quarterly licensed operator requalification program sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

On October 27, 2013, 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 due to reactor startup from a unplanned outage. The inspectors observed the operators' performance of the following activities:

- Standard operating procedure transition brief
- Shift turnover brief
- Reactor startup brief
- Control rod withdrawal
- Criticality and startup rate monitoring

In addition, the inspectors assessed the operators' adherence to plant procedures, including AP 21-001 Conduct of Operations, GEN 00-003 Hot Standby to Minimum Load, and other operations department policies.

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

b. Findings

No findings were identified.

.3 Annual Inspection

a. Inspection Scope

The inspector reviewed the results of the operating tests to satisfy the annual inspection requirements.

On December 2, 2013, the licensee informed the lead inspector of the following results:

- Six of eight crews passed the simulator portion of the operating test
- Thirty-six of forty-six licensed operators passed the simulator portion of the operating test
- Forty-five of forty-six licensed operators passed the job performance measure portion of the examination

The individuals and crews that failed portions of the operating test were remediated, retested, and passed their retake operating tests.

The inspector completed one inspection sample of the annual licensed operator requalification program.

b. Findings

Introduction. The inspector reviewed a self-revealing finding associated with licensed operator performance on the annual requalification operating tests. Specifically, 2 of 8 crews (25 percent) failed the simulator scenario portion of the operating test; and 11 of 46 licensed operators (23 percent) either failed the scenario or failed the job performance measure portions of the operating tests.

Description. During the facility-administered annual operating tests of licensed operators, the licensee training staff evaluated crew and individual operator performance during dynamic simulator scenarios and individual operator performance during job performance measures. There were two crew failures and 11 individual failures. The licensee remediated and retested the staff prior to returning them to licensed duties.

Analysis. In accordance with Inspection Procedure 71111.11, each of the following was a performance deficiency against expected licensed operator knowledge and abilities: 1) Greater than 20 percent of the crews failing their scenarios and 2) greater than 20 percent of the licensed operator staff failing their operating tests. Using the Inspection Manual Chapter 0612, Appendix B, "Issue Screening," the inspector determined that the finding was more than minor because the performance deficiency was associated with the Mitigating Systems Cornerstone attribute of human performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspector determined that this finding could be

evaluated using Inspection Manual Chapter 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process." This finding was of very low safety significance (Green) because the finding was related to the requalification exam results, did not result in a failure rate of greater than 40 percent, and the licensed operators were remediated prior to returning to shift. This finding has a cross-cutting aspect in the area of human performance associated with resources, because the licensee failed to ensure that personnel were adequately trained to assure nuclear safety [H.2(b)].

Enforcement. This finding does not involve enforcement action because no violation of regulatory requirements was identified. The licensee entered this finding into their corrective action program as Condition Report 75336. Because this finding does not involve a violation and has very low safety significance (Green), it is identified as a finding: FIN 05000482/2013005-01, "Failure Rates Exceed Twenty Percent for Annual Requalification Operating Tests."

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed four instances of degraded performance or condition of safety-related structures, systems, and components (SSCs):

- June 27, 2013, fire protection functions KC-02 and KC-06, potential sprinkler blockage: dead zebra mussel shells found in fire protection piping, Condition Report 70967
- September 30, 2013, fire protection functions FP-01 and FP-03, fouling of fire pump suction strainers due to zebra mussels, Condition Report 74578
- October 11, 2013, circulating water function DA-02, effects of circulating water internal flooding on non-safety auxiliary feedwater pump, Condition Report 75107
- October 15, 2013, plant annunciator function RK-02, Opto-Isolator cards apparent damage by maintenance practices, Condition Report 74701

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 four maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

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:

- Weekly risk assessment for planned maintenance 2013-407, November 11-17, 2013
- Weekly risk assessment for planned maintenance 2013-409, November 25-December 1, 2013
- Weekly risk assessment for planned maintenance 2013-410, December 2-8, 2013

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.

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

b. Findings

Introduction. The inspectors identified a Green non-cited violation of 10 CFR 50.65(a)(4) for the failure to assess risk associated with an emergent maintenance activity performed on one of the offsite power circuit components inside the Wolf Creek switchyard.

Description. Control room operators received a plant annunciator indicating low SF6 gas pressure in a 13.8kV breaker 13-48 in the Wolf Creek switchyard on the morning of November 14, 2013. This breaker was supplying train A offsite power. Westar (the company that owns the switchyard) personnel recharged the SF6 tank, clearing the 345kV trouble alarm. The performance of this maintenance required the opening of the breaker housing to access the tank, as well as the rest of the actuator internals.

The inspectors noted that throughout the identification and repair process, Wolf Creek did not perform any risk assessment to determine the compatibility of current work. Loss of SF6 pressure would have caused this breaker to automatically open, causing a loss of power to train A AC buses.

The inspectors questioned why no risk assessment was performed, and were told

that operators knew that this was classified as a routine task in station procedure AP 22C-003, "Online Nuclear Safety and Generation Risk Assessment." Operators assumed that this meant that the task had been pre-determined to be low risk, so no risk assessment was required. The inspectors determined that there was no pre-determined risk assessment associated with gassing switchyard breakers. While walking down the task with qualified individuals, the inspectors determined that it was possible to have problems during the task that could lead to loss of SF6 pressure and automatic tripping of the breakers. Further, while most switchyard breakers had redundant breakers, some breakers, including breaker 13-48, would cause loss of power to certain loads if tripped open, so the risk for some breakers was more significant. Based on the above, the inspectors concluded that recharging the SF6 gas in breaker 13-48 required that a risk assessment be performed for this work, and that risk management actions were required according to the licensee's program. The risk management actions should have included verification of the emergency diesel generator A system alignment and the emergency diesel engine room posted as protected equipment for the duration of the switchyard maintenance.

On December 4, 2013, the inspectors observed a second degraded condition in the switchyard was also not considered. A cracked insulator on the west 345kV bus, part of the train B offsite power circuit, was also not properly being assessed for plant risk. Realizing a potential trend, the inspectors brought the oversight to the attention of licensee management, who immediately directed an assessment of risk and wrote Condition Report 77149 to ensure capture of emergent switchyard degraded conditions into their online risk assessment program as required by 10 CFR 50.65(a)(4) and station procedure AP 22C-003. This condition was later able to be analyzed as acceptable without performing field work on the offsite circuit.

