

APPENDIX B

US NUCLEAR REGULATORY COMMISSION

NRC Inspection Report: 50-482/85-19

LP: NPF-32

Docket: 50-482

Licensee: Kansas Gas and Electric Company (KG&E)
Post Office Box 208
Wichita, Kansas 67201

Facility Name: Wolf Creek Generating Station (WCGS)

Inspection At: Wolf Creek Site, Coffey County, Burlington, Kansas

Inspection Conducted: April 1 to 30, 1985

Inspectors:

J. E. Cummins
J. E. Cummins, Senior Reactor Inspector,
Operations,
(pars. 2 and 6)

7/8/85
Date

B. L. Bartlett
B. L. Bartlett, Resident Reactor Inspector,
Operations,
(pars. 2, 3, 4, 5, 6, and 7)

7/8/85
Date

H. F. Bundy
H. F. Bundy, Resident Reactor Inspector,
Operations,
(pars. 2, 4, 5, 6, 7, and 8)

6-25-85
Date

Approved:

L. E. Martin
L. E. Martin, Chief, Project Section A
Reactor Project Branch 2

7/8/85
Date

Inspection Summary

Inspection Conducted April 1 to 30, 1985 (Report 50-482/85-19)

Areas Inspected: Routine, unannounced inspection including licensee actions on previous inspection findings; compliance with Technical Specifications; event followup; startup test witnessing and observation; plant tours; precritical testing data review; and document control.

The inspection involved 342 inspector-hours onsite by three NRC inspectors including 56 inspector-hours onsite during offshifts.

Results: Within the seven areas inspected, two violations were identified (failure to properly update procedure manuals, paragraph 8 and failure to respond to control room annunciator, paragraph 4). One open item is identified in paragraph 7).

DETAILS

1. Persons Contacted

Principal Licensee Personnel

- *R. M. Grant, Director-Quality
- *F. T. Rhodes, Plant Manager
- *C. C. Mason, Director-Nuclear Operations
- *M. G. Williams, Superintendent of Regulatory, Quality, and Administrative Services
- *K. Peterson, Licensing
- *C. E. Parry, Superintendent of Quality Systems Engineer
- *C. J. Hoch, QA Technologist
- V. MacTaggart, Results Engineering Supervisor
- J. Johnson, Chief of Security
- D. Smith, Plant Support Supervisor
- J. Zell, Operations Superintendent
- T. Gardner, Startup
- O. Maynard, Licensing Manager
- K. Ellison, Assistant to the Superintendent of Regulatory, Quality, and Administrative Services

*Denotes those attending the exit interview on April 30, 1985.

2. Licensee Actions on Previous Inspection Findings

(Open) Open Item (482/8515-01): Ruskin Fire Dampers: The licensee's testing and rework of the Ruskin fire dampers has not been completed. By letter dated May 1, 1985, the licensee made a 10 CFR Part 21 Report to the NRC Region IV office concerning the installation of some of the fire dampers with less than the designed clearance between the fire damper frame and the penetration sleeve. This insufficient clearance could cause the fire damper to warp and become inoperative during a fire. This item will remain open.

(Closed) Open Item (482/8511-08): This item involved Preoperational Test Deficiency Deferral (RD) #40 concerning retesting of a condensate demineralizer outlet sample throttling valve following rework. The NRC inspector reviewed appropriate test documentation including Work Request (WR) 14140-84 and found test data for the reworked valve acceptable.

(Closed) Open Item (482/8511-13): This item involved RD #61 concerning an inability to perform Section 7.8 of Test SU3-HA01 due to equipment problems with the hydrogen and oxygen analyzers in the purge line from the

volume control tank (VCT) to the gaseous radwaste system. The licensee requested and the NRC granted an extension of the completion of this item from prior to Mode 4 entry to prior to Mode 2 entry. The analyzers as presently installed meet Technical Specifications (TS) requirements due to their ability to be operated in manual; however, due to equipment procurement problems they are not presently able to be run in automatic which would be required in order to clear the test deficiencies. This section of the test can be deferred until prior to entry into Mode 2 for the reasons stated above. This will be tracked as an open item. (482/8519-03)

(Closed) Open Item (482/8511-04): This item involved installation of the essential service water chlorination system prior to Mode 4. The NRC inspector walked down parts of the installed chlorination system, questioned plant operators on the operability of the chlorination system, reviewed Interim Design Change Package (IDCP) M-142KT, reviewed Field Change Work Plan 1-FJ-108-034, reviewed Field Change Request (FCR) 1-0303-H, and reviewed WRs on the installation and testing of the chlorination system.

