APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-482/88-26 Operating License: NPF-42

Docket: 50-482

Licensee: Wolf Creek Nuclear Operating Corporation (WCNOC)
P. O. Box 411
Burlington, Kansas 66837

Facility Name: Wolf Creek Generating Station (WCGS)

Inspection At: WCGS, Burlington, Kansas

Inspection Conducted: September 26-30, 1988

Inspectors: _____ 10/12/88
L. E. Ellershaw, Reactor Inspector, Materials and Quality Programs Section, Division of Reactor Safety Date

for _____ 10/12/88
L. D. Gilbert, Reactor Inspector, Materials and Quality Programs Section, Division of Reactor Safety Date

_____ 10/12/88
R. G. Taylor, Reactor Inspector, Materials and Quality Programs Section, Division of Reactor Safety Date

Approved: _____ 10/14/88
I. Barnes, Chief, Materials and Quality Programs Section, Division of Reactor Safety Date

Inspection Summary

Inspection Conducted September 26-30, 1988 (Report 50-482/88-26)

Areas Inspected: Routine, unannounced inspection of the inservice inspection program and procedures, welding and nondestructive examination procedures, the program for the control of design changes and modifications, and the program for control of procurement. These activities were inspected with respect to their relationship to the plant outage scheduled to begin in early October 1988.

## DETAILS

1. Persons Contacted

Licensee Personnel

*B. D. Withers, President
*J. A. Bailey, Vice President, Engineering and Technical Support
*R. M. Grant, Vice President, Quality
*F. Rhodes, Vice President, Nuclear Operations
*G. D. Boyer, Plant Manager
*C. E. Parry, Quality Assurance Manager
*C. W. Fowler, Manager, Instruments and Controls
*B. M. Kinney, Manager, Technical Support
*M. G. Williams, Manager, Plant Support
*T. Foster, Manager, Facilities and Modifications
*A. A. Freitag, Manager, Nuclear Plant Engineering-WC
*J. Pipping, Manager, Nuclear Plant Engineering
*R. Benedict, Manager, Plant Inspection
*C. A. Snyder, Manager, Purchasing and Material Services
*R. J. Potter, Manager, Supplier and Materials Quality
*R. W. Holloway, Manager, Maintenance and Modifications
*C. G. Patrick, Supervisor, Quality Systems
*K. Peterson, Supervisor, Licensing
*A. B. Clason, Maintenance Engineering Supervisor
*R. E. Doty, Material Control Supervisor
*G. J. Pendergrass, Licensing Engineer
*C. J. Hoch, Quality Assurance Technician
T. F. Deddens, Jr., Outage Manager

NRC Personnel

*B. L. Bartlett, Senior Resident Inspector
*M. E. Skow, Resident Inspector

*Denotes those persons that attended the exit interview on September 30, 1988.

The NRC inspectors also interviewed other licensee personnel during the inspection.

2. Inservice Inspection

a. Review of Program (73051)

The NRC inspector reviewed the licensee's program pertaining to inservice inspection (ISI) for the first 10-year interval. The following documents were reviewed for conformance with the requirements of 10 CFR Part 50a(g), Technical Specifications, and the ASME Boiler Pressure Vessel Code, Section XI, 1980 Edition and Addenda through Winter 1981:

- o Control of Site Vendor Services, Procedure ADM 01-043, Revision 4
- o Steam Generator Eddy Current Checklist, Procedure ENG 06-501, Revision 2
- o Steam Generator Tube Inspection, Procedure STS PE-022, Revision 3
- o Reactor Pressure Vessel, Program Plan 83A1710, Revision 1
- o Reactor Coolant System, Program Plan 83A1700, Revision 1W
- o High Pressure Coolant Injection System, Program Plan 83A1695, Revision 1W

b. Review of Procedures (73052)

The NRC inspector reviewed the following ISI procedures for performing nondestructive examinations:

- o Digital Multi-Frequency Eddy Current Inspection of Inservice Heat Exchanger Tubing, Procedure MRS 2.4.2 GEN-28, Revision 3
- o Magnetic Particle Examination, Procedure QCI 12.1-502, Revision 3
- o Liquid Penetrant Examination, Procedure QCI 12.1-501, Revision 1
- o Visual Examination, Procedure QCI 11.1-001, Revision 7

No violations or deviations were identified in the review of this program area.

