Wolf Creek 1
4Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2009
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Fuse Thermography Procedure Resulted in Blown Fuses and Unplanned Reactor Trip
A self-revealing finding was identified for an inadequate thermography maintenance procedure. Inadequate procedural guidance resulted in thermography failing to identify an overheated fues which resulted in a reactor trip due a loss of power to a main feed regulating valve controller. On April 28, 2009, the main feedwater regulating valve controller power supply fuses blew, isolating flow to steam Generator B. The fuses blew due to overheating of the fuse holder. Wolf Creek's root cause found that vendor information was previously used in 1995 to detect a process cabinet main power fuse holder that was hot. However, this guidance was not incorporated into the preventive maintenance thermography procedure. This issue was entered into the corrective action program as Condition Report 00016455. Failure to develop an adequate maintenance procedure for the 7300 process rack fuses was a performance deficiency. The inspectors determined that this finding was more than minor because it is associated with the procedure quality attribute of the Initiating Events cornerstone and it affected the cornerstone objective to limit the likelihood of those events that upset plant stability. The inspectors evaluated the significance of this finding using Inspection Manual Chapter 0609.04, and determined the finding to be Green because it did not result in both a reactor trip and loss of accident mitigation equipment. Consequently, this finding was determined to be of very low safety significance (Green). The inspectors also determined that the cause of the finding has a crosscutting aspect in the problem identification and resolution area associated with operating experience because Wolf Creek failed to use vendor information to assure plant safety. Specifically Wolf Creek utilized but failed to subsequently institutionalize operating experience in 1995 and 2009 by updating the thermography maintenance procedure.
Inspection Report# : 2009003 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: VIO Violation
Failure to correct component cooling water valve closures
The inspectors identified a cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," involving Wolf Creek's failure to correct the cause of the reactor coolant pump thermal barrier component cooling water heat exchanger outlet valves stroking closed on high flow. Specifically, between 2001 and 2009, Wolf Creek experienced repeated cases of the reactor coolant pump thermal barrier component cooling water heat exchanger outlet valves stroking closed during component cooling water pump swaps and during isolations of the radioactive waste evaporators. Wolf Creek reinitiated evaluation of the issue after the inspector's questions but did not review the impact on the operators' ability to open the valves given the valves' circuit breakers opening. Repeated throttle valve adjustments have not been successful in stopping the valve closures. This issue and the corrective actions are being tracked by the licensee in Condition Report 2007 002074 and has corrective action pending to modify valve circuitry but it has not been implemented.
The failure to correct a condition adverse to quality of ensuring reactor coolant pump seal cooling as described in the Updated Safety Analysis Report is a performance deficiency. The finding is more than minor because it is associated with the equipment performance attribute for the Initiating Events Cornerstone; and, it affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding was determined to be of very low safety significance because the finding would not result in exceeding the Technical Specification limit for identified reactor coolant system leakage and would not have affected other mitigation systems resulting in a total loss of the seal cooling safety function. This finding is being cited because the licensee failed to establish measures to assure this condition adverse to quality was promptly identified and corrected. This finding has a crosscutting aspect in the area of human performance associated with the decision making component because, even though numerous instances of valve closures occurred since the

first noncited violation, Wolf Creek downgraded the condition report. Using nonconservative assumptions, the licensee consistently viewed this issue as not having a risk impact because seal injection was not simultaneously lost. [H.1.b]