(Closed) Open Item (482/8511-21): This item involved RD #65 concerning computer calculation problems of determining leakage rates into the auxiliary building and residual heat removal pump room (RHR) sumps. The NRC inspector reviewed the documentation of the retest to SU3-BB15B, Test Deficiency Reports (TDR) 01 and 02 and found it acceptable.

(Closed) Open Item (482/8511-14): This item involved RD #66 concerning computer calculation problems of determining leakage rates into the containment normal sumps. The NRC inspector reviewed the documentation of the retest to SU3-BB15B, TDR-04 to the Test Deficiencies (TD) 010 and 017 and found it acceptable.

(Closed) Open Item (482/8511-07): This item involved completion of the reapplication of the concrete coatings removed on the 2000' elevations of containment as a result of 10 CFR 50.55(e) Report TE53564-K159. After the NRC inspector was informed by the licensee, the reapplication was complete, he toured the 2000' elevation of containment and reviewed appropriate WRs and found them acceptable.

(Closed) Open Item (842/8427-06): This item tracked licensee evaluation of excess reactor coolant pump (RCP) seal leakage on the Number 1 seals of C and D RCPs. This evaluation was performed. It concluded that the seal surfaces had rubbed, but no cause could be definitely established. Foreign material contamination was ruled out. The seals were replaced and performed satisfactorily. This item was incorrectly referenced as 482/8427-01 in Inspection Report 50-482/85-04.

3. Compliance With TS

Through in-plant inspections of system lineups, control room valve and breaker indications, review of control room logs, calibration data, and plant records, the NRC inspectors verified compliance with the following TS:

- 3.1.1.1 - Boration Control-Shutdown Margin
- 3.1.1.2 - Boration Control-Shutdown Margin
- 3.1.2.1 - Boration Control-Shutdown Flow Path
- 3.1.2.3 - Boration Control-Charging Pump
- 3.1.2.5 - Boration Control-Borated Water Source
- 3.4.1.2 - Reactor Coolant System-Hot Standby
- 3.4.1.3 - Reactor Coolant System-Hot Shutdown
- 3.4.1.4.1 - Reactor Coolant System-Cold Shutdown
- 3.4.4 - Reactor Coolant System-Relief Valves
- 3.4.9.3 - Reactor Coolant System-Overpressure Protection Systems
- 3.5.4 - Emergency Core Cooling Systems-ECCS Subsystem
- 3.5.5 - Emergency Core Cooling Systems-Refueling Water Storage Tank

No violations or deviations were identified.

4. Event Followup

a. The NRC inspector reviewed selected Wolf Creek events to determine:

- Adequacy of response
- Adequacy of analysis to determine cause
- Adequacy of corrective action to prevent recurrence

The following Wolf Creek Event Reports were reviewed:

- 85-15 - Manual Aux. Transformer Deluge With Failure Of Electric Fire Pump To Start
- 85-16 - Inadvertent Closing Of EJ HV8701B While RHR Pump B Was Running
- 85-25 - Procedural Noncompliance
- 85-31 - Failure of GK RE-4
- 85-34 - Administrative Error Per ADM 01-070
- 85-40 - Timely PSRC Approval Not Obtained For Temporary Procedure Changes
- 85-41 - Start of STS-901 Without Shift Supervisor Approval
- 85-42 - Excessive Pressurizer Heatup Rate
- 85-44 - Control Room A/C Inlet Damper Blocked Closed
- 85-45 - Rod Speed Indicator Found Inoperative
- 85-48 - Reactor Trip Breaker Failed To Open Due To Switch Not Actuated Hard Enough
- 85-49 - STS MT-024 and STS MT-025 Used Beyond One Time Issue Date

