In Reply Refer To:
Docket: STN 50-482/84-43

JUN 18 1985

Kansas Gas and Electric Company
ATTN: Glenn L. Koester
Vice President - Nuclear
P. O. Box 208
Wichita, Kansas 67201

Gentlemen:

A copy of the enclosed draft inspection report was given to a member of your staff on January 18, 1985. With the exception of minor editorial changes, the final version of this report issued on January 18, 1985, is the same as the enclosed draft inspection report.

NRC policy requires that released drafts be placed in the public document room and be retained and made a part of NRC official files. Therefore, a copy of this letter and the enclosed draft inspection report will be placed in the NRC Public Document Room.

Sincerely,

/S/

R. P. Denise, Director
Division of Reactor Safety
and Projects

Enclosure:
Draft NRC Inspection
Report 50-482/84-43

cc w/enclosure:
Kansas Gas and Electric Company
ATTN: Gene P. Rathbun, Manager
of Licensing
P. O. Box 208
Wichita, Kansas 67201

Forrest Rhodes, Plant Superintendent
Wolf Creek Generating Station
P. O. Box 309
Burlington, Kansas 66839

Kansas Radiation Control Program Director

RPB2/A RR
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6/17/85

DRSP RR
RPDenise
6/11/85

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DRAFT

Docket No. 50-482 -54-43

Kansas Gas and Electric Company
ATTN: Glenn L. Koester
Vice President - Nuclear
Post Office Box 208
Wichita, Kansas 67201

Gentlemen:

This refers to the routine safety inspection conducted by Messrs. M. J. Farber, D. L. Williams, W. G. Guldemond, and Ms. M. L. McCormick-Barger of the Region III NRC office during the period October 1-31 and November 1-30, 1984, of activities authorized by NRC Construction Permit CPPR-147 for the Wolf Creek Generating Station, and to the discussion of our findings with you and Messrs. F. T. Rhodes and R. B. Glover and others of your staff at the conclusion of the inspection.

Areas examined during the inspection included licensee action on previous inspection findings, preoperational test procedures, preoperational test performance, preoperational test result package evaluations, preoperational test procedure verification, preoperational test results verification, startup test procedure reviews, voiding of completed preoperational tests, preoperational test schedule, technical specification review, and preoperational test content. Within these areas, the inspection consisted of a selective examination of procedures and representative records, interviews with personnel, and observations by the inspectors. These findings are documented in the enclosed inspection report.

During this inspection, certain of your activities appeared to be in noncompliance with NRC requirements. These items are detailed within the inspection report and were a topic of discussion at an enforcement conference held on December 4, 1984. Enforcement action based on the findings of this inspection will be discussed in inspection report 50-482/84-57. This inspection report is being forwarded for your information. A written response to the specific findings of this report is not required.

DRAFT

Transmitted to RE via 5520 on 12/26/84 Jan

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure(s) will be placed in the NRC Public Document Room unless you notify this office, by telephone, within ten days of the date of this letter and submit written application to withhold information contained therein within thirty days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1). If we do not hear from you in this regard within the specified periods noted above, a copy of this letter, the enclosure(s), and your response to this letter will be placed in the Public Document Room.

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

Sincerely,

R. P. Denise, Director
Reactor Safety and Projects

Enclosure: Appendix, Inspection
Report No. 50-482/84-43

cc w/encl:
G. P. Rathbun, Manager of
Licensing
F. Rhodes, Plant Superintendent

bcc to DMB (IE01):

bcc dist. by RIV

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Section Chief (RPS-2A)
R. D. Martin, RA
Info. Systems
RPB1
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C. Wisner, PAO
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Myron Karman, ELD, MNBB (2)

RIII	RIII	RIII	RIII	RIII
Farber/ld 12/12/84	McCormick-Barger 12/21/84	Ring 12/17/84	Spessard 12/21/84	Denise
Williams 12/11/84	Guldemond 12/26/84	Harrison 12/21/84	Martin	

Appendix

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

NRC Inspection Report: 50-482/84-43 CP: CPPR-147

Docket: 50-482 Category: A2

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: October 1-31 and November 1-30, 1984

