



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064**

June 24, 2002

Otto L. Maynard, President and
Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
P.O. Box 411
Burlington, Kansas 66839

**SUBJECT: NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION
REPORT 50-482/2002-03**

Dear Mr. Maynard:

On May 17, 2002, the NRC completed an inspection at your Wolf Creek Generating Station. The enclosed report documents the inspection findings which were discussed on May 17, 2002, with you and other members of your staff.

On the basis of the sample selected for review, there were no findings of significance identified during the inspection. The inspectors concluded that problems were properly identified, evaluated, and resolved within the problem identification and resolution program.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Anthony T. Gody, Chief,
Operations Branch
Division of Reactor Safety

Docket: 50-482
License: NPF-42

Enclosure:
NRC Inspection Report
50-482/02-03

Wolf Creek Nuclear Operating Corporation -2-

cc w/enclosure:
Vice President Operations
Wolf Creek Nuclear Operating Corp.
P.O. Box 411
Burlington, Kansas 66839

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 Branch Chief, DRP/B (**DNG**)
 Senior Project Engineer, DRP/B (**RAK1**)
 Staff Chief, DRP/TSS (**PHH**)
 RITS Coordinator (**NBH**)

Only inspection reports to the following:
 Scott Morris (**SAM1**)
 WC Site Secretary (**SLA2**)

R:_WC\2002\WC2002-03RP-GWJ.wpd

SOE:OB	SOE:OB	RI:PBB	C:OB	C:PBB	C:OB
GWJohnston/vlh	TOMcKernon	JCruz	ATGody	DGraves	ATGody
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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket: 50-482
License: NPF-42
Report No.: 50-482/02-03
Licensee: Wolf Creek Nuclear Operating Corporation
Facility: Wolf Creek Generating Station
Location: 1550 Oxen Lane, NE
Burlington, Kansas
Dates: May 17, 2002
Inspectors: G. Johnston, Senior Operations Engineer, Operations Branch
T. McKernon, Senior Operations Engineer, Operations Branch
J. Cruz, Resident Inspector, Wolf Creek Generating Station
Approved By: A. Gody, Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000482-02-03, on 05/06-17/2002; Wolf Creek Nuclear Operating Corporation; Wolf Creek Generating Station; biennial inspection of identification and resolution of problems.

The inspection was conducted by two regional senior operations engineers, and a resident inspector.

Identification and Resolution of Problems

The licensee was effective at identifying problems and placing them into the corrective action program. Observations and findings identified by the NRC during the evaluation period (March 1, 2001, to April 1, 2002) were similar to those identified in the licensee audits and assessments. The licensee effectively prioritized and evaluated issues with few exceptions. The licensee was effective in prioritizing the extent of evaluation and scheduling of individual problems and implementation of corrective actions. The depth of the condition evaluations was appropriate to the significance of the safety issue involved. Corrective actions, when specified, were implemented in a timely manner and were effective. Based on interviews conducted during this inspection, workers at the site felt free to input safety issues into the problem identification and resolution program (Section 4OA2).

Report Details

4OA2 Identification and Resolution of Problems

a. Effectiveness of Problem Identification

(1) Inspection Scope

The team reviewed items selected across the seven safety cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. Specifically, the team selected problem identification reports (PIRs), which had been issued between March 2001 and April 2002. The team also reviewed licensee audits covering the corrective action program and self-assessments of plant activities. One of the self-assessments specifically addressed integrated issues resolution in a comprehensive assessment. The effectiveness of the audits and assessments were evaluated by comparing the audit and assessment results against self-revealing and NRC-identified issues.

In addition, the team reviewed system health reports, maintenance work order records, radiation protection logs, and security logs to identify potential problems and ascertain whether they had been appropriately addressed by the problem identification and resolution program. Specific documents reviewed are listed in the attachment.

The team also conducted walkdowns, attended PIR screening and corrective action review meetings, and interviewed plant personnel to better understand the functioning of the problem identification and resolution program. The team also focused on recent management changes to determine the effect that these changes may have had on the effectiveness of problem identification. Another area of focus was on the effectiveness of identification of human performance issues related to past equipment mispositioning events.