Analysis. The inspectors determined that failure to assess risk associated with an emergent maintenance activity in accordance with station procedure AP 22C-003, "Online Nuclear Safety and Generation Risk Assessment," was a performance deficiency. The performance deficiency was more than minor because it affects the switchyard activities area of the protection against external factors attribute of the Initiating Events Cornerstone. According to Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," a greater than minor inspection finding that results from the licensee's underestimate of plant risk should be evaluated using the methods in Appendix K. Appendix K, Step 4.1.2, "NRC Evaluation of Risk," states that the regional senior reactor analyst may independently evaluate the risk if there are specific concerns regarding the adequacy of the licensee's assessment such as the quantitative risk assessment contained omissions. As stated in Step 4.2, "Determination of Risk Deficit," if the licensee did not perform a risk assessment at all, the actual risk increase ($ICDP_{actual}$) is the product of the incremental core damage frequency ($ICDF_{actual}$) and the annualized fraction of the duration of the configuration. The actual incremental core damage frequency is defined as the actual core damage frequency (CDF_{actual}) less the core damage frequency without consideration of the test and maintenance events ($CDF_{zero-maintenance}$). The risk can then be calculated as follows:

$$ICDP_{actual} = (CDF_{actual} - CDF_{zero-maintenance}) * duration$$

As a bounding assessment, the analyst assumed that the risk of a total loss of offsite power was no more than 100 times higher than usual during the performance of the subject maintenance. Additionally, the analyst made the worst-case bounding assumption that inappropriate maintenance on the breaker could have resulted in the failure of Bus NB01. Given these assumptions, the analyst utilized the Standardized Plant Analysis Risk model for Wolf Creek Version 8.20 to quantify the risk. The resulting actual core damage frequency was $8.50 \times 10^{-3}/\text{year}$. The appropriate baseline risk evaluated by this model was a zero-maintenance core damage frequency of $1.44 \times 10^{-6}/\text{year}$. The inspectors stated that the duration of the activity, as it impacted plant risk, was no more than 1.0 hour. Therefore, the incremental core damage probability was calculated as follows:

$$\begin{aligned} \text{ICDP}_{\text{actual}} &= (8.50 \times 10^{-3}/\text{year} - 1.44 \times 10^{-6}/\text{year}) * 1.0 \text{ hour} \div 8760 \text{ hours/year} \\ &= 9.7 \times 10^{-7} \end{aligned}$$

Based on the above calculations, the analyst determined that the finding was of very low safety significance (Green) because the bounding analysis indicated that the effect of the finding on plant operations was less than the Green/White threshold.

The inspectors determined that the finding did not have a cross-cutting aspect because the performance deficiency was caused by an inadequate procedure change in 1998, which was not representative of current performance.

Enforcement. 10 CFR 50.65(a)(4) requires that “Before performing maintenance activities, the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities.” Contrary to the above, on November 14, 2013, the licensee failed to assess and manage the increase in risk that may result from the proposed maintenance activities. Specifically, the licensee allowed switchyard personnel to perform troubleshooting and online corrective maintenance to address an emergent condition on 13.8kV switchyard breaker 13-48, which was part of the train A offsite power circuit, without assessing the impact on scheduled maintenance in progress, and without consideration of risk management actions to ensure the readiness of the diesel generator A.

Because the violation was of very low safety significance (Green) and was entered into the licensee’s corrective action program as Condition Report 77149, it is being treated as a non-cited violation in accordance with Section 2.3.2.a of the NRC’s Enforcement Policy: NCV 05000482/2013005-02, “Failure to Assess Risk Prior to Performing Online Maintenance to an Offsite Power Circuit Component.”

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed five operability determinations and functionality assessments that the licensee performed for degraded or nonconforming structures, systems, or components:

- October 26, 2013, operability determination of auxiliary feedwater pump turbine casing steam leak
- November 13, 2013, Class 1E and control room A/C unit cleanliness maintenance practices from Root Cause Analysis (RCA) 75337
- November 30, 2013, main feed water pump turbine vibration probe failure
- December 2, 2013, Westinghouse process control group 1 power supply fuse exceeds thermography acceptance criteria
- December 11, 2013, tubing vibration on B emergency diesel generator fuel leak-off line

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

These activities constitute completion of five operability and functionality review samples, as defined in Inspection Procedure 71111.15

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Permanent Modifications

a. Inspection Scope

The inspectors reviewed one permanent plant modification that affected risk-significant structures, systems, and components:

- October 30, 2013, compensatory measures for non-functional class 1E air conditioning units

The inspectors reviewed the design and implementation of the modification. 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 functionality of the SSCs as modified.

These activities constitute completion of one sample 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 structures, systems, or components:

- October 2, 2013, reactor coolant system wide range pressure channel 3 recorder replacement
- October 10, 2013, fuel building emergency exhaust fan dust seal replacement
- November 6, 2013, relug NK026 cables 14NKK02A3 and 14NKK02A4
- November 20, 2013, replace essential service water instrumentation root valve EFV0253
- November 21, 2013, emergency diesel generator B relay functional test
- November 26, 2013, emergency diesel generator starting air compressor oil change
- November 26, 2013, control rod drive mechanism cooling fan breaker Meggar and Baker 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 constitute 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

During the station's October 18 - 27, 2013 unplanned outage, 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:

- Monitoring of shut-down and cool-down activities
- Verification that the licensee maintained defense-in-depth during outage activities
- Monitoring of heat-up and startup activities

These activities constitute completion of one outage activities 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 five risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the structures, systems, and components were capable of performing their safety functions:

Reactor coolant system leak detection tests:

- May 7, 2013, transient event walkdown
- October 8, 2013, reactor coolant system water inventory balance using the plant computer

Other surveillance tests:

- October 28, 2013, power range adjustment to calorimetric
- September 14, 2013, train B motor driven auxiliary feedwater pump discharge check valve confirmatory radiography
- November 25, 2013, pressurizer relief discharge temperature loop channel calibration

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 constitute completion of five surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation (71114.01)

a. Inspection Scope

The inspectors observed the biennial emergency preparedness exercise conducted, November 5, 2013, to determine if the exercise acceptably tested major elements of the emergency plan and provided opportunities to demonstrate key emergency response organization skills. The scenario simulated,

- An earthquake with a strong aftershock;
- An automatic plant trip with control rods that fail to insert;
- A reactor coolant system leak inside containment that increases over time;
- Failures of primary and auxiliary feed pumps to the steam generators;
- A fire in a charcoal filter that causes the radiological release to be unfiltered; and,
- A failure of the containment purge system that creates a monitored release to the environment;

to demonstrate the licensee personnel's capability to implement their emergency plan.