Inspection Report# : 2009002 *(pdf)*
Inspection Report# : 2009005 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inability to perform manual actions for risk assessment
The inspector identified a noncited violation of 10 CFR 50.65(a)(4) for failure to adequately assess and manage the increase in risk during fuse inspection of component cooling water valves supplying cooling loads inside containment. On March 18, 2009, component cooling water Valves EG HV 16 and EG HV-54 were out of service for fuse inspections to verify wiring for fire protection analyses. The inspectors observed that the evolution was not included in the weekly risk assessment and that operations and maintenance personnel did not have guidance or briefings for restoration of the valves. Review of the risk assessment revealed that the impact of de-energizing the valves in the closed position was neglected and that restoration actions credited by the risk analyst were unknown to the control room and craft workers. The issue was entered into the corrective action program as Condition Report 15318.
The failure to adequately assess and manage risk in accordance with AP 22C 003 and the preplanned risk assessment for the use of local actions to ensure component cooling water cooling to loads inside containment was a performance deficiency. The finding is more than minor because the licensee failed to effectively manage prescribed significant compensatory measures for maintenance activities that could increase the likelihood of initiating events. The finding was of very low safety significance because the magnitude of the calculated risk deficit was less than IE-6 even though risk management actions were not in place. The inspectors also determined that the finding has a human performance crosscutting aspect in the area associated with work control because the risk assessment procedure and clearance order procedure assumed local actions could be accomplished but there was no communication regarding this during the work planning stages [H.3(b)]

Inspection Report# : 2009004 *(pdf)*

Significance: G Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Use of Nonsafety Related Power to Ensure Operability of Safety Related Boric Acid System
The inspectors identified a noncited violation of 10 CFR 50 Appendix B, Criterion III, “Design Control,” for failing to translate the boric acid design basis into procedures that ensure time sensitive operator actions are completed to achieve the core shutdown margin specified in the core operating limits report. Performance Improvement Request 2005-3461 identified that if the room coolers were started while lake temperature was low, the boric acid solution temperature may decrease below the solubility limit. Corrective actions for heat tracing and room temperature logging took approximately 3 years to implement and stopped short of addressing boric acid system operation when nonsafety power is lost to the heat tracing and the plant must be taken to cold shutdown in accordance with technical specifications. The licensee entered this issue in their corrective action program as Condition Report 20717.
The failure to translate the design bases into procedures that ensure the function of the safety related boric acid system upon loss of nonsafety related heat tracing is a performance deficiency. The inspectors determined that this finding was more than minor because this issue aligned with Inspection Manual Chapter 0612, Appendix E, example 2.f, because the pipe temperature was required to stay above the boric acid solubility limit and the loss of the heat tracing and or room temperature decrease will block the boric acid system. This issue was 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. The inspectors evaluated the significance of this finding using Phase 1 of Inspection Manual Chapter 0609, Appendix A, "Significance

Determination of Reactor Inspection Findings for At Power Situations," and determined that the finding screened to phase 2 because the issue was a design or qualification deficiency confirmed to result in loss of operability or functionality The inspectors evaluated the significance of this finding using Phase 2 of Inspection Manual Chapter 0609, Risk Informed Inspection Notebook for Wolf Creek Generating Station, and determined that the finding was of very low safety significance because loss of the boric acid system in Table 3.9 for one year resulted in a 1E-7 CDF when giving recovery credit for the refueling water storage tank. The inspectors determined that this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because Wolf Creek did not take appropriate corrective actions to resolve known deficiencies in the design and operation of the boric acid system for approximately 4 years. The issue was re-evaluated in 2009, and the licensee failed to correct the deficiencies identified in 2005. [P.1.d]

Inspection Report# : 2009004 *(pdf)*

Significance: SL-IV Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Changes to the Approved Fire Protection Program Without Prior Staff Approval
The inspectors identified a Severity Level IV noncited violation of License Condition 2.C.(5), “Fire Protection,” for making changes to the approved fire protection program without the required prior Commission approval. Specifically, the licensee made a change to the Updated Safety Analysis Report that allowed the licensee to violate the requirements of 10 CFR Part 50, Appendix R, Section III.L. Specifically, when the licensee recognized that fire damage could cause a pressurizer power operated relief valve to open long enough to create a void in the reactor vessel, this was documented as acceptable when it was not in compliance with this regulatory requirement. The licensee entered this issue into their corrective action program as Performance Improvement Request 2008 004869. This finding was assessed using traditional enforcement since it had the potential for impacting the NRC’s ability to perform its regulatory function. This finding is more than minor since the change required prior staff review and approval prior to implementation and it did not receive the required approval. A senior reactor analyst performed a Phase 3 evaluation and determined this performance deficiency was of very low risk significance. In accordance with the guidance in Supplement I of the Enforcement Policy, this issue is considered a Severity Level IV noncited violation because it is of very low risk significance. This finding had a crosscutting aspect in the area of human performance associated with resources because the licensee failed to maintain long term plant safety by maintaining design margins. Specifically, the licensee’s choice to allow reactor vessel head voiding during an alternative shutdown in lieu of restoring the plant to compliance with the requirements of 10 CFR Part 50, Appendix R, Section III.L constituted a reduction in safety margin [H.2(a)]
Inspection Report# : 2009004 *(pdf)*