As a part of this review, the team evaluated the licensee's threshold for and consistency in identifying problems and entering them into the problem identification and resolution program.

(2) Issues and Findings

The team determined that the licensee was generally effective at identifying problems and entering them into the problem identification and resolution program. The licensee's threshold for entering problems into the problem identification and resolution program was appropriate. This was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee during the review period.

The team found that audits by the quality assurance group and self-assessments were effective in identifying areas of needed improvement and noncompliance with station procedures. Findings and recommendations from those audits and self-assessments were placed in the problem identification and resolution program.

During this inspection, the team found no conditions adverse to quality that were being handled outside the problem identification and resolution program.

No findings of significance were identified.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The team reviewed approximately 52 PIRs and supporting documentation, including an appropriate analysis of the cause of the problem, to ascertain whether the licensee's evaluation of the problems identified and considered the full extent of conditions, reportability and operability, generic implications, common causes, and previous occurrences. In addition, the team reviewed the licensee's evaluation of selected industry experience information, including operating event reports and NRC and vendor generic notices, to assess if applicable issues were appropriately addressed.

For selected issues, the team evaluated whether the root cause analysis was of sufficient depth and if the licensee's plant risk analysis had been considered in prioritizing resolution of the issue. Those specific issues reviewed by the team included component cooling water system pipe cracking, emergency diesel generator lube oil heat exchanger tube degradation, and the Fire Protection program.

Specific documents reviewed are listed in the attachment to this report.

(2) Issues and Findings

The team found that the licensee effectively prioritized and evaluated issues with few exceptions. The team noted that the licensee typically investigated issues with sufficient depth and breadth to determine both the scope and extent of condition and in accordance with the issues' safety significance.

The inspectors reviewed a number of PIRs related to deficiencies with the Fire Protection program. For example, PIRs 970991 and 993401 identified deficiencies between the Wolf Creek Updated Safety Analysis (WC USAR) Chapters 9.5.1, 9.5A, 9.5E-1, USAR Tables and Appendix A to Branch Technical Position APCSB 9.5-1 to which the facility is committed. The inspectors also reviewed other PIRs and documents which indicated that the WC Fire Protection program has been addressing the fire protection program issues since 1996. Discussions with the licensee and review of current documentation indicated that the licensee is preparing a USAR change package for submittal to the NRC during July 2002.

While the licensee's changes to the plant and the fire protection program have been extensive, the inspectors observed that, during the process, the implementation of long-term corrective actions had been delayed due to several changes in new program management. As a result, the changes to the USAR for fire protection had been on going for 6 years (1996-2002). The inspectors determined that the delay did not impact

actions the licensee had implemented as interim that addressed immediate protection concerns.

With regard to determination of causal factors and root cause analysis, the team did not identify any instances where the underlying causes were not appropriately categorized.

No findings of significance were identified.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The team reviewed the PIRs and other documents described in 4OA2A(1) above as well as trending reports and corrective action effectiveness review reports to verify that corrective actions related to the issues were identified and implemented in a timely manner commensurate with safety, including corrective actions to address common cause or generic concerns. The team also conducted plant walkdowns and interviewed plant personnel to independently verify and assess the effectiveness of corrective actions implemented by the licensee. A listing of specific documents reviewed during this inspection is included in the attachment to this report.

(2) Issues and Findings

The team found that the corrective actions for all significant conditions adverse to quality were timely and effective.

No findings of significance were identified.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

The team interviewed 12 individuals from the licensee's staff, which represented a cross-section of functional organizations and supervisory and nonsupervisory personnel, to determine their overall safety awareness and sensitivity to safety issues. The team also reviewed logs generated by employee concerns manager and followed up on selected issues to ascertain that safety concerns identified by employees were being appropriately processed in accordance with the requirements of the licensee's problem identification and resolution program. The team then assessed whether conditions existed that would challenge the establishment of a safety conscious work environment.

(2) Issues and Findings

Based on interviews and review of records generated by the employee concerns program, the team identified no findings related to a safety-conscious work environment. The team concluded that employees were willing to identify issues and accepted the

responsibility to proactively identify and enter safety issues into the problem identification and resolution program.