- 85-51 - Off Loading Of NAOH
- 85-52 - Loss Of Paperwork (Containment Purge Permit CPP No. 001)
- 85-53 - Clearance Of Temporary Modification Prior To Issuance Of PMR
- 85-54 - Two Year Maintenance On Air Operated 3" Globe Valve BMFV054

b. The following defect/deficiency reports were reviewed:

- 85-10 - Excessive Vibration On EJ F0-3
- 85-12 - Inadvertent Control Room Ventilation Isolation Signal (CRVIS)
- 85-19 - Containment Sump Screens
- 85-20 - Ruskin Horizontal Dampers-Stitch Welds
- 85-21 - Conduit Fire Barriers/Gas Seals
- 85-22 - Inadvertent Reset Of Steam Line SI-Causing SI Train B
- 85-23 - Failure Of Valve Operator EFHV-60 Caused By Broken Lug
- 85-24 - CRVIS Due To Chlorine Monitor GK AI-2 Running Out Of Paper

c. The following licensee event reports (LERs) were reviewed:

- 50-482/85-001-00 - Engineered safety feature actuation
- 50-482/85-002-00 - Technical Specifications violation
- 50-482/85-003-00 - Engineered safety feature actuation
- 50-482/85-004-00 - Technical Specifications violation
- 50-482/85-005-00 - Technical Specifications violation

Unless otherwise noted below, the NRC inspector had no comments.

d. During April, the licensee had three safety injections (SI). All were inadvertent and due to low steam line pressure signals. The following is a list of the dates, times, and modes in which they occurred:

- | | | | |
|----|----------------|-----------|--------|
| 1. | April 19, 1985 | 16:19 CST | Mode 4 |
| 2. | April 28, 1985 | 15:50 CDT | Mode 3 |
| 3. | April 30, 1985 | 11:43 CDT | Mode 3 |

The resident inspector was onsite during the three SIs and responded to the control room as soon as he was notified. The NRC inspector verified the licensee had responded in accordance with procedures and notified the necessary agencies and personnel in a timely fashion. The plant operators responded to the SIs in a calm, deliberate, and knowledgeable manner. During the April 28, 1985 SI, approximately 2 hours after the event, the NRC inspector was performing a detailed review of all control room panels when he observed Annunciator F-79, "Loose Parts Monitor" energized. Upon questioning the supervising operator, the NRC inspector learned that the annunciator had been acknowledged without any control room personnel being aware it had "come in". An operator was sent to the loose parts monitor panel and

reported a signal on Channel 2. Operations requested reactor engineering personnel to investigate, and it was verified that the noise was being heard on Channels 1, 2, and 4. At this time, the noise is a high frequency, low amplitude type which is indicative of an object with a small mass or one which is restrained. The failure to follow Alarm Procedure ALR 00-0079F is a violation. (50-482/8519-02)

- e. During this inspection the NRC inspector also followed up on the following engineered safety features actuation events:

- | | | | |
|----|----------------|------------------|---|
| 1. | April 7, 1985 | 10:38 CST Mode 5 | Control Room Ventilation Isolation (CRVIS) and Fuel Building Isolation (FBIS) |
| 2. | April 8, 1985 | 08:47 CST Mode 5 | CRVIS |
| 3. | April 9, 1985 | 14:06 CST Mode 5 | Containment Purge Isolation (CPIS) and CRVIS |
| 4. | April 12, 1985 | 22:15 CST Mode 5 | CRVIS |
| 5. | April 12, 1985 | 11:14 CST Mode 5 | FBIS, CPIS, and CRVIS |
| 6. | April 21, 1985 | 19:22 CST Mode 4 | CRVIS |
| 7. | April 26, 1985 | 18:54 CST Mode 3 | Feedwater Isolation (FWIS) and Auxiliary Feedwater Actuation (AFAS) |

- f. On April 10, 1985, at approximately 1555 hours CST the central alarm station (CAS) operator identified a problem with Door 31042 (access from health physics area to auxiliary building) and dispatched an officer to that location. Upon arrival, the officer found 10 to 15 individuals waiting for access through the door. Apparently, no one had identified an access problem to security. A number of individuals had apparently entered the auxiliary building when other individuals exited as the card reader had not been operating properly. The CAS operator dispatched an officer to the scene after several individuals had requested computer overrides to allow them to exit the auxiliary building.

