

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SEP 16 1988

Docket No. 50-482

Wolf Creek Nuclear Operating Corporation
ATTN: Bart D. Withers President and
Chief Executive Officer
P.O. Box 411
Burlington, Kansas 66839

Gentlemen:

SUBJECT: QUALITY VERIFICATION FUNCTION INSPECTION AT WOLF CREEK
NRC INSPECTION REPORT NO. 50-482/88-200

The Nuclear Regulatory Commission's (NRC's) report of the special, announced team inspection conducted at Wolf Creek Generating Station (WCGS) from June 6 through June 17, 1988, of activities authorized by NRC License No. NPF-42 is enclosed. The NRC inspection team consisted of R. P. Correia, A. E. Finkel, P. C. Hopkins, D. R. Hunter, R. L. Moore, S. E. Sparks, and P. J. Prescott. The inspection team's findings were discussed with Bart D. Withers, F. T. Rhodes, R. M. Grant, J. A. Bailey, and other members of your staff at the end of the inspection.

The inspection was the seventh in a series of NRC headquarters-directed quality verification function inspections (QVFI) performed under the guidance of NRC Inspection Manual Temporary Instruction 2515/78. The inspection was performed to assess your line organization's support and contribution to plant quality and your quality verification organization's ability to identify, resolve, and prevent the occurrence of safety-significant technical deficiencies. Another area of the inspection was to evaluate the effectiveness of management in ensuring that identified quality deficiencies were responded to promptly and completely.

Generally, the NRC inspection team determined that your quality verification organizations were staffed with experienced and capable individuals. The audits, surveillances, and inspections performed by Quality Assurance and Quality Control personnel were both technically oriented and performance oriented, notably in the area of control room operations. We encourage you to continue performing these audits and surveillances, including backshift reviews and to consider having quality verification personnel perform plant system walkdowns, both in conjunction with operations personnel and independently of them. The team noted that your Quality Assurance organization will soon be obtaining the "Performance-based Surveillance and Auditing" training course. We commend you for taking this positive performance-oriented step and recommend that all of your quality verification personnel receive this training.

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The NRC inspection team also reviewed the activities of the Nuclear Safety Engineering group, the Nuclear Safety Review Committee, and the Plant Safety Review Committee (PSRC). The ability of these organizations to deal with plant equipment and systems problems was assessed. In that regard, the team determined that the Nuclear Safety Engineering group and the Nuclear Safety Review Committee had capable personnel, acted independently, performed thorough evaluations and reviews, and provided accurate recommendations to plant and corporate management concerning plant reliability and safety. Although the PSRC also had capable personnel, the team noted that this committee had not been consistently effective with their reviews and evaluations. This was evidenced by their nonconservative recommendation on the operability of the essential service water system with a through-wall leak and pipe wall-thinning problems, despite the recommendations made by your engineering staff. However, the inspectors noted that in most of the more recent PSRC evaluations the committee had been heeding the recommendations of engineering and taking prompt actions when warranted.

We are concerned with the apparent weakness in your organization's ability to determine the underlying causes of problems with plant systems and components, although the team found that your maintenance staff is generally effective in identifying and resolving specific problems. Similarly, your line organizations are generally effective in ensuring that these identified deficiencies are promptly addressed, but they do not always ensure that the deficiencies are completely resolved to prevent their recurrence. An example is the 28 control room ventilation isolation signal (CRVIS) actuations caused by chlorine monitor failures. We are concerned that these and approximately 44 other CRVIS actuations may be degrading other components in the control room habitability system. The NRC recognizes your commitment to have new and more reliable chlorine monitors installed during the next refueling outage scheduled for September 1988 and expects that the possible detrimental effects of the CRVIS actuations may have had on components in the control room HVAC system will be evaluated to ensure reliable system operations in the future. The inspection team also was concerned that repetitive failures and false alarms from malfunctioning equipment may be desensitizing control room operators to actual plant problems. We feel that management attention is warranted to address and resolve such problems.

