

ENCLOSURE

**U.S. NUCLEAR REGULATORY COMMISSION
REGION IV**

Docket No.: 50-482
License No.: NPF-42
Report No.: 50-482/99-19
Licensee: Wolf Creek Nuclear Operating Corporation
Facility: Wolf Creek Generating Station
Location: 1550 Oxen Lane, NE
Burlington, Kansas
Dates: November 28, 1999, through January 8, 2000
Inspectors: F. L. Brush, Senior Resident Inspector
R. A. Kopriva, Senior Project Engineer
Approved By: W. D. Johnson, Chief, Project Branch B

ATTACHMENT: Supplemental Information

EXECUTIVE SUMMARY

Wolf Creek Generating Station NRC Inspection Report No. 50-482/99-19

This routine announced inspection included aspects of licensee operations, engineering, maintenance, and plant support activities. This report covers a 6-week period of resident inspection.

Operations

- The licensee took the appropriate actions when a power supply in the engineered safety features actuation system tripped on two occasions. The plant entered the appropriate Technical Specification Action Statement each time. The licensee completed repairs to the power supply before the 6-hour time limit was exceeded. Control room personnel used three-way communications, peer-checking, and self-checking when changing plant power. The shift supervisors exhibited good supervisory oversight (Section O4.1).
- On October 14, 1999, the licensee failed to verify the operability of offsite power during an emergency diesel generator outage because of a personnel error. This is a violation of Technical Specification 3.8.1.1, Action b. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Performance Improvement Request 99-3369 (50-482/9919-01) (Section O8.1).

Maintenance

- Overall, plant material condition was good. A small number of water and boric acid leaks had been identified by the licensee and planned repairs were scheduled (Section O2.1).

Engineering

- The configuration change package to effect a temporary repair to the Emergency Diesel Generator B, Cylinder 6, petcock valve was unclear. The package described installing a plug to replace the valve and associated tubing. However, the package also described replacing just the tubing with a plug. The actual temporary repair entailed removing the tubing and installing a pipe cap on the outlet of the petcock valve. The pipe cap repair did not affect diesel operability even though the configuration change package did not accurately describe the temporary repair (Section E1.1).

Plant Support

- The prejob brief and health physics coverage during a containment entry at 100 percent power were thorough. Personnel exhibited good ALARA practices while in the containment (Section R4.1).

Report Details

Summary of Plant Status

The plant began the report period at 100 percent power. On November 30 and December 1, 1999, the licensee reduced power to 31 and 54 percent, respectively, when a power supply in the engineered safety features actuation system tripped. The licensee returned the plant to 100 percent power each day. On December 31, 1999, the licensee reduced plant power to 52 percent following the load center's request. The licensee reduced power in order to support Y2K activities. Wolf Creek's output was reduced so that there was load available for other plants that were placed online to provide additional spinning reserve. The plant was returned to 100 percent power the following day. The plant operated at 100 percent power the remainder of the report period.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

The inspectors conducted frequent reviews of ongoing plant operations. In general, the conduct of operations was professional and safety conscious. Plant status, operating problems, and work plans were appropriately addressed during daily turnover and plan-of-the-day meetings. Plant testing and maintenance requiring control room coordination were properly controlled. The inspectors observed several shift turnovers and noted no problems.

O2 Operational Status of Facilities and Equipment

O2.1 Review of Equipment Tagout (71707)

The inspectors walked down the following tagout:

- Clearance Order 99-1056-KJ, Emergency Diesel Generator A

The inspectors did not identify any significant discrepancies. The tagout was properly prepared and authorized. All tags were on the correct devices and the devices were in the position prescribed by the tags. The inspector observed that a switch description in the clearance order did not match the description on the component. However, the component identification number was correct. The licensee reviewed the clearance order data base and determined that the switch description in the data base was incorrect. The licensee also determined that the description for the Emergency Diesel Generator B switch was incorrect. The licensee corrected the clearance order data base switch descriptions.