The inspectors evaluated exercise performance by focusing on the risk-significant activities of event classification, offsite notification, recognition of offsite dose consequences, and development of protective action recommendations, in the Control Room Simulator and the following dedicated emergency response facilities:

- Technical Support Center
- Operations Support Center
- Emergency Operations Facility

The inspectors also assessed recognition of, and response to, abnormal and emergency plant conditions, the transfer of decision making authority and emergency function responsibilities between facilities, onsite and offsite communications, protection of emergency workers, emergency repair evaluation and capability, and the overall implementation of the emergency plan to protect public health and safety and the environment. The inspectors reviewed the current revision of the facility emergency plan, emergency plan implementing procedures associated with operation of the licensee's emergency response facilities, procedures for the performance of associated emergency functions, and other documents as listed in the attachment to this report.

The inspectors compared the observed exercise performance with the requirements in the facility emergency plan, 10 CFR 50.47(b), 10 CFR Part 50, Appendix E, and with the guidance in the emergency plan implementing procedures and other federal guidance.

The inspectors attended the post-exercise critiques in each emergency response facility to evaluate the initial licensee self-assessment of exercise performance. The inspectors also attended a subsequent formal presentation of critique items to plant management. The specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.01-05.

b. Findings

No findings were identified.

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

a. Inspection Scope

The NSIR headquarters staff performed an in-office review of the latest revisions of various Emergency Plan Implementing Procedures (EIPs) and the Emergency Plan located under ADAMS accession numbers ML13260A258 and ML13330B029 as listed in the Attachment.

The licensee determined that in accordance with 10 CFR 50.54(q), the changes made in the revisions resulted in no reduction in the effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. The NRC review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection. The specific documents reviewed during this inspection are listed in the Attachment.

These activities constitute completion of three samples as defined in Inspection Procedure 71114.04-05.

b. Findings

No findings were identified.

1EP5 Maintenance of Emergency Preparedness (71114.05)

a. Inspection Scope

The inspectors performed an on-site and in-office review of the licensee's response to Condition Report 59832, dated January 30, 2013, which documented a potential inaccuracy in the Emergency Dose Assessment Program identified during an exercise conducted November 13, 2012.

b. Findings

Introduction. The inspectors identified an Unresolved Item to determine the adequacy of licensee methods and systems for assessing the actual or potential offsite consequences of a radiological emergency, as required by 10 CFR 50.47(b)(9).

Description. The NRC determined that the licensee had identified in November 2012, a potential inaccuracy in the Electronic Dose Calculation Program (EDCP, radiological assessment software), and as of November 5, 2013, had not evaluated or corrected the inaccuracy.

The NRC observed that the licensee dose assessor participating in the November 5, 2013, emergency preparedness exercise was knowledgeable about an inaccuracy in the Electronic Dose Calculation Program and subsequently reviewed Condition Report 00059832, "E-Plan Drill, Potential Incorrect EDCP Dose Assessments," dated January 30, 2013. Condition Report 00059832 documented a potential inaccuracy in EDCP calculations using the main vent stack radiation monitor that was identified during an exercise conducted November 13, 2012.

The main vent stack radiation monitor reports separate release rates for total Noble Gasses, radioactive Iodine, and radioactive Particulates when operating in its normal mode. In 'accident mode' the iodine and particulate release rates are not measured. The inspectors determined the Control Room places this monitor in accident mode when the noble gas channel goes into Alert Alarm, at a value of 3530 $\mu\text{Ci/s}$. When the main vent stack radiation monitor is in accident mode, EDCP compensates by calculating assumed Iodine and Particulate release rates, using a noble gas to iodine ratio; a default ratio of 10 is assumed (e.g. the iodine release rate is set to 10% of the measured noble gas release rate). Users identified during the November 13, 2012, exercise that EDCP did not appear to apply the expected noble gas to iodine ratio with the vent stack radiation monitor in accident mode. The licensee confirmed on November 7, 2013, that EDCP was not correctly applying the default noble gas to iodine ratio, resulting in an overestimate of the concentration of iodine and particulates by a factor of 10, and an overestimate of the Thyroid CDE dose. The licensee determined this deficiency existed in EDCP Version 4.7, which was in use on November 13, 2012, and continued to exist in EDCP Version 4.8, implemented October 28, 2013.

The NRC continues to evaluate this issue to determine if a performance deficiency exists. No additional information is required from the licensee. URI 05000482/2013-005-03, "Apparent inaccuracy in licensee dose assessment software."

1EP8 Exercise Evaluation (71114.08)

a. Inspection Scope

The licensee submitted the preliminary scenario for the 2013 biennial emergency preparedness exercise on September 3, 2013, in accordance with the requirements of Appendix E to 10 CFR 50, Part IV.F(2)(b). The inspectors performed an in-office review of the preliminary exercise scenario to determine whether the scenario would acceptably test the major elements of the licensee's emergency plan and provided opportunities to demonstrate the key emergency response organization skills.

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 Safety System Functional Failures (MS05)

a. Inspection Scope

For the period of October 1, 2012 through September 30, 2013, the inspectors reviewed licensee event reports (LERs), maintenance rule evaluations, and other records that could indicate whether safety system functional failures had occurred. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, and NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73," Revision 3, to determine the accuracy of the data reported.

These activities constituted verification of the safety system functional failures performance indicator for Wolf Creek, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index: Heat Removal Systems (MS08)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of October 1, 2012 through September 30, 2013, 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 heat removal systems for Wolf Creek, as defined in Inspection Procedure 71151

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index: Residual Heat Removal Systems (MS09)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of October 1, 2012 through September 30, 2013, 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 residual heat removal systems for Wolf Creek, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.4 Drill/Exercise Performance (EP01)

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill and Exercise Performance, performance indicator for the period July 2012 through September 2013. The definitions and guidance of Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, were used to determine the accuracy of the performance indicator data reported to the NRC. The inspectors reviewed the licensee's records associated with the performance indicator to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the

Nuclear Energy Institute guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the performance indicator; assessments of performance indicator opportunities during predesignated control room simulator training sessions, performance during the 2013 biennial exercise, and performance during other drills. The specific documents reviewed are described in the attachment to this report.

These activities constitute completion of the drill/exercise performance sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.5 Emergency Response Organization Drill Participation (EP02)

a. Inspection Scope

The inspectors sampled licensee submittals for the Emergency Response Organization Drill Participation performance indicator for the period July 2012 through September 2013. The definitions and guidance of Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, were used to determine the accuracy of the performance indicator data reported to the NRC. The inspectors reviewed the licensee's records associated with the performance indicator to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the Nuclear Energy Institute guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the performance indicator, rosters of personnel assigned to key emergency response organization positions, and exercise participation records. The specific documents reviewed are described in the attachment to this report.