3. Welding and Nondestructive Examination Activities Related to Plant Modifications

The NRC inspector reviewed Plant Modification Package CS-596-W which involved the socket welding of two pipe caps on small diameter Class 2 piping for implementing a design change to the reactor coolant system level indication. Since this activity was ascertained to be the only safety-related welding planned for the outage, the NRC inspector selectively reviewed additional welding and nondestructive examination procedures which are listed below:

a. Welding (55050)

- o ASME Section XI Repair and Replacement Program, Procedure ADM 01-036, Revision 3

- o Control of Welding Operations, ADM 08-300, Revision 3
- o Preparation and Qualification of Welding Procedures, Procedure ADM 08-301, Revision 2
- o Control of Welding Filler Material, Procedure ADM 08-302, Revision 5
- o Qualification of Welders, Procedure ADM 08-303, Revision 4
- o Welding of P-8 Materials, Procedure WPS1-0808, Revision 1
- o Welding of P-1 Materials, Procedure WPS1-0101, Revision 2
- o Welding of P-1 to P-8 Materials, Procedure WPS1-0108, Revision 0
- o Inspection of In-Process Welding, Procedure QCI 12.1-007, Revision 1

b. Nondestructive Examination (57060 and 57070)

- o Liquid Penetrant Examination, Procedure QCI 12.1-501, Revision 1
- o Magnetic Particle Examination, Procedure QCI 12.1-502, Revision 3

No violations or deviations were identified in the review of this program area.

4. Design Changes and Modifications Program (37702)

The purpose of this area of the inspection was to ascertain whether the licensee has implemented a quality assurance program for the control of design changes and modifications that is in conformance with regulatory requirements, commitments contained in the Safety Analysis Report, and industry standards. 10 CFR Part 50, Appendix B, Criterion III contains the basic requirements for design controls. The Wolf Creek Updated Safety Analysis Report (USAR), Chapter 17.2.3, Revision 1, contains the licensee's description of the program for control of design changes and modifications. Table 17.2-1 of the above USAR chapter provides a description of the hierarchy of licensee procedures with "Policy" and "Directive" documents having the highest authority. Procedures with a "KGP" prefix are indicated as having the next lower level of authority followed by departmental and section procedures. In general, the procedures gain specificity as they decrease in authority. In order to gain a full understanding of the licensee's program for control of design changes and modifications, the NRC inspector reviewed the following procedures:

- Policy No. III.25.0, Revision 03, "Configuration Management Policy," which defines the applicability of the configuration management system. Only very minor plant facilities, such as standard office telephones, are excluded.

- Policy No. II.11.0, Revision 02, "Management Systems," defines the organizational responsibilities for configuration control.

- Procedure KGP-1131, Revision 6 and Procedure Change Notice (PCN) 2, "Plant Modification Process," essentially defines the plant configuration control system and serves to route changes through the entire process from origination to final closeout.

- Procedure KGP-1132, Revision 2, "Configuration Identification," serves to implement Policy III.25.0 and provides greater detail.

- Procedure KGP-1135, Revision 3, "Configuration Verification," defines methodology and assigns responsibilities for verification of configuration after a change in the plant is completed.

- Procedure ADM 01-0532, Revision 6, "Engineering Evaluation Request," allows plant and other personnel to report certain types of problems which may or may not result in an engineering change.

- Procedure ADM 01-042, Revision 11, "Plant Modification Request Implementation," provides a mechanism to track the status of any change in the plant and assigns responsibilities as well as methods for control of change implementation.

- Procedure ADM 01-057, Revision 12 with PCNs 88-373, 88-338, 88-346, 88-334, 87-427 and 87-349, "Work Request," defines documentation used to authorize and direct any nonroutine work in the plant. Such work includes actual implementation of engineering changes.

- Procedure KPN-C-301, Revision 7, "Initiation of Plant Modification Requests."

- Procedure KPN-C-307, Revision 4, "Plant Modification Request Revisions and Closeouts."

- Procedure KPN-D-302, Revision 5, "Engineering Studies."

- Procedure KPN-D-303, Revision 3, "Determination of Safety Classification."

- Procedure KPN-D-304, Revision 2, "Licensing Review and Safety Evaluation." This procedure addresses methodology for conduct of 10 CFR 50.59, USAR and Technical Specification change reviews relative to any changes.

- Procedure KPN-D-317, Revision 1, "ALARA." This procedure establishes requirements for conduct of ALARA reviews of a change.

- Procedure KPN-D-319, Revision 2, "Environmental Qualification Review of Electrical Equipment to 10 CFR 50.49."

- Procedure KPN-E-300, Revision 4 and PCN 2, "Design Process." This procedure provides a broad overview of the design process within the engineering department.

- Procedure KPN-E-301, Revision 4 and PCN 1, "Design Interfaces."

- Procedure KPN-E-302, Revision 2 and PCN 1, "Design Inputs."

- Procedure KPN-E-303, Revision 4 and PCN 1, "Calculations."

- Procedure KPN-E-306, Revision 3 and PCN 1, "Design Specifications." This procedure provides guidance on when a design specification should be developed and its contents.

- Procedure KPN-E-307, Revision 4, "Design Drawings." This procedure provides guidance on when new design drawings should be issued and relates to situations where existing plant drawings cannot be revised to show a design completely.

- Procedure KPN-E-308, Revision 5 and PCN 1, "Interdisciplinary Reviews."