Inspectors: M. O. Farber — Date 12/26/84

for D. F. Williams — Date 12/26/84

for M. L. McCormick-Barger — Date 12/26/84

W. G. Guldemond — Date 12/26/84

Approved By: M. A. Ring, Acting Chief
Test Programs Section — Date 12/26/84

L. E. Martin, Chief
Wolf Creek Task Force — Date

R. P. Denise, Director
Reactor Safety and Projects — Date

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Inspection Summary

Inspection on October 1 through November 30, 1984, (Report No. 50-482/84-43(DRS))
Areas Inspected: Routine announced inspection of licensee action on previous inspection findings; approved preoperational test procedures; preoperational test performance; approved preoperational test results package evaluations; preoperational test procedure verification; preoperational test results package verification; approved startup test procedures; voiding of completed preoperational tests; preoperational test schedule; technical specification review; and preoperational test content. The inspection involved a total of 167 inspector-hours onsite and 100 inspector-hours offsite by four NRC inspectors, including 54 inspector-hours onsite during off-shifts.
Results: Of the eleven areas inspected, four items of noncompliance, with multiple examples, were identified, in the area of preoperational test content (paragraph 12). These items of noncompliance were a topic of an enforcement conference held on December 4, 1984.

DETAILS

1. Persons Contacted

*G. L. Koester, Vice President-Nuclear
*C. C. Mason, Director of Nuclear Operations
*F. T. Rhodes, Plant Manager
*O. L. Maynard, Manager of Licensing
*M. G. Williams, Superintendent Regulatory and Quality Administration
*G. P. Rathbun, Manager, Licensing and Radiological Services
*K. R. Petersen, Licensing Lead Engineer
*R. M. Grant, Director of Quality
*W. J. Rudolph II, Manager, Quality Assurance
*M. Mathis, Startup Quality Control
*R. L. Hoyt, Emergency Plan Administrator
*R. B. Glover, Startup Manager
R. L. Straight, Licensing
F. D. McLaurin, Assistant Startup Manager
*K. R. Ellison, Startup Technical Support Supervisor
*W. M. Lindsay, Quality Assurance Systems Supervisor
*W. B. Norton, Reactor Engineering Supervisor

*Denotes those attending the exit interview on November 29, 1984.

Additional plant technical and administrative personnel were contacted by the inspectors during the course of the inspection.

2. Licensee Action on Previous Inspection Findings

a. (Closed) Unresolved Item (482/84-30-01(DRS)): Safety Injection Signal (SIS) override of Feedwater Isolation Valve exercise mode. This item has been upgraded to an item of noncompliance (482/84-43-09(DRS)) and is further discussed in paragraph 12.

b. (Closed) Open Item (482/84-30-02(DRS)): Improper testing of air operated valves. This item has been upgraded to an item of noncompliance and is discussed in paragraph 12.

c. (Closed) Open Item (482/84-30-04(DRS)): Environmental conditions for 24 hour diesel generator load test. This item has been upgraded to an item of noncompliance and is discussed in paragraph 12.

d. (Closed) Open Item (482/84-30-09(DRS)): Wedge anchor bolt thread engagement. The inspector reviewed an analysis provided by the licensee which demonstrated that adequate thread engagement was provided by engagement of two or three threads depending on the bolt diameter. The inspector performed independent calculations, determined that the analysis was correct, and has no further questions in this area.

e. (Closed) Open Item (482/84-30-06(DRS)): Pump start and acceleration capabilities under degraded voltage conditions. This item has been upgraded to an item of noncompliance and is discussed in paragraph 12.

f. (Open) (482/84-30-07(DRS)): Natural Circulation Startup Procedure comments. The procedure wording was modified so that thermocouple mapping is used to meet a test objective as specified in the Final Safety Analysis Report (FSAR). The licensee is continuing to evaluate the inspector's comment concerning a quantitative limit for the phrase contained in step 6.12, Note b which states, "wide range T_{hot} is approximately equal to core exit thermocouple average temperature".

g. (Closed) Open Item (482/84-30-08(DRS)): Administrative controls for completed preoperational test packages. The inspector reviewed a recently issued administrative procedure which provided adequate controls to ensure that all pages of the test package are identified and accountable. The inspector has no further questions in this area.

h. (Closed) Open Item (482/84-30-05(DRS)): Pump start and acceleration capability under 75% nominal voltage conditions. The licensee provided the inspector with test documentation to show that safety-related pumps had been factory tested to show their ability to start and accelerate to rated speed under full load at 75% nominal voltage conditions. The inspector reviewed the test data and has no further questions in this area.