O2.2 Engineered Safety Feature System Walkdowns (71707)

The inspectors walked down accessible portions of the following engineered safety features and vital systems:

- Emergency Diesel Generators A and B
- Auxiliary Feedwater Trains A, B, and T

Equipment operability, material condition, and housekeeping were acceptable.

O4 Operator Knowledge and Performance

O4.1 Plant Power Reductions When a Power Supply in the Engineered Safety Features Actuation System Tripped

a. Inspection Scope (71707)

The inspectors observed operator actions during portions of two power reductions and power ascensions when a power supply in the engineered safety features actuation system tripped.

b. Observations and Findings

On November 30 and December 1, 1999, the licensee reduced power to 31 and 54 percent, respectively, because of a problem with a power supply in the engineered safety features actuation system. The licensee entered a 6-hour to Mode 3 Technical Specification Action Statement both days.

On November 30, the licensee checked the power supply and determined that the output voltage protection circuit had actuated. The circuit tripped the power supply. Licensee maintenance personnel determined that the circuit setpoint was close to the nominal output voltage of 47 volts. The licensee recalibrated the trip setpoint and returned the power supply to service. The licensee exited the Technical Specification Action Statement and returned the plant to 100 percent power.

On December 1, when opening the cabinet door to perform a planned followup check, the power supply tripped again. The licensee reentered the 6-hour action statement and replaced the power supply. Following postmaintenance testing of the new power supply, the licensee exited the action statement and returned the plant to 100 percent power. The licensee completed repairs to the power supply on both days prior to exceeding the 6-hour Technical Specification Action Statement.

The shift supervisor and supervising operator conducted thorough pre-evolution briefings. Control room personnel used peer-checking and self-checking when operating plant equipment. The operators extensively used three-way communications during the evolutions. The shift supervisors exhibited good supervisory oversight.

c. Conclusions

The licensee took the appropriate actions when a power supply in the engineered safety features actuation system tripped on two occasions. The plant entered a 6-hour to Hot Standby Technical Specification Action Statement each time. The licensee completed repairs to the power supply before the 6-hour time limit was exceeded. Control room personnel used three-way communications, peer-checking, and self-checking when changing plant power. The shift supervisors exhibited good supervisory oversight.

O8 Miscellaneous Operations Issues (92901)

- O8.1 (Closed) Licensee Event Report 50-482/1999-012-00: failure to perform Technical Specification 3.8.1.1, Action b, within the required time limits. The licensee did not verify the operability of offsite power by performing Technical Specification Section 4.8.1.1.1 when Emergency Diesel Generator A was inoperable during maintenance on essential service water System A.

At 12:04 p.m. on October 13, 1999, the licensee declared Emergency Diesel Generator A inoperable. The licensee performed Section 4.8.1.1.1 within 1 hour as required and every 8 hours until 5:25 a.m. on October 14, 1999. At 2:20 p.m. on October 14, the control room supervising operator identified that the offsite power verification had not been performed by 1:25 p.m. The licensee performed the verification at 2:30 p.m., which was past the 8-hour time limit.

Technical Specification Section 3.8.1.1, Action b, required that the licensee verify the operability of offsite power every 8 hours when Emergency Diesel Generator A was inoperable. On October 14, 1999, the licensee failed to verify the operability of offsite power during an emergency diesel generator outage because of a personnel error. This is a violation of Technical Specification 3.8.1.1, Action b. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Performance Improvement Request 99-3369 (50-482/9919-01).

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments - Maintenance

a. Inspection Scope (62707)

The inspectors observed or reviewed portions of the following work activities:

- Work Order 99-208107-00, Emergency Diesel Generator A jacket cooling water piping gasket replacement

- Work Order 98-200736-002, Replace temperature indicators on Emergency Diesel Generator A Panel KJ21

b. Observations and Findings

All work observed was performed with the work packages present and in active use. The inspectors frequently observed supervisors and system engineers monitoring job progress with quality control personnel present, when required.