These activities constitute completion of the emergency response organization drill participation sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.6 Alert and Notification System (EP03)

a. Inspection Scope

The inspectors sampled licensee submittals for the Alert and Notification System performance indicator for the period July 2012 through September 2013. The definitions and guidance of Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, were used to determine the accuracy of the performance indicator data reported to the NRC. The inspectors reviewed the licensee's records associated with the performance indicator to verify that the licensee

accurately reported the indicator in accordance with relevant procedures and the Nuclear Energy Institute guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the performance indicator and the results of periodic alert notification system operability tests. The specific documents reviewed are described in the attachment to this report.

These activities constitute completion of the alert and notification system sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

.1 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.

.2 Semiannual Trend Review

a. Inspection Scope

The inspectors reviewed the licensee's corrective action program, performance indicators, system health reports, division and station roll up reports, and other documentation to identify trends that might indicate the existence of a more significant safety issue. The inspectors verified that the licensee was taking corrective actions to address identified adverse trends.

These activities constitute completion of one semiannual trend review sample, as defined in Inspection Procedure 71152.

b. Findings

No findings were identified.

.3 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors selected one issue for an in-depth follow-up:

- On December, 16, 2013, repetitive train A Class 1E air conditioning unit failures. Failures of the component occurred on May 6, 2013, June 17, 2013, September 11, 2013, and October 18, 2013.

The inspectors assessed the licensee's problem identification threshold, cause analyses, extent of condition reviews and compensatory actions. The inspectors verified that the licensee appropriately prioritized the planned corrective actions and that these actions were adequate to correct the condition.

These activities constitute completion of one annual follow-up sample, as defined in Inspection Procedure 71152.

b. Findings

Failure to Preclude Repetition of a Significant Condition Adverse to Quality Affecting the Train A Class 1E Air Conditioning Unit

Introduction. A Green self-revealing non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," was identified for failure to preclude repetition of a significant condition adverse to quality. Specifically, the licensee failed to determine the cause of the train A Class 1E air conditioner slug flow in the refrigerant prior to experiencing multiple failures and plant shutdowns of the train A Class 1E air conditioner slug flow in the refrigerant.

Description. On May 6, 2013, Wolf Creek entered Technical Specification 3.0.3 action statements for a non-functional train A Class 1E air conditioning unit, after observing an unexplained rise in room temperatures, and a low refrigerant flow rate. Troubleshooting determined that the cause of the event was a failed charcoal filter. The filter support had been over-torqued forcing the ceramic charcoal filter into the piping. The end of the filter partially shattered, introducing debris into the process refrigerant. This debris subsequently clogged the thermal expansion valves. Part of the corrective actions under Condition Report 68760, and performed on May 8, 2013, under Work Order 13-370447-007, was to chemically flush the process piping to remove the remaining debris. It was noted by workers performing the flush that a fraction of the flushing chemical, Rx-11, was not able to be recovered.

The train A Class 1E air conditioner was restored after a compressor replacement based on satisfactory post-maintenance testing.

On June 17, 2013, Wolf Creek again entered Technical Specification 3.0.3 action statements for a non-functional train A Class 1E air conditioning unit due to high compressor vibrations, likely caused by slug flow through the compressor. Wolf Creek requested and was granted a Notice of Enforcement Discretion (NOED) to continue operating for seven days to allow time to replace the compressor online. The train A Class 1E air conditioner was restored on June 21, 2013. Condition Report 70482 was initiated to determine the cause. The screening review team assigned a level two root cause analysis per station procedure AI 28A-020, Step 6.3.5, because they concluded that the condition was a significant condition adverse to quality. They based this decision on the fact that since the condition results in a Technical Specification 3.0.3 plant shutdown to Mode 5, therefore if left uncorrected, would constitute a serious effect on operability if it were to recur. The inspectors concluded that the level two significance assigned to the condition report was appropriate.

The inspectors reviewed the written NOED request (ADAMS ML1317A417), and observed that it assumed that failure was internal to the compressor assembly replaced in May, based on the compressor vibrations, monitoring of the thermal expansion valves, and aluminum in the oil. The NOED specified the most likely cause was slug flow caused by high oil level or malfunctioning thermal expansion valves. However both of the potential mechanisms specified to induce the NOED were not observed in subsequent maintenance to replace the compressor again. Specifically the excessive oil level expected was not found, a proper amount and type of oil was recovered from the compressor, and the thermal expansion valves were observed to be working properly when tested. Early stages of the root cause analysis also focused almost exclusively on the compressor, and an extensive hardware failure analysis was performed, which confirmed the slugging but could not identify the cause.

On September 11, 2013, Wolf Creek again observed high compressor vibration on the train A Class 1E air conditioning unit. Subsequent oil analysis also showed elevated particulates in the oil. The licensee concluded that compressor failure was approaching and it could no longer be relied upon to meet its 30 day mission time. The plant shut down for another unplanned outage to replace the compressor. On September 29, 2013, Wolf Creek restarted. The ongoing root cause analysis was expanded to include the September 11, 2013, failure under Condition Report 70482.

Another failure of the train A Class 1E air conditioner occurred on October 18, 2013, and another unplanned outage ensued for repairs. In this instance a pressure switch had failed due to the same process fluid fouling a different portion of the system, so even though the symptoms were different in this case, the root cause of the failure was the same. The pressure switch was replaced and the unit was restarted on October 28, 2013.

On November 7, 2013, the root cause analysis performed under Condition Report 70482, was approved by the station's corrective action review board. The report concluded that the vibrations and slugging was most likely induced by leftover flushing chemicals and debris that have been subsequently loosened into the process fluid,

causing partial flow restriction at the thermal expansion valves. Wolf Creek is regularly monitoring the compressors and it is likely that they will perform satisfactorily until the mid-cycle outage in spring 2014. The root cause analysis also determined that the work performed under Work Order 13-370447-007, was not in accordance with station procedural requirements. Specifically station procedure AP 12-002, "Internal/External System Cleanliness," Revision 7, Step A.3.4.c, requires that the system cleanliness shall be evaluated by examining a 14-mesh or finer filter, installed on the outlet of the cleaning circuit.

Because the licensee was unable to clearly identify the root cause, the final report was in fact documented the most probable cause based on the analyses performed.

Failure to preclude repetitive failures of the train A Class 1E air conditioner, a significant condition adverse to quality, is a performance deficiency.