3. Preoperational Test Procedure Reviews

Below is a list of preoperational tests for which the inspectors have completed their test procedure review during the inspection period. Unless otherwise noted, the inspectors have no further questions on these procedures.

SU3-AB04, Rev. 0, "Main Steam System"
SU3-BG02, Rev. 0, "Seal Injection System"
SU3-BG04, Rev. 0, "Boron Thermal Regeneration System"
SU3-NE01, Rev. 1, "Diesel Generator Electrical Test"
SU3-NK01, Rev. 0, "125 VDC Class 1E Electrical System"
SU3-EN01, Rev. 0, "Containment Spray Nozzle Air Test"
SU3-EJ01, Rev. 0, "Residual Heat Removal System (Cold)"
SU3-SB01, Rev. 0, "Reactor Protection System"

The procedures were reviewed against the Final Safety Analysis Report (FSAR), Safety Evaluation Report (SER), and applicable Regulatory Guides, Standards, and portions of 10 CFR 50. The inspectors had the following comments with respect to the review of:

a. SU3-AB04, Rev. 0, "Main Steam System"

During the review of this preoperational test the inspector determined that not all testing required for design verification has been included in the procedure. The Wolf Creek-SNUPPS FSAR Section 7.3.7.2 page 25 states "the control sequence for the 10 percent close test would be interrupted in the event of an actuation signal..." The inspector determined that testing of this function had not been incorporated into the procedure. The licensee has acknowledged this concern and has committed to verify this design function during the retest of SU3-AB03, "Main Steam Isolation Valves (Cold)". This is considered an item of noncompliance and is further discussed in paragraph 12.

b. SU3-NK01, Rev. 1, "125 VDC Class 1E Electrical Test"

The Wolf Creek - SNUPPS FSAR Section 8.3.2.2.1 page 34 states a commitment to monitor Hydrogen concentration during battery operations, record and retain as a permanent plant record. Contrary to this commitment, no hydrogen survey has been completed and the licensee appeared unaware of this commitment. The licensee has committed to incorporate this requirement into the NK01 retest. This is a failure to meet an FSAR commitment and is considered an item of noncompliance and is further discussed in paragraph 12.

c. SU3-NE01, Rev. 1, "Diesel Generator Electrical Test"

1. The inspector noted that the stated acceptance criteria for diesel start time, full load rejection peak voltage and largest (Essential Service Water Pump) load shed peak voltage did not support the requirements of the most recent proof and review technical specifications. The inspector noted that this condition could lead to circumstances where the preoperational test was accepted but the diesel generator could not meet its operational requirements. The inspector met with licensee staff who acknowledged the concern and the consequences of an unidentified inoperable diesel generator. A Test Change Notice (TCN) was issued to change the acceptance criteria to reflect technical specification requirements. The inspector reviewed the TCN and has no further questions in this matter.

2. The method used for the 35 start reliability test did not allow the diesel generator to return to ambient conditions between successive starts. Ambient condition is considered to be the condition under which the diesel would be expected to start in the event of an actuation (in accordance with Regulatory Guide 1.108). The inspector identified the deficiency to the licensee and a TCN was issued to correct the improper test method. Failure of the review process to identify and correct this improper test method is an item of noncompliance and is further discussed in paragraph 12.

d. SU3-SB01, Rev. 0, "Reactor Protection System"

1. Several errors were noted in switch operations of the Nuclear Instrument system during its use as a signal input to the protection system. These errors would have been self-identifying and the test could not have proceeded until they were corrected.

2. Although the function was tested, no acceptance criterion was included to verify the ability of the General Warning system to trip the reactor.

3. An error in the setup and operation of the switched decade resistors would have prevented the Overpower Delta T and Overtemperature Delta T sections from being completed as written.

4. Appendices AH and AI, which identified where test instrumentation connections were to be made, were left completely blank.