No findings of significance were identified.

40A6 Meetings, including Exit

Exit Meeting

An exit meeting was held on May 17, 2002, with O. Maynard, President and Chief Executive Officer, and other licensee staff members during which the team leader characterized the results of the inspection. The licensee's management acknowledged the findings presented.

The team leader asked the licensee's management whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. B. Fader, Vice President, Technical Services
R. D. Flannigan, Manager, Nuclear Engineering
M. W. Hicks, Manager, Operations
D. Jacobs, Plant Manager
R. A. Kerving, Supervisor, Corrective Action
D. W. Knox, Manager, Maintenance
J. W. Johnson, Manager, Resource Protection
O. L. Maynard, President and Chief Executive Officer
B. T. McKinney, Vice President Operations
R. Muench, Vice President Technical Services
J. L. Yunk, Supervisor, Licensing
J. A. Zell, Manager, Organizational Performance

NRC

F. Brush, Senior Resident Inspector
A. Gody, Chief, Operations Branch

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None.

Closed

None.

Discussed

None.

DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

PROCEDURES

AP 28A-001, "Performance Improvement Request," Revision 20

AI 28A-011, "PIR Initiation," Revision 1

AI 28A-012, "PIR Screening," Revision 2

AI 28A-013, "PIR Evaluation, Action Plans, and Follow Up," Revision 4

AI 28B-003, "Incident Investigation Team," Revision 10

AI 283-007, "PIR Trending and Analysis," Revision 0

PROBLEM IDENTIFICATION AND RESOLUTION REQUESTS (PIRs)

PIR 20010625, "Extension Requests Associated with E&IS PIRs Open > 2 Years are Weak - Develop Action Plans for Closure," March 13, 2001

PIR 20010625, "Extension Requests Associated with E&IS PIRs Open > 2 Years are Weak - Develop Action Plans for Completing Evaluations," March 13, 2001

PIR 20013080, "Recommendations from SEL01-055," December 11, 2001

PIR 20013082, "Recommendation from SEL01-055," December 11, 2001

PIR 20010965, "Errors in NRC PIs," April 10, 2001

PIR 20010623, "Update VP Expectations for Closeout of PIRs > 2 Years Old," March 13, 2001

PIR 20010624, "Recommendation that Manager Design Engineering Review PIRs Older than 2 Years for Compliance with VP Expectations," March 13, 2001

PIR 2002-0187, "Concern that Inattention to Detail and Similar Statements are being Used as Shortcuts Resulting in Inadequate or Inappropriate Statements of Apparent Cause," January 18, 2002

PIR 2001-0556, "Unrecognized capacitor orientation requirement in safety-related inverter at South Texas," March 21, 2001

PIR 20010935, "Crack in weld between vessel nozzle and hot leg pipe at V.C. Summer," April 6, 2001

PIR 20011998, "Crack in weld between vessel nozzle and hot leg pipe at V.C. Summer," August 10, 2001

PIR 20011644, "Response to NRC Information Notice 2001-01," June 22, 2001

PIR 20011424, "Response to NRC Information Notice 2001-02," May 31, 2001

PIR 20011306, "Response to NRC Information Notice 2001-06," May 16, 2001

PIR 20011949, "Response to NRC Information Notice 2001-09," August 3, 2001

PIR 20012535, "Response to NRC Information Notice 2001-10," October 9, 2001

PIR 20012250, "Response to NRC Information Notice 2001-12," September 7, 2001

PIR 20013050, "Response to NRC Information Notice 2001-16," December 7, 2001

PIR 20013050, "Response to NRC Information Notice 2001-19," November 21, 2001

PIR 970991, "Issues related to USAR Appdx. 9.5B, Fire Hazard Analysis"

PIR 982645, "USAR discrepancies related to USAR discrepancies related to USAR Fire Protection Program Discrepancies"

PIR 993401, "USAR Fidelity concerns with Chapter 9.5.1, Chapter 9.5A, Chapter 9.5E:

