

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-482/89-31

Operating License: NPF-42

Docket: 50-482

Licensee: Wolf Creek Nuclear Operating Corporation (WCNOC)
P.O. Box 411
Burlington, Kansas 66839

Facility Name: Wolf Creek Generating Station (WCGS)

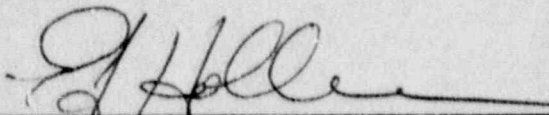
Inspection At: WCGS, Coffey County, Burlington, Kansas

Inspection Conducted: December 1-31, 1989

Inspectors: B. L. Bartlett, Senior Resident Inspector
Project Section D, Division of Reactor Projects

M. E. Skow, Senior Resident Inspector
Project Section D, Division of Reactor Projects

Approved:


E. J. Holler, Chief, Project Section D
Division of Reactor Projects

1/17/90
Date

Inspection Summary

Inspection Conducted December 1-31, 1989 (Report 50-482/89-31)

Areas Inspected: Routine, unannounced inspection including plant status, operational safety verification, monthly surveillance observation, monthly maintenance observation, cold weather preparations, and observation of initial licensee fitness-for-duty training.

Results: Within the areas inspected, no violations were identified. Control room operators secured the "B" diesel generator (DG) during performance of a DG surveillance. The operator action was appropriate notwithstanding that it was based on information later determined to be erroneous (paragraph 4). The licensee took appropriate cold weather precautions and freeze problems were not encountered that affected plant operation or safety during a period of extreme cold weather during this inspection period (paragraph 6). Overall, the licensee's conduct of training required by 10 CFR Part 26 (fitness-for-duty) was satisfactory, notwithstanding some formal lectures which were marginal regarding details (paragraph 7).

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DETAILS

1. Persons Contacted

Principal Licensee Personnel

- *B. Withers, President and Chief Executive Officer
- *J. A. Bailey, Vice President, Operations
- *F. T. Rhodes, Vice President, Engineering and Technical Services
- G. D. Boyer, Plant Manager
- *H. K. Chernoff, Supervisor, Licensing
- *L. Stevens, Nuclear Safety Engineering (NSE)
- *C. W. Fowler, Manager, Instrumentation and Control (I&C)
- *R. W. Holloway, Manager, Maintenance and Modifications
- *W. M. Lindsay, Manager, QA
- *B. McKinney, Manager, Operations
- *D. G. Moseby, Supervisor, Operations
- *W. B. Norton, Manager, Technical Support
- *C. E. Parry, Director, Quality
- *C. Sprout, Section Manager, NPE, WCGS
- *S. Wideman, Licensing Specialist III
- *M. G. Williams, Manager, Plant Support
- *J. C. Weeks, Shift Supervisor, Operations
- *T. F. Deddens, Outage Manager
- *R. L. Westman, Supervisor, NPE Systems
- S. D. Austin, Operations Support
- A. B. Clason, Supervisor, Maintenance Engineering
- J. L. Blackwell, Fire Protection Coordinator

The inspectors also contacted other members of the licensee's staff during the inspection period to discuss identified issues.

*Denotes those personnel in attendance at the exit meeting held on January 4, 1990.

2. Plant Status

The plant operated in Mode 1 (100 percent reactor thermal power) during the inspection period. There were no reactor or turbine trips.

3. Operational Safety Verification (71707)

The purpose of this inspection was to ensure that the facility was being operated safely and in conformance with license and regulatory requirements. It also was to ensure that the licensee's management control system was effectively discharging its responsibilities for continued safe operation. The methods used to perform this inspection included direct observation of activities and equipment, tours of the facility, interviews and discussions with licensee personnel, independent

verification of safety system status and limiting conditions for operation (LCO); corrective actions, and review of facility records.

Areas reviewed during this inspection included, but were not limited to, control room activities, routine surveillances, engineered safety feature operability, radiation protection controls, fire protection, security, plant cleanliness, instrumentation and alarms, deficiency reports, and corrective actions. Selected inspector observations are discussed below:

During the inspection period, the inspectors reviewed the licensee's practice of "red-lining" control room drawings. The purpose of red-lining is to ensure that the licensed operators have access to accurate drawings during the time interval between implementing a plant modification and changing the drawing to show the new as-built status. The inspectors observed that the licensee only red-lined the control room drawings and did not red-line the drawings located at the auxiliary shutdown panel, technical support center, or emergency operations facility. This practice conforms with the licensee's commitments as stated in NUREG 0696, "Functional Criteria for Emergency Response Facilities"; NUREG 0737, Item III.A.1.2, "Upgrade Emergency Support Facilities"; Generic Letter 82-33, "Requirements for Emergency Response Capability"; the Updated Safety Analysis Report (USAR); and the licensee's emergency plan. Controlled copies of drawings and documents containing updated information regarding the drawings are maintained at the auxiliary shutdown panel, technical support center, and emergency operations facility.

No violations or deviations were identified.

4. Monthly Surveillance Observation (61726)

The purpose of this inspection was to ascertain whether surveillance of safety-significant systems and components was being conducted in accordance with Technical Specifications (TS). Methods used to perform this inspection included direct observation of licensee activities and review of records.

Items inspected in this area included, but were not limited to, verification that:

- Testing was accomplished by qualified personnel in accordance with an approved test procedure.
- The surveillance procedure was in conformance with TS requirements.
- The operating system and test instrumentation was within its current calibration cycle.
- Required administrative approvals and clearances were obtained prior to initiating the test.

