UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

September 10, 2002

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

SUBJECT: NRC RADIATION SAFETY TEAM INSPECTION REPORT 50-482/02-07

Dear Mr. Maynard:

On August 9, 2002, the NRC completed a radiation safety team inspection at your Wolf Creek Generating Station. The enclosed report documents the inspection findings which were discussed with Mr. B. McKinney, Vice President, Operations, and other members of your staff on August 9, 2002.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, the inspectors evaluated the inspectable areas within the Radiation Protection Strategic Performance Area that are scheduled for review every two years. These areas are:

- Radiation Monitoring Instrumentation
- Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems
- Radioactive Material Processing and Transportation
- Radiological Environmental Monitoring Program and Radioactive Material Control Program

On the basis of the sample activities and documents selected for observation and review, there were no findings of significance identified during the inspection. The team concluded that, in general, the four program areas listed above were properly implemented in accordance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be 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).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

Gail M. Good, Chief
Plant Support Branch
Division of Reactor Safety

Docket: 50-482
License: NPF-42

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

cc w/enclosure:
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DOCUMENT: R\WC\WC2002-07RP-TEAM-MPS.wpd

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket No:	50-482
License No:	NPF-42
Report No:	2002-07
Licensee:	Wolf Creek Nuclear Operating Corporation
Facility:	Wolf Creek Generating Station
Location:	1550 Oxen Lane, NE Burlington, Kansas
Dates:	August 5-9, 2002
Inspectors:	Michael P. Shannon, Senior Health Physicist-Team Leader Larry Ricketson, PE, Senior Health Physicist Bernadette Baca, Health Physicist James Dodson, Health Physicist
Approved By:	Gail M. Good, Chief, Plant Support Branch Division of Reactor Safety

SUMMARY OF FINDINGS

Wolf Creek Generating Station
NRC Inspection Report 50-482/02-07

IR 05000482/2002-007; Wolf Creek Nuclear Operating Corporation; 08/05/2002-08/09/2002; Wolf Creek Generating Station; Radiation Safety Team Inspection

The inspection was conducted by a team of four region-based inspectors. Based on the results of the inspection, the team did not identify any significant findings. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

2. RADIATION SAFETY

2OS3 Radiation Monitoring Instrumentation (71121.03)

a. Inspection Scope

The team evaluated the adequacy of the programs to calibrate radiation monitoring instruments and to provide self-contained breathing apparatus. The team interviewed cognizant licensee personnel, observed instrumentation in the field, and compared the following items to regulatory requirements:

- Operability, performance checks and alarm setpoints, when applicable, of selected radiation detection instrumentation (whole-body counters, PM-7 personnel portal monitors, and RO-2 and teletector portable radiation instruments), continuous air monitors, electronic alarming dosimeters, personnel contamination monitors, and area radiation monitors

- Calibration and alarm setpoint of selected area and process radiation monitoring instrumentation (Spent Fuel Pool Critically Monitor, Containment Atmosphere Particulate/Iodine/Gas Monitor, Containment Purge Particulate/Iodine/Gas Monitor, Radwaste Building Particulate/Iodine Monitor, Liquid Radwaste Discharge Monitor, and Steam Generator Blowdown Discharge Monitor)

- Calibration source traceability for selected radiation sources

- Calibration expiration and source response check currency of pre-staged radiation detection instruments

- The status of self-contained breathing apparatuses staged and ready for use in the plant and associated surveillance records

- Capability for refilling and transporting self-contained breathing apparatus air bottles to and from the control room and operations support center during emergency conditions

- Control room operator and emergency response personnel training and qualifications for use of self-contained breathing apparatus

- Audits and self assessments related to the radiation monitoring instrumentation program (Quality Evaluation Audits K-559 and K-569 and Plant Evaluation Program Report OB 02-1104)

- Selected corrective action documents that involved radiation monitoring instrument and/or self-contained breathing apparatuses deficiencies initiated since the previous inspection

b. Findings

No findings of significance were identified.