PIR 20020048, "EDGs A & B may have been inoperable concurrently as a result of Eddy current indications known as ADI (absolute drift indications)"

PIR 990554, "OIR issued as a result of self assessment SEL 99-005, Fire Protection Training Program"

PIR 2002899, "Items related to EBG01 (Letdown Heat Exchanger)"

PIR 20003531, "Cracks in CCW Service Loop Piping"

PIR 20011534, "Need for resource availability during holidays for emergent work"

PIR 20012802, "Asiatic Clam control in ESW system"

PIR 20012599, "Procedure Weakness in AP 26A-003"

PIR 20020034, "EDG A Declared Inoperable"

PIR 20020040, "EDG Jacket Water and Lube Oil Heat Exchanger tube degradation"

PIR 19993865, "RCS leak detection for containment normal sump does not satisfy TS Requirements"

PIR 20010957, "INPO Areas for Improvement on Supervisor Effectiveness"

PIR 20012474, "Expectations for first line maintenance supervisors"

PIR 20012475, "Coaching of first line maintenance supervisor"

PIR 20010957, "Areas for Improvement MA.1 from 2001 INPO Plant Evaluation"

PIR 20010659, "investigate why some corrective actions of PIR 98-3040 were not completed or completed in a timely manner"

PIR 2001-1971, "Failure of valve EFV-33"

PIR 2001-2488, "Evaluate changes to procedure STN PE-037A & B"

PIR 2002-0572, "NSAL 02-3, DP across the mid deck plate in SGs"

PIR 2002-0675, "LLRT for Penetration 65, H2 purge system"

PIR 20012745, "Review the bases for 3500 gpm flowrate for flooding analysis"

PIR 20013042, "Post LOCA operator access to electrical penetration rooms"

PIR 20020341, "Evaluate WC Operations ability to assess grid stabilities"

PIR 20003531, "Maintenance Rule evaluation of CCW piping cracks"

PIR 20003385, "Failure of EDGs to meet T.S. Surveillance 3.8.1.3"

PIR 20003403, "Fluxmapping problems resulted in lost generation of approximate 11,500MW-hr"

PIR 2001-0225, "Pressurizer safety relief valve lifts at higher pressure than upper tolerance"

PIR 20012843, "Recommended changes to Procedure AP 28A-001, Performance Improvement Request"

PIR 2001-1976, "Lack of Documentation related to trouble experienced"

LICENSEE EVENT REPORTS

LER 50-482/2002-01-00

MISCELLANEOUS

SEL 01-027, "Self Assessment - OPS Quarterly Human Performance & Corrective Action Monitoring," May 31, 2001

SEL 01-059, "Self Assessment Report - Health Physics Program Management and HP Performance 2001," February 11, 2002

SEL 01-045, "Self Assessment Report - Common Cause Analysis of Human Performance During Refuel 10 and 11," December 8, 2001

SEL 01-001, "Assessment of INPO Performance Objectives and Criteria, Organization Performance," February 28, 2001

2001-01, "Nuclear Safety Review Committee Meeting Minutes," March 30, 2001

2001-02, "Nuclear Safety Review Committee Meeting Minutes," July 3, 2001

2001-03, "Nuclear Safety Review Committee Meeting Minutes," October 10, 2001

2001-04, "Nuclear Safety Review Committee Meeting Minutes," December 21, 2001

"NSRC Divisional Performance Report - First Quarter 2002"

"Trend Reports - February 2002"

"Engineering Performance Trend Report," December 2001

"Regulatory Affairs PIR Trend Report to NSRC," October 1, 2001

SEL 01-055, "Self Assessment Report - NRC Performance Indicator Errors," January 9, 2002

"Effectiveness Followup on PIRs"