Analysis. Failure to preclude repetitive failures of the train A Class 1E air conditioner, a significant condition adverse to quality, is a performance deficiency. The performance deficiency is more than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically the leftover debris in the system resulted in a subsequent maintenance outage to replace rapidly degrading components. Using the Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because the finding did 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 did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The inspectors determined that the cause of the finding had a cross-cutting aspect in the area of human performance. The licensee did not ensure complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components. Specifically applicable housekeeping requirements detailed in station procedure AP-12-002 "Internal/External System Cleanliness" were not met during the chemical cleaning of system piping on May 8, 2013, [H.2(c)].

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," states "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition." Contrary to the above, between September 11 and October 18, 2013, the licensee failed to preclude repetition of a significant condition adverse to quality. Specifically, the train A Class 1E air conditioning unit had to be removed from service due to internal debris on June 17, September 11, and October 18, 2013 before the cause was identified and corrected. Because the violation was of very low safety significance (Green) and was entered into the licensee's corrective action program as Condition Report 78709, it is being treated

as a non-cited violation in accordance with Section 2.3.2.a of the NRC's Enforcement Policy: NCV 05000482/2013005-03, "Failure to Preclude Repetition of a Significant Condition Adverse to Quality Affecting Class 1E Air Conditioning Unit."

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

- .1 (Closed) Licensee Event Report 05000482/2012-005-00: Calculation Assumptions Lead to Inadequate Procedure, Resulting in LCO 3.0.3 Entry Due to Non-Functional Class 1E Electrical Equipment Air Conditioning Unit

The cause of this event and the resulting corrective actions were reviewed. The corrective actions, even after revisions to the calculations, required plant modifications to install compensatory measures to support operability of the cooled loads when one chiller was unavailable. Those modifications were inspected and documented in section 1R18 of this report.

This licensee event report is closed.

- .2 (Closed) Licensee Event Report 05000482/2013-006-01: Technical Specification Required Shutdown Due to a Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit

The cause of this event and the resulting corrective actions were reviewed. The inspectors observed this event was part of a trend in failures of the Class 1E Air Conditioning Units. Based on corrective action program trends, the inspectors performed an annual problem identification and resolution in-depth review inspection in accordance with Inspection Manual Chapter 71152. The scope of that inspection as well as associated findings are documented in section 4OA2.3 of this report.

This licensee event report is closed.

- .3 (Closed) Licensee Event Report 05000482/2013-007-01: Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit Results in Longer than Technical Specification Completion Time

The cause of this event and the resulting corrective actions were reviewed. The inspectors observed this event was part of a trend in failures of the Class 1E Air Conditioning Units. Based on corrective action program trends, the inspectors performed an Annual Problem Identification and Resolution in-depth review inspection in accordance with Inspection Manual Chapter 71152. The scope of that inspection as well as associated findings are documented in section 4OA2.3 of this report.

This licensee event report is closed.

- .4 (Closed) Licensee Event Report 05000482/2013-008-00: Technical Specification Required Shutdown Due to a Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit

The cause of this event and the resulting corrective actions were reviewed. The inspectors observed this event was part of a trend in failures of the Class 1E air conditioning units. Based on corrective action program trends, the inspectors performed an annual problem identification and resolution in-depth review inspection in accordance with Inspection Manual Chapter 71152. The scope of that inspection as well as associated findings are documented in section 4OA2.3 of this report.

This licensee event report is closed.

.5 (Closed) Licensee Event Report 05000482/2013-010-00: Technical Specification Required Shutdown Due to a Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit

The cause of this event and the resulting corrective actions were reviewed. The inspectors observed this event was part of a trend in failures of the Class 1E Air Conditioning Units. Based on corrective action program trends, the inspectors performed an Annual Problem Identification and Resolution in-depth review inspection in accordance with Inspection Manual Chapter 71152. The scope of that inspection as well as associated findings are documented in section 4OA2.3 of this report.

This licensee event report is closed.

.6 (Closed) Unresolved Item 05000482/2013003-07: Notice of Enforcement Discretion (NOED) 13-4-002 for a Non-Functional Class 1E Air Conditioning Unit

The cause of this event and the resulting corrective actions were reviewed. The inspectors observed this event was part of a trend in failures of the Class 1E Air Conditioning Units. Based on corrective action program trends, the inspectors performed an Annual Problem Identification and Resolution in-depth review inspection in accordance with Inspection Manual Chapter 71152. The scope of that inspection as well as associated findings are documented in section 4OA2.3 of this report.

The inspectors concluded that the basis for the NOED was appropriate as defined in Inspection Manual Chapter 0410. Some of the information used to make this decision, although complete and accurate to the best of the licensee's knowledge at the time, was not in fact correct. Specifically the licensee's repair plan did not address what was eventually determined to be the root cause and did not preclude repetition of the failure.

The cause of the need for this NOED was determined to be inadequate cleaning of the chiller internals following loss of control over the charcoal from a filter. A violation was identified for the cause of the chiller failure that led to the request for the NOED and is documented in section 4OA2 of this report.

This unresolved item is closed.

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

40A5 Other Activities

(Closed) Unresolved Item 05000482/2012005-03: Remediation Training and Reevaluation of Two Individual Performance Deficiencies

NRC Integrated Inspection Report 05000482/2012005 documented an unresolved item associated with the remediation and reexamination (RR) of two licensed operators. The two operators were unable to complete their RR prior to completion of the biennial cycle that ended in 2012; therefore, the NRC was unable to complete the assessment of that aspect of the licensee's requalification program in accordance with Inspection Procedure 71111.11.

The inspector reviewed the two remediation plans and reexamination results that were completed on January 16, and March 6, 2013, for the two operators, respectively. The assessment of the licensee's requalification program for the biennial cycle ending in 2012 is complete, and there are no additional issues of concern with respect to the remediation training and reexamination that occurred for the biennial cycle ending in 2012.

No violation pertaining to the unresolved item was identified.

This unresolved item is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On September 30, 2013, the inspectors discussed the preliminary scenario for the 2013 biennial exercise with Mr. T. East, Superintendent of Emergency Planning, and other members of the licensee's staff. The licensee acknowledged the issues presented.

On November 7, 2013, the inspectors presented the final triennial heat sink inspection results to Mr. M. Sunseri, President and CEO, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On November 8, 2013, the inspector presented the results of the onsite inspection of the licensee's biennial emergency preparedness exercise to Mr. M. Sunseri, President and Chief Executive Officer, and other members of the licensee's staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On December 12, 2013, the lead inspector obtained the annual examination results and telephonically exited with Ms. L. Rockers, Licensing. The inspector did not review any proprietary information during this inspection.

On December 31, 2013, the inspectors presented the resident inspection results to Mr. R. Smith, Site Vice President, 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.