M1.2 General Comments - Surveillance

a. Inspection Scope (61726)

The inspectors observed or reviewed all or portions of the following test activity:

- Test Procedure SYS KJ-123, "Post Maintenance Run of Emergency Diesel Generator A"

b. Observations and Findings

The surveillance testing was conducted satisfactorily in accordance with the licensee's approved programs and the Technical Specifications.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Review of Material Condition During Plant Tours

a. Inspection Scope (62707)

The inspectors performed routine plant tours to evaluate plant material condition. The inspectors also accompanied licensee personnel on a containment entry at full power.

b. Observations and Findings

The inspectors did not observe any water or boric acid leaks in the containment. The inspectors identified a very small quantity of trash and debris in the containment. The licensee removed the items. The inspectors observed a small number of water and boric acid leaks in various parts of the plant. The most significant water leaks were on feedwater regulating Valve B and the manual discharge isolation valve for the startup main feedwater pump. The most significant boric acid water leaks were on the seal cooling piping for both containment spray pumps. The leaks did not affect plant operation. The licensee had identified and planned to repair the leaks.

c. Conclusions

Overall, plant material condition was good. The small number of water and boric acid leaks had been identified by the licensee and repairs were scheduled.

M8 Miscellaneous Maintenance Issues (92902)

- M8.1** (Closed) Licensee Event Report 50-482/1999-002-01, 02: testing of Phase A (Containment Isolation System A) containment isolation valves performed in the wrong mode because the surveillance procedure was not properly developed. These were informational supplements to Licensee Event Report 50-482/1999-002-00, which was closed in NRC Inspection Report 50-482/99-03, paragraph M8.1. The licensee determined that three valves were not tested during Refueling Outage 10 as intended. However, the licensee determined that the valves were tested on February 23, 1999. The valve tests were within the required surveillance interval and will remain in the interval until Refueling Outage 11.

The licensee determined that the surveillance procedures were inadvertently left off the list of required procedures for Refueling Outage 10. The licensee updated the surveillance test master cross-reference data base to identify that the procedures were required to satisfy Technical Specification Section 4.6.3.2.a. The inspectors have no further concerns.

III. Engineering

E1 Conduct of Engineering

E1.1 Review of Modification Packages

a. Inspection Scope (37551)

The inspectors reviewed Configuration Change Package 09275, Revisions 0 and 1. The change package implemented a temporary repair to the Emergency Diesel Generator B, Cylinder 6, petcock valve.

b. Observations and Findings

On December 28, 1999, during surveillance testing of Emergency Diesel Generator B, the licensee collected cylinder performance data. The licensee connected test equipment to Cylinder 6 using the petcock valve and associated permanently installed tubing. The tubing was attached to the downstream side of the valve.

After collecting the data, licensee personnel attempted to close the valve, but the valve stem broke inside the valve body. The valve was still partially open. The licensee stopped the diesel, removed the test equipment, and declared the diesel inoperable. On

December 29, 1999, the licensee issued Configuration Change Package 09275, Revision 0, to implement a temporary repair to the petcock valve and tubing.

The inspectors reviewed the approved configuration change package and inspected the temporary repair. The inspectors observed the following:

- The licensee installed a pipe cap on the outlet of the petcock valve.
- The configuration change package stated, in part, "A plug fabricated as described above is an acceptable alternative to the petcock valve and extension tube assembly."
- The configuration package also stated that the "Petcock valve and associated tubing will be replaced by a plug."

The change package field work section discussed replacing only the tubing and putting a plug on the valve outlet. However, the configuration change package requirements for the plug dimensions and threading actually described a pipe cap. The licensee replaced only the tubing with a pipe cap on the outlet of the petcock valve.

The inspectors discussed the apparent discrepancies with the licensee. The licensee determined that the change package was not clear. However, the discrepancies in the configuration change package did not affect the operability of the diesel. The pipe cap design and installation was adequate to ensure operability of the emergency diesel generator.