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (71122.01)

a. Inspection Scope

The team interviewed cognizant personnel and walked down the major components of the gaseous and liquid effluent release systems to observe ongoing activities, equipment material condition, and system configuration, as compared to the description in the Updated Final Safety Analysis Report. The team reviewed and compared the following items with regulatory requirements to determine whether the licensee had ensured adequate protection of public health and safety from exposure to radioactive material released into the public domain:

- 2001 Radiological Effluent Release Report
- Changes to the Offsite Dose Calculation Manual and the radioactive waste system design and operation
- Anomalous results, if any, reported in the 2001 Radiological Effluent Release Report
- Effluent radiological occurrence performance indicator incidents
- Sample collection and analysis of the radwaste building ventilation exhaust continuous release point
- Selected radioactive effluent release permits and associated projected doses to members of the public
- Compensatory sampling and radiological analyses conducted when effluent monitors were declared out-of-service
- Monthly, quarterly, and annual dose calculations
- Engineered safety feature air cleaning system surveillance test results
- Records of instrument calibrations performed since the last inspection for each effluent radiation monitor at a point of discharge and the associated flow measurement device
- Effluent radiation monitor alarm setpoint values
- Calibration and quality control records of counting room instrumentation associated with effluent monitoring and release activities
- Audits and self assessments related to the radioactive effluent treatment and

monitoring program (Quality Evaluation Audit K 571, Nuclear Utilities Procurement Issues Committee Audit SR-2001-341, and Plant Evaluation Program Reports OB-01-1114 and OB-02-1031)

- Selected corrective action documents related to the radioactive effluent treatment and monitoring program since the previous inspection

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope

No radioactive shipments were conducted during the inspection. Therefore, no direct observations could be made. To verify that the licensee's radioactive material processing and transportation program complied with the requirements of 10 CFR Parts 20, 61, and 71 and Department of Transportation regulations contained in 49 CFR Parts 170-189, the team interviewed licensee personnel, walked down liquid and solid radioactive waste processing systems, reviewed the following items, and compared the results with regulatory requirements:

- Adequacy of any changes made to the radioactive waste processing systems since the last inspection
- Waste stream sampling procedures and radio-chemical sample analysis results for each of the licensee's radioactive waste streams
- Scaling factors and calculations used to account for difficult-to-measure radionuclides
- 10 CFR Part 20, Appendix G, quality assurance program
- Documentation for 6 non-excepted package shipments which demonstrated shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifest, shipping papers provided to the driver, and licensee verification of shipment readiness (01-R21, 01-C29, 02-R02, 02-R45, 02-R53, and 02-C55)
- Applicable transport cask Certificates of Compliance
- Procedures for cask loading and closure
- Transferee licenses
- Training of personnel responsible for the conduct of radioactive waste processing and radioactive material shipment preparation activities

- Audits and self assessments related to the radioactive material and transportation programs performed since the last inspection (Quality Evaluation Audits K-521, K-534, K-550, and K-556 and Plant Evaluation Program Reports OB 00-1012, OB 00-1058, OB 00-1235, OB 00-1327, OB 01-1009, and OB 01-1023)

- Selected corrective action documents related to the radioactive material and shipping programs since the previous inspection

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program and Radioactive Material Control Program (71122.03)

a. Inspection Scope

The team reviewed the radiological environmental monitoring and meteorological monitoring programs to verify that the licensee implemented them consistent with the Technical Specifications, Offsite Dose Calculation Manual, and Technical Requirements Manual. The team interviewed members of the licensee's staff responsible for implementing the radiological environmental monitoring and meteorological monitoring programs. The team observed the following activities and inspected the following equipment:

- Collection and preparation of airborne particulate and charcoal samples for offsite analysis

- Meteorological instrumentation and data displays at the meteorological tower and the control room

The following items were reviewed and compared with regulatory requirements to determine whether the licensee had an adequate program to verify the impact of radioactive effluent releases to the environment:

- Implementing procedures for the radiological environmental monitoring program

- Environmental sample analytical results

- Five environmental air sampling stations (2, 18, 32, 37, and 40), two surface water sampling stations (MUSH and DC), three ground water sampling stations (B-12, C-10, and D-65), two drinking water sampling stations (BW-15 and LW-40), four broadleaf vegetation sampling stations (40, A-2, L-1, and JRR), and nineteen thermoluminescent dosimetry (TLD) stations (2, 6-8, 17-22, 25, 26, 32, 34-37, 40, and 47)