On January 29, 2014, the inspectors discussed the characterization of an issue identified at the November 5, 2013, exercise as an Unresolved Item in a conference call with Mr. W. Mulenburg, Supervisor, Licensing. The licensee acknowledged the issues presented.

On February 6, 2014, the inspectors discussed the final characterization of the two resident findings with Mr. R. Smith, Site Vice President and other members of the licensee staff.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

T. Baban, Manager Systems Engineering
P. Bedgood, Manager, Radiation Protection
M. Brinkmeyer, Fire Protection Technician
J. Broschak, Vice President Engineering
A. Camp, Plant Manager
D. Campbell, Superintendent Electrical Maintenance
R. Clemens, Vice President Strategic Projects
D. Erbe, Manager Security
B. Evans, Training
K. Fredrickson, Licensing
S. Henry, Manager Operations
R. Hobby, Licensing Engineer
T. Jensen, Manager Chemistry
A. Keneipp, Supervisor Quality
N. Mayhew, Program Engineer
M. McMullen, Design Engineer
W. Muilenburg, Supervisor Licensing
E. Peterson, Ombudsman
L. Ratzlaff, Manager Maintenance
T. Slenker, Operations CAPCO
R. Smith, Site Vice President
M. Sunseri, President and CEO
M. Westman, Manager Regulatory Affairs
S. Wideman, Licensing Engineer
J. Wilson, Program Engineer
J. Yunk, Manager Corrective Actions

NRC Personnel

B. Parks, Project Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000482/2013005-03	URI	Apparent inaccuracy in licensee dose assessment software (1EP5)
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Opened and Closed

05000482/2013005-01	FIN	Failure Rates Exceed Twenty Percent for Annual Requalification Operating Tests (Section 1R11.3)
05000482/2013005-02	NCV	Failure to Assess Risk Prior to Performing Online Maintenance to an Offsite Power Circuit Component (Section 1R13)
05000482/2013005-04	NCV	Failure to Preclude Repetition of a Significant Condition Adverse to Quality Affecting Class 1E Air Conditioning Unit (Section 4OA2.3.b)

Closed

05000482/2012-005-00	LER	Calculation Assumptions Lead to Inadequate Procedure, Resulting in LCO 3.0.3 Entry Due to Non-Functional Class 1E Electrical Equipment Air Conditioning Unit (Section 4OA3)
05000482/2013-006-01	LER	Technical Specification Required Shutdown Due to a Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit (Section 4OA3)
05000482/2013-007-01	LER	Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit Results in Longer than Technical Specification Completion Time (Section 4OA3)
05000482/2013-008-00	LER	Technical Specification Required Shutdown Due to a Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit (Section 4OA3)
05000482/2013-010-00	LER	Technical Specification Required Shutdown Due to a Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit (Section 4OA3)
05000482/2013003-07	URI	Notice of Enforcement Discretion (NOED) 13-4-002 for a Non-Functional Class 1E Air Conditioning Unit (Section 4OA3)
05000482/2012005-03	URI	Remediation Training and Reevaluation of Two Individual Performance Deficiencies (Section 4OA5.1)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
SYS KU-122	Energizing NB02 from Station Blackout Diesel Generators	0
SYS KU-121	Energizing NB01 from Station Blackout Diesel Generators	0

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OFN NB-030	Loss of AC Emergency Bus NB01 (NB02)	31
EMG C-0	Loss of All AC Power	31A
CKL KU-120	SBO DG Component Checklist	1
ALR 00-020F	SBO DG System Trouble	0

Section 1R04: Equipment Alignment

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CKL BG-130	Chemical And Volume Control Switch and Breaker Lineup	30
CKL BN-120	Refueling Water Storage System Lineup	14A
CKL EM-120	Safety Injection System Lineup Checklists	26
CKL EJ-120	RHR System Lineup	42
SYS KJ-121	Diesel Generator NE01 and NE02 Lineup for Automatic Operation	49

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-12BG03	Piping and Instrumentation Diagram Chemical and Volume Control System	48
M-12EM02	Piping and Instrumentation Diagram High Pressure Coolant Injection System	20
M-12EJ01	Piping and Instrumentation Diagram Residual Heat Removal System	48
M-12BN01	Piping and Instrumentation Diagram Borated Refueling Water Storage System	15
M-12KJ04	Piping and Instrumentation Standby Diesel Generator "B" Cooling Water	16
M-12KJ05	Piping and Instrumentation Standby Diesel Generator "B" Intake Exhaust, F.O., and Starting Air Systems	16
M-12KJ06	Piping and Instrumentation Standby Diesel Generator "B" Lube Oil System	18

Section 1R05: Fire Protection

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision/ Date</u>
2013-599	Breach Authorization Permit	October 9, 2013
AP10-106	Fire Preplans	14
AP10-104	Breach Authorization	27
OFN KC-016	Fire Response	38

Condition Report

74959

Section 1R07: Heat Sink Performance

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 23L-002	Heat Exchanger Program	3A
QCP-20-518	Visual Examination of Heat Exchangers and Piping Components	7
STN PE-037B	ESW Train B Heat Exchanger Flow and DP Trending	19
STN PE-036	Safety Related Room Cooler Heat Transfer Verification and Performance Trending	16
STN PE-037A	ESW Train A Heat Exchanger Flow and DP Trending	16
AP 23L-002	Heat Exchanger Program	3A
STN PE-037A	ESW Train A Heat Exchanger Flow and DP Trending	14

Drawings

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-612C-00013, Sht 1	Type "R" Coil 31 Tube Face – Carrier Replacement 6 Row – 1 Pass (1 ½ Circuit), Left Hand	W07

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-612C-00017, Sht 1	Type "R" Coil 25 Tube Face – Carrier Replacement 6 Row – 1 Pass (1 ½ Circuit), Left Hand	W07
M-11EF01	System Flow Diagram Essential Service Water	09

Condition Reports

76016	76017	76173	76189	76215
76015	76149	76215	76008	76013
76014				

Work Orders

09316552005	09316552011	07300441006	07300441005	07300441011
0931655204	09316552010	11346020000	11346020001	11346020007
09316552000	09316552006	09316552001	11346019000	11346019007
11346019001	11346019003	11347363000	12361397000	12354784000
07293580007	11349274000	04259616008	12357686000	11344314000
06282420009	11344314002	11346019001		