Significance: G Jun 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Testing Equipment Used for Alignment Verification of Emergency Diesel Lube Oil Piping
The inspectors identified a noncited violation for an inadequate control of measuring and test equipment used to verify the design basis of a safety related system. On June 2, 2009, Wolf Creek measured pipe gaps and angles of deflection associated with Smith-Blair couplings on the emergency diesel generator lube oil and jacket water systems. Wolf Creek used commercial grade tape measures and protractors to determine whether the piping met vendor and design requirements or if the piping had to be refitted. Some of the measurements indicated little or no margin from the maximum pipe gap tolerances. Instrument degradation and human error were not factored into the assessment of design margin when using commercial grade tools. The design specification called for a measurement to one-hundredth of one inch, whereas the tape measure was only graduated to one-sixteenth of one inch. This issue was entered into the corrective action program as Condition Report 00017781.
Failure to use appropriately qualified measuring and test equipment when verifying the design specifications of a safety related system was a performance deficiency. The inspectors determined that this finding was more than minor because it is associated with the design control attribute of the Mitigating Systems cornerstone and it affected the cornerstone objective to ensure the availability, reliability, and capability of mitigating systems. The inspectors evaluated the significance of this finding using Inspection Manual Chapter 0609.04, and determined the finding to be Green because it did not result in the loss of operability or functionality and was not affected by external events such as earthquakes or floods. Consequently, this finding was determined to be of very low safety significance (Green).

The inspectors also determined that the cause of the finding has a crosscutting aspect in the human performance area associated with work controls because Wolf Creek failed to place adequate instructions into the work order to assure that the use of the proper measuring and test equipment requirements were specified.

Inspection Report# : 2009003 *(pdf)*

Significance: G Jun 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Evaluation of Emergency Diesel Generator for Common Cause Failure in the Supporting Essential Service Water System
On June 30, 2009, the inspectors identified a noncited violation of Technical Specification 3.8.1 for failure to perform an adequate common cause evaluation within 24 hours to demonstrate no common cause failure mechanism existed between the emergency diesel generators after a through-wall leak was discovered on the essential service water piping. Wolf Creek did not start the opposite train emergency diesel generator and declared that the through-wall flaw was not a common cause failure without any evaluation or supporting statements. Nondestructive testing had not been started at this time. Subsequent evaluation of the flaw per American Society of Mechanical Engineers (ASME) Code Case N513.2 restored operability to the essential service water piping. The licensee entered this issue in their corrective action program as Condition Report 18347.
The inspectors determined that the failure to demonstrate, per Technical Specifications 3.8.1 Required Actions B.3.1 or B.3.2, that no common cause failure existed for the emergency diesel generators was a performance deficiency. The inspectors determined that this finding was more than minor because it is associated with the equipment performance attribute for 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. The inspectors evaluated the significance of this finding using Phase 1 of Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At Power Situations," and determined that the finding was of very low safety significance (Green) because the issue was not a design or qualification deficiency confirmed to result in loss of operability or functionality, did not represent a loss of system safety function, an actual loss of safety function of a single train for greater than its technical specification allowed outage time, an actual loss of safety function of a nontechnical specification risk-significant equipment train, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The cause of the finding has a problem identification and resolution crosscutting aspect in the area associated with the corrective action program because Wolf Creek failed to thoroughly evaluate the failure mechanism such that the resolutions address the causes and extent of conditions, as necessary. Specifically Wolf Creek did not properly consider the possibility of common-cause pitting failures which could have impacted the essential service water piping Train A structural integrity thereby affecting its cooling loads, including the Emergency Diesel Generator A [P.1(c)]

