

Wolf Creek 1 2Q/2004 Plant Inspection Findings

Initiating Events

Significance:  Apr 07, 2004
Identified By: NRC
Item Type: FIN Finding

Inadequate Work Instructions and Acceptance Criteria for Maintenance Activities on the Feedwater Regulating Valves

The inspectors documented a self-revealing finding for inadequate work instructions and acceptance criteria for maintenance activities on the feedwater regulating valves which resulted in a reactor trip. This finding is greater than minor because it is associated with the reactor safety strategic performance area Initiating Events cornerstone. Specifically, the failure to provide adequate work instructions and acceptance criteria for feedwater regulating valve maintenance resulted in a plant trip. The finding is of very low safety significance because, although it resulted in a reactor trip, it did not: increase the likelihood of a primary or secondary system loss of coolant accident initiator, contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, or increase the likelihood of a fire or internal/external flood.

Inspection Report# : [2004002\(pdf\)](#)

Mitigating Systems

Significance:  Apr 07, 2004
Identified By: NRC
Item Type: NCV NonCited Violation

Inadequate Fire Barriers at Seismic Gaps

The inspectors identified a noncited violation of Technical Specification License Condition 2.C(5)(a) because the licensee failed to provide adequate 3-hour rated fire barriers between fire areas containing redundant safe shutdown equipment in accordance with 10 CFR Part 50, Appendix R, Section III.G.2, requirements. The inspectors identified that approximately 20 inches of fire barrier material between the main steam enclosure and the auxiliary feedwater system flow control valve rooms was missing. The fire barrier material was missing from the approximately 4-inch wide seismic gap between the reactor and auxiliary buildings. The licensee immediately placed fire barrier material in the seismic gap and wrote Performance Improvement Request 2003-3704 to document the condition. The licensee determined that an inadequate design for fire barriers at seismic gaps had also resulted in slightly degraded fire barriers at 14 other locations. After identification, the licensee installed the required fire barrier seal material to restore the 3-hour rating of these 14 additional fire barriers.

This finding is greater than minor because it is similar to the example in Inspection Manual Chapter 0612, Appendix E, Section 2.e. In the as-found condition, the fire penetration seals at the seismic gaps were not rated to perform their function to prevent the spread of fire for 3 hours. However, this finding is of very low safety significance because, overall, the fire barriers would have provided the protection needed. There was not a credible fire scenario that would affect the defense-in-depth design requirements. Fourteen other fire barrier installations were in accordance with an inadequate design, but there were no significant gaps between fire areas and, in some cases, the fire seal material was butted up against each other at a right angle.

Inspection Report# : [2004002\(pdf\)](#)

Significance:  Jul 05, 2003
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Ensure That Emergency Operating Procedures Could Have Been Successfully Performed

The inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criterion V, for failure to ensure that instructions, procedures, or drawings shall include appropriate quantitative or qualitative criteria for determining that important activities have been satisfactorily accomplished. The licensee failed to ensure that the emergency operating Procedure EMG C-11, "Loss of Emergency Coolant Recirculation," Revision 14, could have been successfully performed with the loss of the postaccident dynamic reactor vessel level instrumentation.

This finding is greater than minor because it is associated with the Reactor Safety Strategic Performance Area Mitigating System Cornerstone. Specifically, the quality of emergency operating Procedure EMG C-11 was affected by the inoperable postaccident reactor vessel level instrument. The failure is of very low safety significance because it did not:

Represent a design or qualification deficiency that resulted in a loss of function

Represent an actual loss of a safety function of a system

Represent an actual loss of a single function of a train for greater than the Technical Specification allowed outage time

Represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk significant

Screen as potentially risk significant due to seismic, fire, flooding, or severe weather

This finding is a noncited violation of 10 CFR 50, Appendix B, Criterion V. The licensee entered into the corrective action program as Performance Improvement Requests 2003-0805 and 1731.

Inspection Report# : [2003004\(pdf\)](#)

Significance:  Jul 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure That Changes to an Off-Normal Procedure Were Appropriate

The inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criterion XVI, for failure to identify and correct a procedure deficiency while performing corrective actions due to an NRC identified finding documented in NRC Inspection Report 50-482/2002-08. The licensee failed to ensure that the off-normal Procedure OFN RP-017, "Control Room Evacuation", Revision 18, could have been successfully performed following the procedure change resulting from the corrective actions.

. This finding is greater than minor because it is associated with the Reactor Safety Strategic Performance Area Mitigating System Cornerstone. Specifically, off-normal Procedure OFN RP-017, "Control Room Evacuation" did not verify a volume control tank outlet valve closed in a timely manner. The failure is of very low safety significance because it did not:

- . Represent a design or qualification deficiency that resulted in a loss of function
- . Represent an actual loss of a safety function of a system
- . Represent an actual loss of a single function of a train for greater than the Technical Specification allowed outage time
- . Represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk significant
- . Screen as potentially risk significant due to seismic, fire, flooding, or severe weather

This finding is a noncited violation of 10 CFR 50, Appendix B, Criterion XVI. The licensee entered into the corrective action program as Performance Improvement Requests 2003-0333 and 0338.