2001-0120, January 31, 2002

2000-0439, February 6, 2002

1997-0143, February 1, 2002

2000-2997, January 31, 2002

2000-2662, January 31, 2002

1998-2577, January 30, 2002

2000-2242, January 14, 2002

"Response to Part 21 Report 2001-11-0," March 7, 2001

"Response to Part 21 Report 2001-10-0," August 21, 2001

"Response to Part 21 Report 2001-02-0," April 9, 2001

"Response to Part 21 Report 2001-05-1," February 12, 2002

“Response to Part 21 Report 2001-01-0,” December 19, 2000

“Response to Part 21 Report 2001-03-0,” January 29, 2001

“Response to NRC Information Notice 2001-03,” June 12, 2001

“Response to NRC Information Notice 2001-07,” November 20, 2001

“Response to NRC Information Notice 2001-19,” March 13, 2002

Attachment 2

(Following document E-mailed to licensee on February 7, 2002)

**Information Request 1 - February 2002
Wolf Creek PIR Inspection (IP 71152; Inspection Report 50-482/02-03)**

The inspection will cover the period of March 1, 2001, to April 1, 2002. All requested information should be limited to this period unless otherwise specified. The information may be provided in either electronic or paper media or a combination of these. Information provided in electronic media may be in the form of e-mail attachment(s), CDs, or 3-½ inch floppy disks. The agency's text editing software is Corel WordPerfect 8, Presentations, and Quattro Pro; however, we have document viewing capability for MS Word, Excel, Power Point, and Adobe Acrobat (.pdf) text files.

Please provide the following information to Howard Bundy in the Region IV Arlington office by April 8, 2002:

1. Summary list of all condition reports of significant conditions adverse to quality opened or closed during the period
2. Summary list of all open condition reports which were generated period
3. Summary list of all open condition reports which were generated prior to the latest refueling outage
4. Summary list of all condition reports closed during the specified period
5. A list of all corrective action documents that subsume or "roll-up" one or more smaller issues for the period
6. List of all root cause analyses completed during the period
7. List of root cause analyses planned, but not complete at end of the period
8. List of plant safety issues raised or addressed by the employee concerns program during the period
9. List of action items generated or addressed by the plant safety review committees during the period
10. All quality assurance audits and surveillances of corrective action activities completed during the period
11. A list of all quality assurance audits and surveillances scheduled for completion during the period, but which were not completed
12. All corrective action activity reports, functional area self-assessments, and non-NRC third party assessments completed during the period

13. Corrective action performance trending/tracking information generated during the period and broken down by functional organization
14. Current revision of the following procedures: AP 28E-006, AF 28B-005, AP-28A-001, and AI 18A-003
15. Any additional governing procedures/policies/guidelines for:
 - a. Condition Reporting
 - b. Corrective Action Program
 - c. Root Cause Evaluation/Determination
16. A listing of all external events evaluated for applicability at Wolf Creek during the period
17. Condition Reports or other actions generated for each of the items below [ADAMS accession numbers or other cross reference listed for some]:
 1. Part 21 Reports (2001-01-0 [ml01023.0266]; -02-0 [Event Notification 37602]; -02-1 [Event Notification 37602]; -03-0 [ml01023.0240]; -05-1 [ml01080.0052]; -07-0 [ml01018.0233]; -08-0 [ml01024.0297]; -09-1 [ml01131.0474]; -10-0 [Event Notification 37703]; -11-0 [Event Notification 37788]; -11-1 [ml01072.0390]; -11-2 [ml01089.0030]; -11-3 [ml01134.0018]; -13-0 [Event Notification 37868]; -13-1 [ml01117.0249]; -21-0 [ml01177.0294]; -21-1 [ml01240.0113]; -24-0 [ml01199.0032]; -26-0 [Event Notification 38204]; -26-1 [ml01260.0136]; -27-0 [ml01241.0030]
 2. NRC Information Notices 01-001; -002; -005; -006; -007; -009; -010; -012; -014; -016; -017; -018; -019
 3. All LERs issued by Wolf Creek during the period
 4. Findings, NCVs, and Violations issued to Wolf Creek during the period
18. Safeguards event logs for the period
19. Radiation protection event logs
20. Current system health reports or similar information
21. Current predictive performance summary reports or similar information
22. Corrective action effectiveness review reports generated during the period
23. Problem Identification and Resolution (PI&R) Reports: 1-0025, 1-1551, 1-1833, 1-1835, 1-2170, 1-2802, 1-2794