- 2001 land use census results and changes to the radiological environmental monitoring program

- 2001 Annual Environmental Operating Report
- The contract laboratory's performance in interlaboratory comparison programs for environmental sample and TLD analysis
- Implementing procedures for the meteorological monitoring program
- Meteorological instrument operability, reliability, calibration, and annual meteorological data recovery
- Calibration and maintenance records for the environmental air and composite water sampling equipment and radiation measurement instrumentation
- Audits and self-assessments related to the radiological environmental monitoring program and the radioactive material control program (Quality Evaluation Audit K-571, Nuclear Utilities Procurement Issues Committee Joint Quality Assurance Program Audit Report #17795, Supplier Quality Audit Report 99-0116 of supplier D036 for March 27, 2000, and Plant Evaluation Report OB 02-1045, "Dosimetry Processing - Onsite and Offsite")
- Selected corrective action documents related to the radiological environmental monitoring, and meteorological monitoring programs since the previous inspection

The team observed the release of material from the radiologically controlled area during the inspection and interviewed members of the licensee's staff responsible for the program. The team reviewed and compared the following items with regulatory requirements to ensure that the licensee's surveys and controls were adequate to prevent the inadvertent release of licensed materials into the public domain:

- Procedures, methods, and instruments used to survey, control, and release materials from the radiologically controlled area
- Calibration procedures and records for instruments used to perform radiological surveys prior to material release
- Detection sensitivities of radiation survey instruments used for the release of potentially contaminated materials from the radiologically controlled area
- Criteria used for the unrestricted release of potentially contaminated material from the radiologically controlled area
- Selected corrective action documents related to the release of radioactive material program since the previous inspection

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA6 Meetings

Exit Meeting Summary

The team presented the inspection results to Mr. B. McKinney, Vice President, Operations, and other members of licensee management at an exit meeting on August 9, 2002. The licensee acknowledged the findings presented.

The team asked the licensee whether or not any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Bedgood, Superintendent, Chemistry and Radiation Protection
R. Butz, System Engineer
M. Blow, Manager, Chemistry and Radiation Protection
K. Harris, Manager, Regulatory Affairs
S. Koenig, Acting Manager, Chemistry and Radiation Protection
B. McKinney, Vice President, Operations
C. Medenciy, Supervisor, Radiation Protection
C. Palmer, Superintendent, Chemistry and Radiation Protection
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L. Rockers, Technician, Chemistry
J. Schepers, Supervisor, Radiation Protection Operations
J. Truelove, Supervisor, Chemistry
D. Williamson, Supervisor, Environmental/Fire Protection

NRC

J. Cruz, Resident Inspector

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None.

Opened and Closed During this Inspection

None

Previous Items Closed

None

LIST OF DOCUMENTS REVIEWED

IP 71121.03
Performance Improvement Requests 1998-0550, 2001-1726, 2001-1820, 2001-1919, 2001-2576, 2001-2611, 2001-2998, 2002-0778, and 2002-1260

IP 71122.01
Liquid Release Permits 2002-027, 2002-028, 2002-032, and 2002-058; Gaseous Release Permits 2001-088, 2001-094, 2001-170, 2001-173, 2002-043, 2002-057, 2002-064, and 2002-106

Performance Improvement Requests 2001-1446, 2001-1599, 2001-1631, 2001-1798, 2001-1811, 2001-1812, 2001-1835, 2001-1885, 2001-3021, 2001-3064, 2001-3102, 2001-3121, 2002-0975, 2002-1242, and 2002-1274

IP 71122.02
Performance Improvement Requests 2001-1369, 2001-1733, 2001-2434, 2001-2435, 2002-0006, 2002-0501, 2002-1394, and 2002-1703

IP 71122.03
Performance Improvement Requests 2001-1605, 2001-1638, 2001-1639, 2001-1640, 2001-1641, 2001-2301, 2001-2389, 2002-0393, 2002-0576, 2002-0975, 2002-1039, 2002-1054, 2002-1267, and 2002-1689