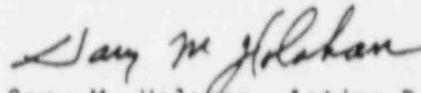
The NRC inspection team identified six potential enforcement findings (PEF) (see Enclosure 1) and two observations (see Enclosure 2); these are described in the inspection report (see Enclosure 3). The PEFs are associated with (1) six examples of not taking appropriate actions to prevent recurrence of plant system and component deficiencies, (2) not having procedures and instructions appropriate for the bearing removal activities on a component cooling water pump, (3) not obtaining all applicable service information letters (SIL) from the emergency diesel generator (EDG) vendor and evaluating their relevance to the Wolf Creek EDGs, (4) not verifying the installation of four seismic and vibration control pipe supports on the emergency diesel generator's cooling water system as required by the vendor's design drawings, (5) not posting a fire watch, as required when a fire barrier seal in a penetration was determined not to be qualified, and (6) not declaring a loop of the Essential Service Water System inoperable when it was determined it did not meet its specified design requirements. The two observations are associated with (1) the apparent lack of a feedback mechanism for crafts to report concerns with maintenance procedures used in maintaining plant equipment and (2) the methodology used to calibrate

the resistance temperature detectors for the reactor coolant system. These PEFs and observation 1 will be further evaluated by NRC Region IV staff for possible enforcement and followup actions. Observation 2 will be referred to NRC Headquarters staff for further evaluation.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosures will be placed in the NRC Public Document Room. No reply to this letter is required at this time.

Should you have any questions regarding this inspection, please contact me or the NRC Region IV office.

Sincerely,



Gary M. Holahan, Acting Director
Division of Reactor Projects, III, IV,
V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Potential Enforcement Findings
2. Observations
3. Inspection Report. No. 50-482/88-200

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QAB:DLPQ:NRR	C:QAB:DLPQ:NRR	DD:DLPQ:NRR	D:DLPQ:NRR	PDIV:DRSP:NRR
FCHawkins	SHWeiss	JAZwolinski	JWRoe	PWO'Connor
09/9/88	09/9/88	09/9/88	09/9/88	09/14/88

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D:PDIV:DRSP:NRR	A.D.:DRSP:NRR
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POTENTIAL ENFORCEMENT FINDINGS

As a result of the Nuclear Regulatory Commission's (NRC's) Quality Verification Function Inspection at Wolf Creek Generating Station from June 6 through 17, 1988, the following items are being referred to NRC Region IV as potential enforcement findings (PEFs). Section references refer to detailed descriptions of the items in the inspection report (see Enclosure 3).

1. Criterion XVI of Appendix B to 10 CFR 50 requires that conditions adverse to quality, such as equipment failures and malfunctions, are promptly identified and corrected. It also states that the causes of significant conditions adverse to quality be determined and corrective action taken to preclude their repetition. The licensee's Updated Safety Analysis Report, Revision 0, paragraph 17.2.16.1, states in part that corrective action measures have been established to ensure that conditions adverse to quality are promptly identified, reported, and corrected to preclude recurrence. Significant conditions adverse to quality may include a recurring condition for which past corrective action has been ineffective. Contrary to these requirements:
 - a. the licensee has not determined the underlying cause that permitted O-rings that were not environmentally qualified to remain installed in the post-accident sampling system containment isolation valves. (Section 2.2.1) (Item No. 88-200-1a)
 - b. the licensee has not taken the corrective actions specified in engineering evaluation request EE 85-GK-08 (completed November 27, 1985) to resolve the electrical breaker malfunctions of the heating, ventilating, and air conditioning (HVAC) system in the control building. (Section 3.2.1.1) (Item No. 88-200-1b)
 - c. the licensee has not fully investigated the underlying causes of the multiple HVAC damper failures in the control building. (Section 3.2.1.2) (Item No. 88-200-1c)
 - d. the licensee has not aggressively taken action to resolve a large number of actuations in the control room ventilation isolation signal (CRVIS) system that were attributed to the control room habitability system chlorine monitor malfunctions that began in 1985. (Section 3.2.1.3) (Item No. 88-200-1d)
 - e. the licensee has not taken actions to correct multiple fire protection system failures that resulted from the apparent misapplication of valve microswitches. (Section 3.4.1) (Item No. 88-200-1e)
 - f. the licensee has not aggressively pursued the cause and taken action to resolve malfunctions in the emergency diesel engine's jacket water pressure sensing system that began in 1986. (Section 3.6.1) (Item No. 88-200-1f)

2. Criteria V of Appendix B to 10 CFR 50 requires that activities affecting quality be accomplished in accordance with documented instructions, procedures, or drawings of a type appropriate to the circumstances. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Contrary to the above, NRC inspectors observed during a component cooling water pump maintenance activity that the licensee's procedures and instructions provided to the maintenance personnel did not include appropriate cautions or details for removal of the bearing. (Section 3.1.1) (Item No. 88-200-2)

3. Criterion V of Appendix B to 10 CFR 50 requires that activities affecting quality be accomplished in accordance with documented instructions, procedures, or drawings.