Calculations

<u>Number</u>	<u>Title</u>	<u>Revision</u>
KJ-M-011	EKJ03A/B Thermal Performance Calculation	0
KJ-M-012	EKJ04A/B Thermal Performance Calculation	0
KJ-M-015	EKJ06A/B Thermal Performance Calculation	0
M-1HX001	Heat Exchanger Tube Sheet Map Diesel Generator Intercooler "B" EKJ03B	63
M-1HX001	Heat Exchanger Tube Sheet Map Diesel Generator Jacket Water Heat Exchanger "B" EKJ06B	68
M-1HX001	Heat Exchanger Tube Sheet Map Diesel Generator Lube Oil Cooler "B" EKJ04B	63
GF-01-W	Cooling Load – Motor Driven Auxiliary Feedwater Pump Rooms	0
GF-01-W-000- CN001	Cooling Load – Motor Driven Auxiliary Feedwater Pump Rooms	0

Calculations

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-612C-00015	CA-819-1, Performance Calculations & Curves	W02
M-612B-00010	CA-819, Performance Calculations & Curves	W01

Vendor Document

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-018C-00002	Instruction Manual for EDG Heat Exchangers Storage, Installation, Operation and Maintenance Instruction Manual	W03

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-018C	Design Specification for Replacement Intercooler Water Heat Exchangers for the Wolf Creek Generating Station	02
M-018B	Design Specification for Replacement Emergency Diesel Generator Lube Oil Heat Exchanger for the Wolf Creek Generating Station	01
M-018E	Design Specification for Replacement Jacket Water Heat Exchangers ASME Code Section III Class 3	03
DCP 05475	SGF02B Low Flow Acceptance	00
M-612C	Technical Specification for Aerofin "Type R" Replacement Room Cooler Coils	02
M-612C-00025	Aerofin Maintenance Instruction for Aerofin Coils	W02
M-612C-VDS-00002	Vendor Data Sheet for SGL09A/B, SGL10B, and SGL13A	W01
M-612C-VDS-00004	Equipment Data Sheet SGL11B, 12B, 15A, SGF02A & 2B	W01

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 21-001	Conduct of Operations	66
GEN 00-003	Minimum Load to Hot Standby	92

Lesson Plan

<u>Number</u>	<u>Title</u>	<u>Revision</u>
LR1000001	Reactivity Management	12

Miscellaneous

<u>Title</u>	<u>Date</u>
Operating Test Results	December 12, 2013

Section 1R12: Maintenance Effectiveness

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STN FP-209	Electric Motor Driven Fire Pump Monthly Operation	17
STN FP-212	Fire Pump Performance Tests	22
INC C-1000	Calibration of Miscellaneous Components	7A
INC C-0039	SSPS Universal Board	5B

Condition Reports

28474	29028	29031	29559	29985
32221	33899	36990	37269	41819
43637	46348	46398	46607	46783
46784	53235	54864	55252	55260
55755	56321	56771	57782	58848
58853	59418	60058	60377	60385
61756	61757	61986	62018	62553
62594	68852	68971	69856	70967
72434	73171	73500	73911	74039

74578 75107 74701 77030

Work Orders

11-345439-000	13-375755-000	13-370858-000	11-349118-000	12-352986-000
12-356427-000	12-354488-000	12-356465-000	12-356483-000	12-357234-000
12-357466-000	12-358320-000	12-353122-001	12-353122-003	11-343861-000

Work Request

11-089840	13-102846	13-101188	11-091806	12-097297
12-094639	12-095362	12-095363	12-095754	12-095896
12-096294	13-103300			

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Date</u>
NUMARC 93-01	Assessment of Risk Resulting from Performance of Maintenance Activities	May 1993
12-11-CHM	Quality Assurance Audit Report: Chemistry	January 18, 2012
	INPO Document and WCNOC Response Withheld	

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 22C-003	On-Line Nuclear Safety and Generation Risk Assessment	20
SYS SC-330	Deenergizing Process Rack Uninterruptible AC Power Source	17
TMP 13-031	Deenergizing and Energizing Primary Power Supply for RP043	0

Condition Reports

77091	76422
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Weekly Risk Assessments

<u>Number</u>	<u>Title</u>	<u>Date</u>
13 Week 407	Weekly Scheduler's Risk Report	November 11, 2013
13 Week 409	Weekly Scheduler's Risk Report	November 25, 2013
13 Week 410	Weekly Scheduler's Risk Report	December 2, 2013

Weekly Major Activities Summary

<u>Number</u>	<u>Title</u>	<u>Date</u>
2013 407	Weekly Major Activities Summary	November 11, 2013
2013 409	Weekly Major Activities Summary	November 25, 2013
2013 410	Weekly Major Activities Summary	December 2, 2013

Miscellaneous

Title

Control Room Operators Logs

Section 1R15: Operability Determinations and Functionality Assessments

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 26C-004	Operability Determination and Functionality Assessment	29

Condition Reports

75713	77001	77007	77462	77472
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Operability Evaluation

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OE FC-13-009	Auxiliary Feedwater Pump PAL02 Turbine Casing Steam Leak	0

Section 1R18: Plant Modifications

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
SYS GK-200	Non-Functional Class 1E A/C Unit	28

Drawing

<u>Number</u>	<u>Title</u>	<u>Revision</u>
E-11NG21	Low Voltage System Class 1E Motor Control Center Distribution Panel Summary	28

Condition Reports (CRs)

74320	75659	75660	75885
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Work Order

13-373740-076

Change Packages

<u>Number</u>	<u>Title</u>	<u>Revision</u>
014503	Evaluation of Fans in Class 1E Equipment Rooms	7
014512	Safety Related Power for Temp Fans Between SGK05A & B Areas	3

Calculations

<u>Number</u>	<u>Title</u>	<u>Revision</u>
GK-06-W	SGK05A/B Class 1E Electrical Equipment Rooms A/C Units, Single Unit Operation Capability	5
GK-06-W	SGK05A/B Class 1E Electrical Equipment Rooms A/C Units, Single Unit Operation Capability	4

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision</u>
USAR	Wolf Creek Updated Safety Analysis Report	26

Section 1R19: Post-Maintenance Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STS IC-530D	Channel Calibration Wide Range Temperature and Wide Range Pressure Instrumentation Protection Set One	24
STS IC-530E	Channel Calibration Wide Range Temperature and Wide Range Pressure Instrumentation Protection Set Two	2
MGE TS-001	Wiring Termination and Lug/Connector Installation	
CNT ME-507		
AP 12-003	Foreign Material Exclusion	

Work Orders

12-352649-000	12-356877-000	12-356877-001
12-356507-001	13-372573-000	13-370842-000

Section 1R22: Surveillance Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STS BB-006	RCS Water Inventory Balance Using the NPIS Computer	10
STS SE-001	Power Range Adjustment to Calorimetric	33
STS AL-102	MDAFW Pump B Inservice Pump Test	39A
STN PE-040G	Transient Event Walkdown	6
STN IC-209	Channel Calibration Pressurizer Relief Discharge Temperature	6