The CAS operator incorrectly assumed the locking mechanism was not operating properly, when the dispatched officer could not gain access through the door, and placed it in access. He directed the officer to ensure everyone was using the card reader. Approximately 20 minutes later, a second CAS operator decided the card reader was inoperable and directed the officer at the scene to initiate a manual access log. All personnel who had entered the auxiliary building during this incident were identified and found to have access authorization.

The NRC inspector discussed with the plant superintendent the apparent slow response in discovering the problem and lack of training and/or concern for security. The plant superintendent stated that he would have all individuals involved in the incident interviewed to determine why they had not contacted security when they were having access problems.

5. Startup Test Witnessing and Observation

The NRC inspectors observed portions of the following startup tests:

- SU7-SF03.1 - Cold No Flow Control Rod System Testing
- SU7-SF03.2 - Cold Full Flow Control Rod System Testing
- SU7-SR03 - Incore Movable Detector Test
- SU7-0015 - Power Ascension Thermal and Dynamic Test
- SU8-BB13 - Pressurizer Relief Valve Test
- STS-PE19 - Reactor Coolant System Isolation Valve Leakage

The NRC inspectors verified conformance by the licensee to procedural and license requirements, observed the performance of the plant operating staff and verified the adequacy of test program records, including preliminary evaluation of the test results.

No violations or deviations were identified.

6. Precritical Testing Data Review

The NRC inspectors reviewed the following completed test procedures to ascertain compliance with administrative and test procedures and conformance to Final Safety Analysis Report (FSAR) and Technical Specifications requirements:

- SU7-0001 - Initial Core Loading
- SU7-0002 - Inverse Count Rate Ratio Monitoring For Core Loading
- SU7-S009 - Initial Core Loading
- SU7-SE02.1 - Operational Alignment Of Nuclear Instrumentation
- SU7-SC01 - Core Loading Instrumentation and Neutron Source Requirements
- SU7-SR03 - Incore Movable Detector Test

Selected NRC inspector comments are noted below:

During the review of SU7-S009, the inspector noted that steps 4.1, "Core loading operations shall be suspended, pending evaluation by the senior reactor operator (SRO) in charge of refueling, who has no concurrent responsibilities, and reactor engineering personnel, if any of the following conditions occur during core loading" and 4.1.8 "Less than two of the nuclear channels being used for inverse count rate ratio ICRR monitoring have counting rates greater than or equal to 2 counts per second (after both primary source-bearing assemblies are loaded in the vessel and completion of core loading step 10)" were written so as to be vague enough to allow test and operations personnel to exceed the limitations desired by the plant safety review committee (PSRC) and the Plant Manager. Although this did not occur during the performance of this test, the inspectors concern was that it could happen during a future refueling operation. The licensee stated that this statement was not in

the procedure to be used for the refueling operation and they committed that if they wanted to place it in that procedure, appropriate limitations and precautions would be taken. All NRC inspector concerns with this procedure have been resolved.

No violations or deviations were identified.

7. Plant Tours

Control room activities were observed on a regular basis including several shift turnovers. Special emphasis was placed on verifying implementation of administrative controls for fire protection, temporary modifications, and out-of-service equipment. Compliance with TS and limiting conditions for operations were verified as appropriate.

The NRC inspector observed that although WCGS Administrative Procedure ADM 13-102, Rev. 4, requires an expiration date for combustible materials permits in step 5.2.1, the form in use does not have a block for this date. The Superintendent of Plant Support committed to making the procedure and form compatible. This will be tracked as an open item. (482/8519-03)

On April 2, 1985, the NRC inspector noted the following unusual indications which he discussed with the supervising operator:

- 345 Kv west bus indicating light was blinking
- No status lights were illuminated for Breaker 69-16

The supervising operator stated that these conditions would be promptly corrected or work requests would be issued and the indicating lights status tagged. The NRC inspector verified that this had been accomplished.