5. The low flow reactor trip requires two of four coincidence. The test setup started with two low flow signals present, which would not have allowed the protection system to reset, and would have prevented the test from proceeding as written.

The inspector met with licensee staff to discuss these discrepancies. Major TCNs were issued to correct these problems. The inspector reviewed these TCNs and has no further questions in this area.

4. Preoperational Test Witnessing

The inspectors witnessed the performance of portions of the following preoperational tests during this inspection period:

SU3-NE01, Rev. 0, "Diesel Generator Electrical"
SU3-SB01, Rev. 0, "Reactor Protection System"
SU3-KJ01, Rev. 0, "Diesel Generator Mechanical"
SU3-NF01, Rev. 1, "Load Shedding and Load Sequencer"

The inspectors witnessed test performance to assure that it was conducted in accordance with approved procedures, that test equipment was properly installed, that test data was collected and recorded properly, that the ability of licensee personnel conducting the test was adequate, that deficiencies and test problems were documented, and that test changes were processed in an approved manner. The inspectors noted the following with respect to the performance of:

SU3-NF01, Rev. 1, "Load Shedding and Load Sequencer"

During the conduct of this test the inspector expressed concern that not all FSAR commitments had been demonstrated as being completed. Section 7.3.8.2, page 44 states, "If an actuation occurs during testing, the automatic actuation circuitry will override testing." The preoperational procedure attempted to verify this design feature by injecting an actuation (SIS) signal and then attempting to interrupt the actuation by

initiating the test circuitry. The inspector believed that the opposite approach would have better demonstrated this feature. The test circuitry should have been initiated and then inject the automatic actuation signal to verify that this signal overrides the test circuitry. The licensee acknowledged the concern and wrote a TCN to prove the design feature. This is considered an item of noncompliance and is further discussed in paragraph 12.

5. Preoperational Test Results Packages Evaluations

The inspectors completed review of the following preoperational test results packages during this inspection period:

SU3-AB04, Rev. 0, "Main Steam System"
SU3-BG02, Rev. 0, "Seal Injection System"
SU3-BG04, Rev. 0, "Boron Thermal Regeneration System"
SU3-EJ01, Rev. 1, "Residual Heat Removal System (Cold)"
SU3-EN02, Rev. 0, "Containment Spray Nozzle Air Test"
SU3-NB01, Rev. 0, "4160 VAC Class 1E Electrical System"

The packages were reviewed to assure that test results are being adequately evaluated, test data meets acceptance criteria, deviations are properly identified and resolved, review procedures are being followed, and administrative practices are adequate with respect to test execution and data evaluation. The inspectors had the following comments with respect to the review of:

a. SU3-AB04, Rev. 0, "Main Steam System"

During the review of the results package it became evident that problems had existed with the operation of the Main Steam Isolation Valves (MSIV) during the fast closure testing. The first attempt at fast closure timing resulted in excessive times. For some valves this exceeded two minutes. Successive tests showed faster times but still outside the acceptance criteria limits. Further testing resulted in the valves meeting acceptance criteria and this test was considered acceptable. When questioned by the inspector, the licensee presented two possible causes of these problems: (1) the valves had been repacked and this was the first time that they had been stroked, (2) the startup testing engineer felt that sufficient time had not been allowed for the high pressure accumulators to recharge to nominal pressure before actuation. While these may be acceptable explanations, no supporting data is available except for one acceptable fast closure time. If additional testing had been conducted to further demonstrate the acceptable operation of the valves there would be no further concern by the inspector. However, at this time, the inspector has no confidence that the valves can meet acceptance criteria timing limits. The inspector has expressed this concern to the licensee. Based on this issue and the major maintenance activities on the actuator systems that are currently in progress, the inspector has requested a justification for relying on the recorded times. This is considered an open item (482/84-43-01(DRS)) pending further evaluation by the licensee and the inspector.

b. SU3-BG02, Rev. 0, Seal Injection System

1. Failure mode testing of system air operated valves did not check valve position after loss of electrical power to the solenoid operated air valve. This is an item of noncompliance and is discussed further in paragraph 12.