Inspection Report# : [2003004\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 26, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to obtain a radiological survey prior to moving materials from a contaminated area.

Green. A self-revealing noncited violation of a Technical Specification 5.4.1(a) required procedure was reviewed because workers failed to obtain a radiological survey before removing materials from a contaminated area. On December 1, 2003, three workers alarmed the personnel contamination monitors upon exiting the radiologically controlled area because they had become contaminated. A followup survey of the work area identified contamination levels up to 100,000 disintegrations per minute per 100 cm². The licensee determined that the personnel became contaminated when they improperly moved a drip catch from a posted contaminated area.

The failure to obtain a radiological survey before removing materials from a contaminated area is a performance deficiency. This finding is greater than minor because it is associated with the occupational radiation safety program and process attribute and affected the cornerstone objective, which is to ensure adequate protection of the worker health and safety from exposure to radiation. Using the occupational radiation safety significance determination process, the inspector determined that the finding was of very low safety significance because it did not involve (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. In addition, this finding had a cross-cutting aspect associated with problem identification and resolution. The immediate corrective actions were narrowly focused.

Inspection Report# : [2004003\(pdf\)](#)

Significance:  Jun 26, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to provide adequate contaminated area controls.

Green. A self-revealing noncited violation of a Technical Specification 5.4.1(a) required procedure was reviewed because a health physics technician failed to provide adequate contaminated area controls. On October 31, 2003, after working on a refueling water storage tank line flange, three personnel alarmed the personnel contamination monitors as they exited the radiologically controlled area because they had become contaminated. The licensee determined that the health physics technician covering the above work activity did not properly establish contamination controls, area posting and protective clothing instructions in accordance with procedural requirements.

The failure to provide adequate contaminated area controls is a performance deficiency. This finding is greater than minor because it is associated with the occupational radiation safety program and process attribute and affected the cornerstone objective to ensure adequate protection of the worker health and safety from exposure to radiation. Using the occupational radiation safety significance determination process, the inspector determined that the finding was of very low safety significance because it did not involve (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. In addition, this finding had a cross-cutting aspect associated with problem identification and resolution. The immediate corrective actions were narrowly focused.

Inspection Report# : [2004003\(pdf\)](#)

G

Significance: Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Control Access to a Very High Radiation Area

The inspector identified a noncited violation of 10 CFR 20.1602 because the licensee failed to institute measures to ensure that an individual is not able to gain unauthorized access to a very high radiation area. Specifically, on October 28, 2003, the inspector observed that the area surrounding a locked ladder leading down to the reactor under-vessel area, a very high radiation area, was not provided with a physical barrier that completely enclosed the area. Radiation levels at the bottom of the ladder, one meter away from the withdrawn in-core instrument thimbles, were approximately 640 Rads per hour. An individual could have climbed over the handrail and climbed down the outside of the ladder using the fall protection cage. The finding is in the licensee's corrective action program as Performance Improvement Request 2003-3220.

The finding was greater than minor because it affected the Occupational Radiation Safety cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation and the finding was associated with the cornerstone attribute (program & process). The finding involved an individual's potential for unplanned or unintended dose. When processed through the Occupational Radiation Safety Significance Determination Process the finding was determined to be of very low safety significance because the finding was not associated with as low as reasonably achievable planning or work controls, there was no overexposure nor a substantial potential for overexposure, and the ability to assess dose was not compromised.

Inspection Report# : [2003006\(pdf\)](#)

G

Significance: Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Four Examples of the Failure to Perform Radiological Surveys

The inspectors identified four examples of a noncited violation of 10 CFR 20.1501(a), because the licensee failed to perform required radiological surveys to ensure compliance with 10 CFR 20.1204(a) and 10 CFR 20.1902(b). On October 19, 2003, the licensee did not perform adequate surveys to assess changes in radiological conditions during chemical cleaning of the reactor coolant system. On October 22, 2003, the licensee did not perform an adequate survey of the workers breathing zone while decontaminating of the reactor cavity seal ring. These findings are in the licensee's corrective action program as Performance Improvement Requests 2003-3069 and -3136 respectively.

The finding is greater than minor because it affected the Occupational Radiation Safety cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation and the finding is associated with the cornerstone attribute (program & process). The finding involved an individual's potential for unplanned or unintended dose. When processed through the Occupational Radiation Safety Significance Determination Process the finding was determined to be of very low safety significance because the finding was not associated with as low as reasonably achievable planning or work controls, there was no overexposure or a substantial potential for overexposure, and the ability to assess dose was not compromised.

Inspection Report# : [2003006\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : September 08, 2004