No violations or deviations were identified.

8. Document Control

The NRC inspector conducted an audit of WCGS Procedure Manuals and Drawings located in the TSC and EOF on April 10 and 11, 1985, in response to expressed concerns. Documents surveyed were randomly selected from the KG&E master drawing file index and the computer based master procedure index. Sixteen drawings were selected and the correct revision levels were found at either location. Of 46 procedures selected, the NRC inspector identified problems with nine at the TSC and fifteen at the EOF as follows:

a. TSC

1. Temporary Change Notice (TCN) MI 85-162 was not filed with Procedure CHM 01-004, Rev. 1.

2. Rev. 0 with a TCN was also filed with Rev. 1 of Procedure CHM 01-007, Rev. 1.
3. TCN MI 85-224 was not filed with Procedure CHM 02-480, Rev. 4.
4. TCN MI 85-115 was not filed with Procedure SYS AB-120, Rev. 4.
5. TCNs MA 85-594 and MA 85-611 were not filed with Procedure SYS BB-201, Rev. 4.
6. TCNs MA 85-486 and MA 85-669 were not filed with Procedure SYS EF-200, Rev. 5.
7. Expired TCN 84-277 was filed with Procedure SYS GT-121, Rev. 3.
8. TCN MA 85-422 was not filed with and expired TCN 84-307 was filed with Procedure SYS NB-201, Rev. 3.
9. Expired TCN 84-361 was filed with Procedure SYS NG-131, Rev. 3.

b. EOF

1. Two expired TCNs were filed with Procedure GEN 00-005, Rev. 2.
2. Two expired TCNs were filed with Procedure GEN 00-006, Rev. 4.
3. TCN MA 85-220 was not filed with Procedure EMG FR-C1, Rev. 0.
4. TCN MA 85-084 was not filed with Procedure EMG C-31, Rev. 0.
5. TCNs MA 85-087, 217, and 439 were not filed with Procedure EMG E-0, Rev. 0.
6. TCNs MA 85-088 and 218 were not filed with Procedure EMG E-1, Rev. 0.
7. TCNs MA 85-089 and 219 were not filed with Procedure EMG E-3, Rev. 0.
8. TCN MI 85-162 was not filed with Procedure CHM 01-004, Rev. 1.
9. An expired TCN was filed with Procedure CHM 01-007, Rev. 1.
10. TCN MI 85-224 was not filed with Procedure CHM 02-480, Rev. 4.
11. Procedure SYS AB-120 should have been Rev. 4 with TCN MI 85-115.
12. TCNs MA 85-486 and 669 were not filed with Procedure SYS EF-200, Rev. 5.
13. Procedure SYS EP-200 should have been Rev. 1 with TCN MA 85-539. Only Rev. 0 was found.
14. An expired TCN was found with SYS NG-131, Rev. 3.
15. Procedure HPH 01-017 should have been Rev. 1. Only Rev. 0 was found.

The above findings were discussed with the licensee site emergency planning coordinator, who accompanied the NRC inspector during the audit, and the Superintendent of Regulatory, Quality, and Administrative Services committed to the following corrective actions:

- The licensee will perform a 100 percent review of WCGS procedures located at the EOF and TSC and correct any discrepancies found prior to April 30, 1985.

- KG&E Document Control will assign an individual to be responsible for drawings and procedures in the EOF and TSC.
- Periodic surveillances will be performed in accordance with WCGS Administrative Procedure ADM 07-100 for WCGS procedures located at the EOF and TSC and any deficiencies found will be corrected.

The above findings constitute a violation of NRC regulations.
(482/8519-01)

9. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. An open item disclosed during the inspections is discussed in paragraph ,

10. Exit Meeting

The NRC inspectors met with licensee personnel to discuss the scope and findings of this inspection on April 30, 1985.