Inspection Report# : 2009004 *(pdf)*

Significance: G Jun 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate instructions for changing modes of operation of the residual heat removal system
The inspectors identified a noncited violation of Technical Specification 5.4.1, “Procedures,” associated with the licensee’s failure to ensure that adequate procedures were available for changing modes of operation of the residual heat removal system from shutdown cooling to emergency core cooling system operation. Specifically, station procedures allowed the residual heat removal system to be realigned to the emergency core cooling system mode of operation following operation in the shutdown cooling mode with suction temperatures as high as 350°F without properly cooling the entire suction header. This resulted in both trains of the residual heat removal system being inoperable during periods of operation in Modes 3 and 4. This issue was entered into the licensee’s corrective action program as Condition Reports 2008-3810 and 2008 4997.
The performance deficiency was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and it directly affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, the inspectors concluded

that a Phase 2 evaluation was required because this finding represented a loss of safety function of the residual heat removal system.

The inspectors performed a Phase 2 analysis using Appendix A, “Determining the Safety Significance of Reactor Inspection Findings for At-Power Situations,” of Inspection Manual Chapter 0609, “Significance Determination Process,” and the plant specific Phase 2 presolved tables and worksheets for Wolf Creek. The inspectors determined that the Phase 2 presolved tables and worksheets did not contain appropriate target sets to accurately estimate the risk input of the finding. Therefore, it was determined that a Phase 3 analysis was required. Senior risk analysts performed a Phase 3 analysis of this issue. The estimated Conditional Core Damage Probability was determined to be 2.84E-7, and the estimated Conditional Large Early Release Probability was determined to be 2.72E-9. Based on these results, the finding was determined to be of very low safety significance. This finding was determined to have a crosscutting aspect in the area of Problem Identification and Resolution associated with the corrective action program [P.1(c)], in that the licensee failed to appropriately and thoroughly evaluate problems such that the resolutions address the causes

Inspection Report# : 2009006 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Unacceptable preconditioning of control rods prior to surveillance testing
On February 6, 2009, the inspectors identified a noncited violation of 10 CFR 50 Appendix B, Criterion XI, “Test Control” for a procedure that allowed unacceptable preconditioning of the control rods prior to Technical Specification Surveillance 3.1.4.2. Wolf Creek did not perform any preconditioning acceptability review when adopting operating experience and revising Procedure STS SF-001. The licensee entered this issue into the corrective action program as Condition Report 2009-000598.
Unacceptable preconditioning of the control rods is a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the significance of this finding under the mitigating systems cornerstone using Phase 1 of Inspection Manual Chapter 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” and determined that the finding was of very low safety significance (Green) because, it did not represent an actual loss of safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding was determined to have a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the condition report that adopted the operating experience failed to evaluate NRC guidance regarding preconditioning during surveillance testing which should have disallowed the procedure change. Therefore, the applicable procedures were not complete and accurate.
Inspection Report# : 2009002 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: FIN Finding
Untimely corrective actions result in room temperature below boric acid solubility limit
The inspectors identified a finding for allowing low room temperature to cause a boric acid flow path to be inoperable. The inspectors reviewed a performance improvement request from 2005, which identified that boric acid could decrease below its limits if the room cooler was started while lake temperature was low which would render the system inoperable. The inspectors reviewed operator logs of safety injection Room A temperature data and found an instance where room temperature had decreased below the solubility limit for boric acid which had not been noted by operators. The licensee entered this issue into the corrective action program as Condition Reports 2009 000516 and 2009 001495.
The failure to implement the heat tracing corrective action within 3 years to maintain the boric acid injection piping operable during the winter is a performance deficiency. The inspectors determined that this finding was more than minor because this issue aligned with Inspection Manual Chapter 0612, Appendix E, example 2.f because the heat tracing was required by Condition Reports 2005-3461 and 2007-2472 but was not installed and the room temperature dropped below the boron solubility limit. The inspectors evaluated the significance of this finding using Phase 1 of

Inspection Manual Chapter 0609, Appendix G, Attachment 1, Checklist 3, and determined that the finding was of very low safety significance because Wolf Creek maintained shutdown margin in compliance with its Technical Specifications. No violation of regulatory requirements occurred. The inspectors determined that this finding has a cross cutting aspect in the area of human performance associated with the resources component because Wolf Creek did not maintain long term plant safety by not correcting this long term (3 years) equipment issue and its compensatory measure with the boric acid system.