Drawing

<u>Number</u>	<u>Title</u>	<u>Revision</u>
M-13AL03	Piping Isometric Motor Driven Aus Feedwater Pump "B" Discharge Piping	07

Condition Reports

75750	710738
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Work Order

13-369073-000

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Date</u>
RT#4320	WCNOC Radiography Report for Component Wall thinning	September 14, 2013

Section 1EP1: Exercise Evaluation

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
APF 06-002-01	Emergency Action Levels	17
AP 17C-028	Emergency Response Duties and Responsibilities	13
EP 06-001	Control Room Operations	19
EP 06-002	Technical Support Center Operations	34A
EP 06-003	Emergency Operations Facility Operations	20A
EP 06-005	Emergency Classification	7
EP 06-006	Protective Action Recommendations	9
EP 06-007	Emergency Notifications	20A
EP 06-009	Drill and Exercise Requirements	8
EP 06-011	Emergency Team Formation and Control	8
EP 06-012	Dose Assessment, Oct-28-2013	13
EP 06-012	Dose Assessment, Sep-13-2012	12B
EP 06-015	Emergency Response Organization Callout	12B
	Followup Assessment and Report, January 13, 2012, Event	
	Followup Assessment and Report, March 4, 2013, Event	January 26, 2012
	Followup Assessment and Report, March 16, 2013, Event	March 5, 2013
	Followup Assessment and Report, April 13, 2013, Event	March 16, 2013

	2009 Biennial Exercise Scenario Timeline	April 23, 2013
11-EVAL-EX	Exercise Scenario Timeline	
13-PRE-01	Exercise Scenario Timeline	
13-PRE-02	Exercise Scenario Timeline	
	Evaluation Report for the August 9, 2012, Exercise	
	Evaluation Report for the October 23, 2012, Exercise	
	Evaluation Report for the November 6, 2012, Exercise	
	Evaluation Report for the November 13, 2012, Exercise	
	Evaluation Report for the July 8, 2013, Exercise	
	Evaluation Report for the July 10, 2013, Exercise	
	Evaluation Report for the August 20, 2013, Exercise	
	Evaluation Report for the August 22, 2013, Exercise	
	Evaluation Report for the October 9, 2013, Exercise	

Section 1EP4: Emergency Action Level and Emergency Plan Changes

<u>Number</u>	<u>Title</u>	<u>Revision</u>
Form APF 06-002-01	Emergency Action Levels	17
AP 06-002	Radiological Emergency Response Plan (RERP)	15
EPP 06-002	Technical Support Center Operations	34A

Section 1EP5: Maintenance of Emergency Preparedness

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
CE 22 356 10	Workbook: Offsite Dose Projection using EDCP Workbook, June 26, 2012	1
CE 12 356 10	Lesson Plan: Offsite Dose Projection using EDCP, June 26, 2012	11
GE 13 356 01	Lesson Plan: E-Plan Dynamic Learning Activity for	2

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	Email, Ken Thrall, to Shift Managers, Technical Support Center Site Emergency Managers, and Emergency Operations Facility Offsite Emergency Managers	November 7, 2013
	Unit Vent, Table of Ranges and Alarm Set Points	November 7, 2013
Service Request 126710	EDCP issues documented in CR 59826 and CR 59832	January 8, 2013
	Weekly Schedule, Chemistry Continuing Training Cycle 13-Q2, April 15 to May 21, 2013	
	Weekly Schedule, Chemistry Continuing Training Cycle 13-Q3, July 8 to August 15, 2013	

Condition Reports (Corrective Action Program)

48268	49240	50872	51428	54279	55060	55066	55071	59554	59832
67808	68404	70209	70212	70220	70229	70876	70899	71332	71347
72965	73101	73735	74632						

Section 40A1: Performance Indicator Verification

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	6 and 7
WCNOC-163	Mitigating Systems Performance Index Basis Document	9
EP 06-019	Alert and Notification System Sirens	7
EP 06-022	Tone Alert Radio Maintenance/Compensatory Actions	5
AI 26A-004	Emergency Planning Performance Indicators	6
AP 34-003	Performance Indicator Program	0A

MISCELLANEOUS DOCUMENT

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AP 06-002	Wolf Creek Station Radiological Emergency Response Plan	15

Section 40A2: Problem Identification and Resolution

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AI 28A-010	Screening Condition Reports	17
AP 12-002	Internal/External System Cleanliness	7
AP 28A-100	Condition Reports	20A

Condition Reports

70482	76481	75337	70482	76481
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Work Orders

13-370447-007	13-379314-000	13-379314-001	13-379314-009	13-379314-008
13-379314-005	13-379314-002	13-379314-003	13-375890-007	13-379314-010

Licensee Event Reports

<u>Number</u>	<u>Title</u>	<u>Date</u>
2013-007-01	Non-functional Class 1E Electrical Equipment Air Conditioning Unit Results in Longer than Technical Specification Completion Time	November 14, 2013
2013-008-00	Technical Specification Required Shutdown due to a Nonfunctional Class 1E Electrical Equipment Air Conditioning Unit	November 12, 2013

Performance Improvement Roll-Up Reports

<u>Title</u>	<u>Date</u>
Maintenance Department Roll-Up Meeting Results, Quarter 3-2013	October 26, 2013
Engineering Department Roll-Up Meeting Results, Quarter 3-2013	October 26, 2013
Chemistry Department Roll-Up Meeting Results, Quarter 3-2013	October 26, 2013
Health Physics Department Roll-Up Meeting Results, Quarter 3-2013	October 26, 2013
Security Department Roll-Up Meeting Results, Quarter 3-2013	October 26, 2013

Performance Improvement Roll-Up Reports

Station Roll-Up Performance Results, Quarter 2-2013	August 23, 2013
Station Roll-Up Performance Results, Quarter 3-2013	November 22, 2013
Strategic Projects Department Roll-Up Meeting Results, Quarter 3-2013	November 1, 2013
Training Department Roll-Up Meeting Results, Quarter 3-2013	October 26, 2013
Ops Department Roll-Up Meeting Results, Quarter 3-2013	October 26, 2013

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Date</u>
NOED Request Docket 50-482	Request for Notice of Enforcement Discretion for Technical Specification Limiting condition for Operation (LCO) 3.0.3, TS 3.8.4, "DC Sources – Operating," TS 3.8.7, "Inverters – Operating," and TS 3.8.9 "Distribution Systems – Operating"	June 19, 2013