On December 30, 1999, the licensee issued Revision 1 to the change package. The new revision stated that a pipe plug (cap) was the correct temporary repair and that only the tubing would be replaced. The inspectors reviewed the revised change package and had no further concerns. The licensee initiated Performance Improvement Request 2000-0025 to document the problems with the change package and corrective actions.

The licensee purchased petcock valves and planned to replace the broken valve during a planned diesel outage. The licensee also planned to replace three additional valves, one more on Emergency Diesel Generator B and two on Emergency Diesel Generator A, and examine them for defects.

c. Conclusions

The configuration change package to effect a temporary repair to the Emergency Diesel Generator B, Cylinder 6, petcock valve was unclear. The package described installing a plug to replace the valve and associated tubing. However, the package also described replacing just the tubing with a plug. The actual temporary repair entailed removing the tubing and installing a pipe cap on the outlet of the petcock valve. The pipe cap repair did not affect diesel operability even though the configuration change package did not accurately describe the temporary repair.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 General Comments (71750)

The inspectors observed health physics personnel, including supervisors, routinely touring the radiologically controlled areas. Licensee personnel working in radiologically controlled areas exhibited good radiation worker practices.

Contaminated areas and high radiation areas were properly posted. Area surveys posted outside rooms in the auxiliary building were current. The inspectors checked a sample of doors, required to be locked for the purpose of radiation protection, and found no problems.

R4 Staff Knowledge and Performance

R4.1 Containment Entry at 100 Percent Power

a. Inspection Scope (71750)

The inspectors accompanied licensee personnel during a containment entry at 100 percent power.

b. Observations and Findings

The inspectors attended the prejob brief and observed health physics coverage during the containment entry. The licensee entered the containment to troubleshoot Containment Cavity Cooling Fan A and obtain maintenance planning information. The prejob brief was thorough. In addition to health physics concerns, personnel safety issues were also discussed since the location of the fan was a high noise and heat area.

The health physics technician provided excellent coverage while in containment. Personnel were continually advised of dose rates in various areas. The technician was proactive in ensuring personnel did not enter high dose areas. Licensee maintenance personnel used good as low as reasonably achievable (ALARA) practices.

c. Conclusions

The prejob brief and health physics coverage during a containment entry at 100 percent power were thorough. Personnel exhibited good ALARA practices while in the containment.

V. Management Meetings

X1 Exit Meeting Summary

The exit meeting was conducted on January 7, 2000. The licensee did not express a position on any of the findings in the report.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. W. Johnson, Manager, Resource Protection
O. L. Maynard, President and Chief Executive Officer
B. T. McKinney, Vice President Plant Operations and Plant Manager
R. Muench, Vice President Engineering and Information Services
S. R. Koenig, Manager, Performance Improvement and Assessment
C. C. Warren, Vice President Operations Support

INSPECTION PROCEDURES USED

IP 37551	Onsite Engineering
IP 61726	Surveillance Observations
IP 62707	Maintenance Observations
IP 71707	Plant Operations
IP 71750	Plant Support Activities
IP 92700	Onsite Follow-Up of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92901	Followup - Operations
IP 92902	Followup - Maintenance
IP 92903	Followup - Engineering
IP 92904	Followup - Plant Support

ITEMS OPENED and CLOSED

Opened

50-482/9919-01	NCV	Failure to perform Technical Specification 3.8.1.1, Action b, within the required time limits (Section 08.1)
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Closed

50-482/99-002-01, 02	LER	Testing of Phase A (Containment Isolations System A) containment isolation valves performed in the wrong mode because the surveillance procedure was not properly developed (Section M8.1)
50-482/99-012-00	LER	Failure to perform Technical Specification 3.8.1.1, Action b, within the required time limits (Section 08.1)
50-482/9919-01	NCV	Failure to perform Technical Specification 3.8.1.1, Action b, within the required time limits (Section 08.1)