Inspection Report# : 2009002 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Degraded fire barrier for auxiliary feedwater
The inspectors identified a noncited violation of License Condition 2.C(5)(a) for a degraded fire seal that separated redundant safe shutdown equipment. Specifically, a silicone foam seal and ceramic fiber board separating redundant motor driven auxiliary feedwater trains was degraded so that it no longer provided a 3 hour rated fire barrier. The licensee entered the finding into their corrective action program as Condition Report 2009-001087.
The finding was more than minor because it was similar to example 2.e. of NRC Inspection Manual Chapter 0612, Appendix E, “Examples of Minor Issues,” in that, the performance deficiency impacted the ability of the seal to perform its function. In addition, the performance deficiency was associated with the Mitigating Systems cornerstone attribute of Protection Against External Events, and affected the cornerstone objective to ensure the reliability of systems that respond to Initiating Events to prevent undesirable consequences. Under NRC Inspection Manual Chapter 0609, Appendix F, Attachment 2, “Degradation Rating Guidance Specific to Various Fire Protection Program Elements the finding was associated with a Moderate B degradation due to the seal not being in a tested or evaluated condition. Using Appendix F, Supplemental Screening for Fire Confinement Findings, the finding screens as Green due to exposing fire Area A33 featuring an automatic full area water-based suppression system. The inspectors determined that this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because Wolf Creek failed to identify the degraded seal and missing ceramic board during previous post waterhammer walkdowns.

Inspection Report# : 2009002 *(pdf)*

Significance: G Mar 31, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inattentive on-duty senior reactor operator
A self-revealing noncited violation of Technical Specification 5.4.1(a) was identified when an on-duty operations shift manager was observed to be inattentive on multiple occasions in 2004 and 2005. This limited his ability to monitor the safe operation of the plant, assist the control room supervisor with the control room command function, and respond in the event of an accident. The licensee entered this issue into the corrective action program as Condition Report 2008 000572.
The failure of the shift manager to remain attentive is considered a performance deficiency. This finding is more than minor because it adversely impacts the Human Performance attribute of the Mitigating Systems cornerstone, and if left uncorrected this performance deficiency has the potential to lead to a more significant safety concern because the shift manager plays an important role in the oversight of post-accident response by all licensed operators on shift. This issue was reviewed by NRC management using Inspection Manual Chapter 609, Appendix M, Significance Determination Process Using Qualitative Criteria. NRC management reviewed the qualitative factors involved with this finding and determined that this finding is Green. No crosscutting aspect was identified because the shift manager has not stood watch for several years, and therefore this issue was not considered current performance.

Inspection Report# : 2009002 *(pdf)*

Significance: G Mar 24, 2009
Identified By: NRC

Item Type: NCV NonCited Violation
Performing Prohibited Elective Maintenance on Safety Bus NB02 Channel 4 During Emergency Diesel Generator Maintenance
On August 22, 2009, the inspectors identified a noncited violation of Technical Specification 3.0.3 in which both trains of Technical Specification 3.3.2 engineered safety features actuation system interlock function 8.a were bypassed with jumper wires in accordance with a plant procedure. Function 8.a is the interlock for reactor trip signal coincident with lo Tave signal. Wolf Creek blocked the signal from the feedwater valves with jumper wires during control rod drive motor-generator testing in Mode 3. The inspectors and the NRR technical specification branch found this to be contrary to the Updated Safety Analysis Report, the technical specifications, the technical specification bases, and the NRC safety evaluations supporting the technical specifications. The licensee entered this issue in their corrective action program as Condition Report 19318.
The inspectors found that the failure to implement Technical Specification 3.3.2 interlock, function 8.a was a performance deficiency. The inspectors determined that this finding was more than minor because it is associated with the design control attribute of the Mitigating Systems Cornerstone and it affected the cornerstone objective to ensure the availability, reliability, and capability of mitigating systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors evaluated the significance of this finding using Inspection Manual Chapter 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” and screened the finding to Phase 2 because the finding represents a loss of a system’s function. The inspectors used Inspection Manual Chapter 0609, Appendix A and screened the finding to the NRC senior reactor analyst for review because there was not an acceptable equipment deficiency in the pre-solved worksheet. The senior reactor analyst determined that the finding is Green because he solved Table 3.10 of the Risk Informed Inspection Notebook for Wolf Creek Generating Station, Revision 2.1a and found that the loss of feedwater isolation signal for less than 3 days resulted in a 1E 7 (Green) outcome. The inspectors also determined that the cause of the finding has a crosscutting aspect in the human performance area associated with decision making because Wolf Creek failed to make a risk significant decision using a systematic process. This issue was evaluated more than once and those evaluations sought to justify bypassing the interlock rather than seek the full regulatory basis for the interlock [H.1.a]