Wolf Creek licensing condition 2.C.(13) describes the licensee's vendor interface program as part of their response to NRC Generic Letter 83-28. Wolf Creek Nuclear Operating Corporation Procedure, KGP-1311, Revision 1, specifies the function of the Industry Technical Information Program (ITIP). Part of the ITIP requires that vendor reports shall be reviewed to determine their applicability to Wolf Creek Generating Station (WCGS) and, if necessary, a detailed evaluation is to be performed to determine the effects on WCGS.

Contrary to the above, the licensee did not obtain three of the service information letters (SILs) that were potentially applicable to the emergency diesel generators (EDGs) supplied to Wolf Creek. It was further determined that the five EDG SILs that the licensee had received had not been formally reviewed or evaluated. (Section 3.5.1) (Item No. 88-200-4)

4. Criterion X of Appendix B to 10 CFR 50 requires that a program for inspection of activities affecting quality be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity.

Contrary to the above, NRC inspectors found that during construction of the EDGs, the licensee had not verified that the safety-related seismic and vibration control emergency diesel turbocharger cooling water pipe supports had been installed as required by the vendor's design drawing. (Section 3.5.1) (Item No. 88-200-5)

5. Technical Specification 6.8.1 requires that written procedures be established, implemented, and maintained for the fire protection program. Procedure ADM 13-103, Revision 5, "Fire Protection: Impairment Control," implements procedures for impaired fire protection equipment.

Wolf Creek Updated Safety Analysis Report, Section 9.5, Table 9.5.1-3 (sheet 4), requires that all fire barriers and their penetrations separating safety-related areas from those that are not safety related or separating portions of redundant systems important to safe shutdown shall be operable at all times. Should one or more be found to be inoperable, within 1 hour a continuous fire watch must be established on one side of the affected barrier or an hourly fire watch patrol must be established.

Contrary to the above, the licensee failed to establish the required fire watch for penetration OP 142S1099 after an engineering disposition effectively rendered the penetration's fire protection capabilities inoperable. The engineering disposition was completed on May 3, 1988; the licensee posted the fire watch on June 14, 1988. (Section 4.1.1) (Item No. 88-200-6)

6. Technical Specification Limiting Condition for Operation (LCO) 3.7.4 requires at least two independent Essential Service Water (ESW) loops be operable. In addition, LCO 3.7.4 states that with only one ESW loop operable, the inoperable ESW loop must be restored to operable status within 72 hours or the reactor must be in at least hot standby within 6 hours and in cold shutdown within the following 30 hours.

Contrary to the above, when it was determined that the "A" train loop of the ESW system did not meet its specified design requirements on February 19, 1987, the licensee did not declare the loop inoperable and implement the requirements of LCO 3.7.4 (Section 5.1.1) (Item No. 88-200-8).

OBSERVATIONS

As a result of the Nuclear Regulatory Commission's (NRC's) Quality Verification Function Inspection at Wolf Creek Generating Station from June 6 through 17, 1988, the following items are being referred to Region IV and NRC Headquarters staff as observations of activities considered less than optimum. They may require followup reviews during future NRC inspections. Section references refer to detailed descriptions of the items in the inspection report (see Enclosure 3).

1. The NRC inspectors noted during their review of maintenance activities and the work request program that the licensee had not provided a mechanism for maintenance personnel to report problems or recommendations back to procedure (work instruction) writers. This weakness appears to have contributed to the problems identified during the removal of the component cooling water pump bearing. (Section 3.1.1.3) (Item No. 88-200-3) (Referred to Region IV)
2. The NRC inspectors noted during their review of Nuclear Safety Engineering activities that the methodology used to calibrate resistance temperature detectors (RTDs) for the reactor coolant system did not include checking the accuracy of the RTDs to known values of input (temperature). (Section 4.3.1) (Item No. 88-200-7) (Referred to NRC Headquarters staff)