- Procedure KPN-E-309, Revision 3 and PCN 2, "Design Verification - Safety-Related."

- Procedure KPN-E-310, Revision 4 and PCN 1, "Design Verification - Special Scope."

- Procedure KPN-E-311, Revision 4 "Design Verification - Non-Safety."

- Procedure KPN-E-313, Revision 2, "Design Document Change Notice."

- Procedure KPN-E-#14, Revision 7, "Disposition of Field Change Documents."

- Procedure QPM-10, Revision 3, "Modifications." This procedure addresses the quality assurance/quality control involvement in the modification process.

- Procedure QCP-9.1, Revision 9, "Processing Work Requests." This procedure relates to the quality organization's handling of work requests.

- Procedure QP 12.1, Revision 3 and PCN 2, "Inspection Planning For Work Activities."

The NRC inspector found that, collectively, the above procedures provide a highly detailed program for the accomplishment of the entire design change and modification process that satisfies regulatory requirements and meets industry standards.

In the area of temporary modifications, the licensee has issued Procedure ADM 02-101 that addresses how such modifications are to be requested, the requirements for review and approval, and the documentation requirements. In addition, the procedure, which is currently at Revision 18 level, provides instructions on verification of initial installation of a modification and verification of the removal of the modification after it has served its purpose. In general, this type of modification is usually in the electrical and instrumentation area and involves the installation of temporary wiring changes with subsequent restoration to the design basis configuration. Changes required by written surveillance tests required by the Technical Specifications are not considered temporary modifications for the purposes of the above procedure.

No violations or deviations were identified in the review of this program area.

5. Procurement Program (38701)

The NRC inspector reviewed the following documents to verify that administrative controls exist and that they provide measures to assure that necessary technical and quality requirements are included in procurement documents for safety-related items or services. The documents were also reviewed to verify that controls exist for the selection, approval, and use of vendors. These documents were further reviewed to assure that responsibilities for implementing the established measures were delineated in writing.

| Title | Document No. | Revision | Date |
|---|---|---|---|
| Plant Modification Process | KGP-1131 | 6 through PCN 2 | 9/15/88 |
| Procurement | KGP-1250 | 3 through PCN 2 | 8/30/88 |
| Material and Services Procurement | KP-2140 | 2 through PCN 1 | 5/19/88 |
| Plant Modification Request Implementation | ADM 01-042 | 2 through PCN 1 | 7/12/88 |

To assess the implementation of these documents, the NRC inspector selected the following purchase orders (POs) and components. It should be

noted that all of these items were being procured for implementation of design changes/modifications scheduled to be performed during the refueling outage. All of the design changes/modifications are controlled by PMRs (Plant Modification Requests) and are identified to the applicable POs. All of these documents were reviewed to assure that: (a) all required approvals had been obtained; (b) responsibilities had been established to implement the PMRs; (c) detailed descriptions of the changes were delineated; (d) affected drawings and other PMRs which might impact the design changes were identified; (e) design bases, considerations, and calculations were addressed and performed; and (f) the methodology was consistent and appeared to be proper.

| PMR No. | Purchase Order No. | Component Ordered | Quantity |
|---|---|---|---|
| 1544 | 526953 | 3 line items of protective coatings | varying |
| 1544 | 526957 | 6 line items of carbon steel material for use with ASME NF Class 1 component supports | varying |
| 1544 | 527515 | 4 line items of bioshield gates | 1 each |
| 1858 | 524864 | AMSAC panel (with spare components) | 1 each |
| 2068 | 526705 | Chlorine sensors with transmitters | 8 each |
| 2535 | 525071 | Packing box assembly for ASME Section III, Class 1 valve | 1 each |
| | | Diaphragm valve, ASME Section III, Class 1 | 1 each |
| 2538 | 527689 | Carbon steel angle | 20 feet |
| 2538 | 527683 | Stainless steel reducers, bushings, plugs, and tees | varying |

The procurement dates for the above items occurred between July and September 1988. While some of the controlling procedures were revised subsequent to the procurement dates, this had no impact in terms of performance relative to these purchases. For the above items, the NRC inspector reviewed all purchase requisitions, POs, and any applicable revisions for QA review and approval, and verified that technical

requirements were either contained in the text of the document or referenced. It was also verified that these documents did impose 10 CFR Part 21 and either Appendix B to 10 CFR Part 50 or Subarticle NCA-3800 of Section III of the ASME Code. The NRC inspector verified that the vendors from whom these procurements had been made were approved in accordance with the procurement program.

The procurement program was found to be effective with respect to meeting the committed objectives, and no violations or deviations were identified during review of this program area.

6. Exit Interview

The NRC inspectors met with the licensee personnel identified in paragraph 1 on September 30, 1988, to discuss the scope and findings of the inspection. The licensee did not identify as proprietary any of the information provided to, or reviewed by the NRC inspectors.