Inspection Report# : 2009004 *(pdf)*

Significance: G Mar 24, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Performing Prohibited Elective Maintenance on Safety Bus NB02 Channel 4 During Emergency Diesel Generator Maintenance
The inspectors identified a noncited violation of Technical Specification 3.8.1, Required Action B.4.2.2 on March 24, 2009 when the licensee performed elective maintenance on safety bus relays and removed equipment from service that was required by the technical specification and the NRC Safety Evaluation Report (SER) while in an extended diesel generator outage. The maintenance had the potential to open the normal offsite feeder breaker. This issue has been entered into the corrective action program as Condition Report 15727.
The inspectors determined that the failure to implement requirements of Technical Specification 3.8.1 and the associated NRC safety evaluation was a performance deficiency. The finding was more than minor because it is associated with the equipment performance attribute for 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 (i.e., core damage). The finding was determined to be of very low safety significance because the issue did not result in the Train B offsite power being inoperable for greater than 24 hours and did not involve external events such as flooding. Additionally, the cause of the finding has a problem identification and resolution crosscutting aspect in the area associated with the corrective action program. Specifically, Wolf Creek did an extent of condition review in response to a previous violation which included Procedure STS IC 208B, but still failed to prohibit performance of STS IC-208B during the 7 day diesel outages [P.1(c)]

Inspection Report# : 2009004 *(pdf)*

Barrier Integrity

Significance: G Aug 12, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Log Foreign Material in Spent Fuel Pool After Extent of Condition Evaluation
The inspectors identified a noncited violation of Technical Specification 5.4.1.a, "Procedures," for failure to follow Procedure AP 12-003, "Foreign Material Exclusion." On August 12, 2009, the inspectors conducted a walkdown of the spent fuel pool area and found duct tape attached to various fueling and control rod tools such that duct tape was below the water. This duct tape was not in the foreign material exclusion logs. Spent fuel pool foreign material control is required under Procedure AP 12-003. The licensee entered this issue in their corrective action program as Condition Report 20338.
The inspectors determined that the failure to log material in accordance with Procedure AP 12 003 was a performance deficiency. This finding is more than minor because it impacted the Barrier Integrity Cornerstone attribute of configuration control and affected the cornerstone objective to maintain functionality of the spent fuel pool system. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," this finding was determined to be of very low safety significance because the finding only affected the barrier function of the spent fuel pool. The inspectors determined that this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because although Wolf Creek performed a root cause and extent of condition evaluation for untracked foreign material, the evaluation still failed to find the duct tape in the pool itself. This allowed the tape to continue to be untracked [P.1.c]
Inspection Report# : 2009004 *(pdf)*