- ° LCOs were met and the system was properly returned to service.
- ° The test data were accurate and complete and the test results met TS requirements.

The surveillance witnessed and reviewed by the inspectors is listed below:

- ° STS KJ-005B, Revision 11, "Manual/Auto Start, Synchronization, and Loading of Emergency Diesel Generator NE02," performed December 19, 1989

Selected inspector observations are discussed below:

Surveillance Procedure STS KJ-005B was used to run and load the "B" DG for a 24-hour test. During the test, an operator noticed decreasing rocker arm lube oil pressure indications and notified the control room. The control room operators took action to abort the test and secured the DG. After the DG had been secured and declared inoperable, the operator realized that he had erred by reading an indicator that he isolated after his last log entry. The indicator was unisolated, verified to be indicating properly, and the DG was declared operable. The 24-hour test was subsequently performed on December 20-21, 1989, with satisfactory results.

No violations or deviations were identified.

5. Monthly Maintenance Observation (62703)

The purpose of inspections in this area was to ascertain that maintenance activities on safety-related systems and components were conducted in accordance with approved procedures and TS. Methods used in this inspection included direct observation, personnel interviews, and records review.

Items verified in this inspection included:

- ° Activities did not violate limiting conditions for operation and redundant components were operable.
- ° Required administrative approvals and clearances were obtained before initiating work.
- ° Radiological controls were properly implemented.
- ° Fire prevention controls were implemented.
- ° Required alignments and surveillances to verify postmaintenance operability were performed.
- ° Replacement parts and materials used were properly certified.

- ° Craftsmen were qualified to accomplish the designated task and additional technical expertise was made available when needed.
- ° Quality control (QC) hold points and/or checklists were used and QC personnel observed designated work activities.
- ° Procedures used were adequate, approved, and up to date.

Portions of selected maintenance activities regarding the work requests (WRs) listed below were observed. The WRs and related documents were reviewed by the inspectors:

<u>No.</u>	<u>Activity</u>
WR 04080-89	Replaced "A" DG cooling water hose to No. 5 cylinder injector cooling water outlet
WR 02525-89	"A" DG rocker arm lube oil prelube pump oil leaking at fittings

Selected inspector observations are discussed below:

Workers were questioned by the inspector and they appeared knowledgeable about the tasks they performed. Procedures and authorizations were available and were followed.

On December 26, 1989, the licensee was performing stroke tests on the main feedwater isolation valves (MFIVs). Valve AE-FV40, the loop "B" MFIV, failed to operate with actuation from the "red" train. The failure was similar to a failure on September 22, 1989, which was discussed in NRC Inspection Report 50-482/89-24 and on October 24, 1989, which was discussed in NRC Inspection Report 50-482/89-27. Following the October failure, the licensee had requested an independent laboratory to do a failure analysis. The licensee increased the test frequency as follows:

- Daily for the first week
- Three times during the second week
- Twice during the third week
- Weekly until 2 months
- Then return to the normal monthly testing

The laboratory failure analysis indicated that oil had entered the air side of a control cylinder and caused clearance problems. In response to the December 26, 1989, failure, the licensee removed the caps on the "M" valve (each train of each MFIV has two actuation valves, one labeled "M" and the other "N") inspected it, cleaned it, and then returned it to service. The feedwater isolation valve properly stroked after this activity. The actuation valve vendor was contacted and could not suggest any corrective action. The licensee initiated an investigation task force in an effort to ensure the root cause was identified and corrected. The task force consisted of members from engineering, maintenance, I&C, and

the independent safety engineering group. The task force work was ongoing at the close of this inspection.

No violations or deviations were identified.

6. Cold Weather Preparations (71714)

The objective of this inspection was to determine whether the licensee has maintained effective implementation of the program of protective measures for extreme cold weather. This was a continuation of inspection activities in this area that were discussed in NRC Inspection Report 50-482/89-24.

Procedure STN GP-001, Revision 2, "Plant Winterization," was completed on December 7, 1989. Space heaters in rooms that could not be verified operable earlier were found operable. The fire main pipe replacement was completed and placed in service prior to the onset of sustained freezing weather. The temporary fire main piping was disconnected.

The licensee remained sensitive to potential problems that may be caused by sustained extreme cold weather. During this inspection period, the site experienced temperatures of at least -20°F. Stand alone structures such as the essential service water (ESW) pump house and the diesel driven fire pump room were monitored. Additional temporary space heaters were available, if required. No freeze problems affecting plant operation or safety were noted.

No violations or deviations were identified.

7. Observation of Initial Licensee Fitness-For-Duty Training (TI 2515/104)

The purpose of this inspection was to ascertain that the licensee performed initial fitness-for-duty training in accordance with the requirements of 10 CFR Part 26.

The training consisted of three sessions: policy awareness, training for escorts, and training for supervisors. All personnel were required by the licensee to attend policy awareness and escort training. These sessions were held back-to-back and a comprehensive exam was given. An additional session was provided for supervisors. While supervisors were given exams as part of the policy awareness and escort training sessions, a separate exam was not given for the additional supervisor training.

Both lectures and video tapes were used in the training. Handouts were provided and contained the additional details which, for some areas, supplemented presentations of marginal quality. Overall, the training appeared to adequately meet the requirements of 10 CFR 26.

No violations or deviations were identified.

8. Exit Meeting (30703)

The inspectors met with licensee personnel (denoted in paragraph 1) on January 4, 1990. The inspectors summarized the scope and findings of the inspection. The licensee did not identify as proprietary any of the information provided to, or reviewed by, the inspectors.