Significance: G Jun 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Testing Results in P-6 Interlock Failure to Energize Source Range on Reactor Trip
On April 28, 2009, the inspectors identified a Green noncited violation of Technical Specification, Table 3.3.1-1, Function 18.a, when Wolf Creek tripped from 100 percent reactor power. During the trip, intermediate range neutron Detector NI-36 did not decrease below 10 E -10 amps and energize source range Detector NI-32. The inspectors determined that post maintenance testing of the new detector during the previous refueling outage was insufficient and caused the detector to be under compensated. A postmaintenance testing deficiency was not evaluated. After reactor trip, this issue was entered into the corrective action program but was closed to pending recalibration of the detector. The deficiency for Function 18.a was entered into the corrective action program after the inspector's questioning.
The inspectors determined that the failure to ensure that the P-6 interlock was operable per the technical specification as defined in the bases was a performance deficiency. The finding was more than minor because it was associated with the configuration control attribute of the Barrier Integrity cornerstone, and it affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, it affected the reactivity control area (reactor control systems) of the cornerstone's attribute. The inspectors evaluated the significance of this finding under the Mitigating Systems cornerstone using Phase 1 of Inspection Manual Chapter 0609.04, and determined that the finding screened to Green because the P-6 interlock only affected the fuel barrier. This issue has been entered into the corrective action program as Condition Report 00017814. The cause of this finding was determined to have a crosscutting aspect in the problem identification and resolution area associated with the corrective action program because post maintenance testing of Procedure STN IC-236 identified deficiencies as well as the post trip review; however, this did not result in initiation of condition reports and subsequent evaluation.

Inspection Report# : 2009003 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to follow 10 CFR 50.65a(2) for containment isolation valve failures
On February 25, 2009, the inspectors identified a noncited violation of 10 CFR 50.65 a(2), the Maintenance Rule, for failure to demonstrate that the performance of a containment isolation valve was effectively controlled through the performance of preventive maintenance such that the valve remained capable of performing its intended function. An

inadequate Maintenance Rule evaluation was performed after a containment isolation valve (SJHV0005) exceeded its Maintenance Rule a(2) performance criteria, and as a result goal setting and monitoring were not performed as required by paragraph a(1) of the Maintenance Rule. This issue was entered into the licensee's corrective action program as Condition Report 2009 001667.
The failure to follow 10 CFR 50.65 a(2) and properly evaluate the failed valve, establish performance goals, and monitor its performance is considered a performance deficiency. Per Inspection Manual Chapter 0612, Appendix E, Section 7, this finding is more than minor because failure to demonstrate effective control of performance or condition and not putting the affected structures, systems, and components in (a)(1) necessarily involves degraded structures, systems, or components performance or condition. Under NRC Inspection Manual Chapter 0609.04, the Phase I Significance Screening Process, it was found that the finding is of very low safety significance because it does not represent an actual open pathway in the physical integrity of the reactor containment. This finding was determined to have a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee failed to properly classify, prioritize, and evaluate a condition adverse to quality.

Inspection Report# : 2009002 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to implement foreign material exclusion control procedure for spent fuel pool
The inspectors identified a noncited violation of Technical Specification 5.4.1.a, Procedures, for failure to follow Procedure AP 12-003, Foreign Material Exclusion. On January 17, 2009, inspectors conducted a walkdown of the spent fuel pool area and found numerous untracked tools and other equipment inside the fuel pool area. Inspectors also found duct tape attached to various fueling and control rod tools such that duct tape was above and below the water. Condition Report 2009-001388 was initiated identifying a loss of spent fuel pool foreign material control. Subsequently, Wolf Creek began re-inventorying all materials in the spent fuel pool area.
The inspectors determined that the failure to implement multiple steps of Procedure AP 12 003 was a performance deficiency. This finding is more than minor because it impacted the Barrier Integrity cornerstone attribute of configuration control and affected the cornerstone objective to maintain functionality of the spent fuel pool system. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," this finding was determined be of very low safety significance because the finding only affected the barrier function of the spent fuel pool. This finding has a crosscutting aspect in the area of human performance associated with the work practices component because even though personnel had been made aware of Wolf Creek's policy on procedure use and adherence through site-wide communications, personnel still failed to follow numerous parts of the procedure, such that Wolf Creek was not using the procedure.

Inspection Report# : 2009002 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Significance: SL-IV Sep 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Report Conditions that Could have Presented Fulfillment of a Safety Function
The inspectors identified a Severity Level IV noncited violation of 10 CFR 50.73, "Licensee Event Report System," with three examples in which the licensee failed to submit licensee event reports within 60 days following discovery of an event meeting the reportability criteria. First, on April 10, 2008, Wolf Creek submitted Licensee Event Report 2008 002 00 under 10 CFR 50.73(a)(2)(i)(B) which is operation prohibited by technical specifications but failed to make a report for a loss of safety function per 10 CFR 50.73(a)(2)(v) for the same event in which both trains of the emergency core cooling system were inoperable on February 13-14, 2008. Second, Wolf Creek filed Licensee Event Report 2008-004 00 on June 6, 2008 under 50.73(a)(2)(iv)(A) for an event that caused automatic start of an emergency diesel during a loss of offsite power on April 16, 2008. No report was made under 50.73(a)(2)(v) for an event or condition that could have prevented a safety function due to the loss of offsite power. Third, on April 10, 2008, Wolf Creek filed Event Notification Report 44131 under 10 CFR 50.72(b)(3)(ii)(B) based on a possible trip of all four containment coolers. The notification was later retracted. The inspectors found insufficient evidence to show that the containment coolers would not trip and concluded the event should have been reported under 10 CFR 50.73(a)(2)(v). All three issues are collectively captured in Condition Report 15318.
The inspectors reviewed this issue in accordance with Inspection Manual Chapter 0612 and the NRC Enforcement Manual. Through this review, the inspectors determined that traditional enforcement was applicable to this issue because the NRC's regulatory ability was affected. Specifically, the NRC relies on the licensee to identify and report conditions or events meeting the criteria specified in regulations in order to perform its regulatory function, and when this is not done, the regulatory function is impacted. The inspectors determined that this finding was not suitable for evaluation using the significance determination process, and as such, was evaluated in accordance with the NRC Enforcement Policy. The finding was reviewed by NRC management, and because the violation was determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program, this violation is being treated as a Severity Level IV noncited violation consistent with the NRC Enforcement Policy. This finding was determined to have a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program in that the licensee failed to appropriately and thoroughly evaluate for reportability aspects all factors and time frames associated with the inoperability of the emergency core cooling system, the offsite power system, and the containment heat removal system [P.1(c)]
Inspection Report# : 2009004 *(pdf)*

Significance: SL-IV Jun 30, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Report Conditons Prohibited by Technical Specifications and Safety System Functional Failures
The inspectors identified a Severity Level IV noncited violation of 10 CFR 50.73, "Licensee Event Report System," associated with the licensee's failure to submit a licensee event report within 60 days following discovery of an event meeting the reportability criteria as specified. Specifically, on December 8, 2008, the licensee completed analysis of an issue associated with the residual heat removal system which determined that both trains of the system were inoperable when suction side temperature exceeded 249°F. Based on the results of this analysis as well as plant operating history, it was determined that the licensee failed to report instances where the system was operated in a condition prohibited by technical specifications, and a loss of safety function of the system existed between March 20, 2008, and December 8, 2008. The licensee entered this issue into their corrective action program as Condition Reports 2009 1261 and 2009-1326 and Action Requests 15244, 17776, and 15306.

The inspectors reviewed this issue in accordance with Inspection Manual Chapter 0612 and the NRC Enforcement Manual. Through this review, the inspectors determined that traditional enforcement was applicable to this issue because the NRC's regulatory ability was affected. Specifically, the NRC relies on licensee to identify and report

conditions or events meeting the criteria specified in regulations in order to perform its regulatory function, and when this is not done, the regulatory function is impacted. The inspectors determined that this finding was not suitable for evaluation using the significance determination process, and as such, was evaluated in accordance with the NRC Enforcement Policy. The finding was reviewed by NRC management and, because the violation was determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program, this violation is being treated as a Severity Level IV noncited violation consistent with the NRC Enforcement Policy. This finding was determined to have a crosscutting aspect in the area of Problem Identification and Resolution associated with the corrective action program in that the licensee failed to appropriately and thoroughly evaluate for reportability aspects all factors and time frames associated with the inoperability of residual heat removal system when suction temperatures were above 249°F [P.1(c)]

Inspection Report# : 2009006 *(pdf)*

Last modified : March 01, 2010