2. From the data on data sheet 8.2 it would appear that one of the check valves in the seal injection line for Reactor Coolant Pump B is not opening fully or that the line is plugged. Compared to the three other pumps, only the minimum acceptable flow of 7.5 gallons per minute was obtained with its respective throttle valve considerably more open than the others. The licensee has committed to conduct a retest of seal injection flow balancing. Evaluation of this retesting by the licensee and the inspector is an open item (482/84-43-02(DRS)) pending demonstration of satisfactory operation.

c. SU3-BG04, Rev. 0, Boron Thermal Regeneration

1. Failure mode testing of system air operated valves did not check valve position after loss of electrical power to the solenoid air valve. This is an item of noncompliance which is discussed further in paragraph 12.

2. The clamp-on ammeter that was indicated as used in the test was not equivalent to that specified in the procedure. The range of the instrument used in the test was 100-999 Amps with an accuracy of ± 1% while the specified instrument range was 0-100 amps with an accuracy of ± 3%. Discussions with the licensee revealed that the instrument was multi-range and that the wrong range was recorded when identifying the instrument. The inspector reviewed a corrective entry to the results package and has no further questions in this area.

3. Valve BG-UV7056 was identified as exhibiting stroking problems. The solution was to raise control air pressure to 60 psig. Test entries did not provide justification for this action and did not address any investigation to determine if other mechanical problems existed. Discussion with the licensee revealed that 60 psig was the correct pressure and that control air pressure was initially low. The inspector has no further questions in this matter.

d. SU3-EJ01, Rev. 1, "Residual Heat Removal (Cold)"

1. During verification of pump performance, a 0-800 psig gage with an accuracy of ± 16 psig was used to measure pump suction pressures ranging from 4.5 to 30 psig. The inspector met with licensee staff to discuss the validity of the test data and the validity of the test method. The licensee responded that an immediate post-test calibration check of both pump suction pressure gages against a 0-1000 psig, ½% accuracy test gage revealed that the gages used in the test were in fact

indicating as accurately as the precision gage. This post test information was not included in the test package. Failure of the procedure review and test results review process to identify, question, and correct the use of improper test equipment is an item of noncompliance and is further discussed in paragraph 12.

2. The inspector noted a step discontinuity in the pump performance data recorded for both pumps. This discontinuity occurred during the performance of identical steps in the testing of each pump. It was not clear that the review process noted or evaluated this discrepancy and the validity of the procedural step and resulting data is questionable. Evaluation of the step discontinuity by the licensee is an open item (482/84-43-03(DRS)) pending review of that evaluation by the inspector.

6. Preoperational Test Procedure Verification

The inspectors reviewed the following preoperational test procedure against the FSAR, SER, proposed technical specifications, Regulatory Guides 1.68, and the licensee's administrative procedures. Unless otherwise noted, the inspectors had no comments.

SU3-GM01, Rev. 0, "Diesel Generator HVAC System"

No items of noncompliance or deviations were identified.

7. Preoperational Test Results Verification

The inspector reviewed the following preoperational test results packages and verified that the test results were reviewed against approved acceptance criteria and an evaluation of the test results had been performed in accordance with Regulatory Guide 1.68 and the licensee's administrative procedures. Unless otherwise noted the inspector had no comments.

SU3-GM01, Rev. 0, "Diesel Generator HVAC System"

No items of noncompliance or deviations were identified.

8. Initial Startup Test Procedure Review

Below is a list of startup test procedures for which the inspectors have completed their review:

SU7-SF03.1, Rev. 0, "Rod Drop Time Measurement (Cold, No Flow)"
SU7-SF03.2, Rev. 0, "Rod Drop Time Measurement (Cold, Full Flow)"
SU7-SF03.3, Rev. 0, "Rod Drop Time Measurement (Hot, Full Flow)"
SU7-SF03.4, Rev. 0, "Rod Drop Time Measurement (Hot, No Flow)"
*SU7-0004, Rev. 0, "Initial Criticality"
*SU7-0003, Rev. 0, "Inverse Count Rate Ratio Monitoring for Approach to Initial Criticality"

*Denotes procedures incorporated in procedure SU7-S011, Rev. 0, "Initial Criticality and Low Power Test Sequence".

The procedures were reviewed against the FSAR, and applicable Regulatory Guides, Standards, and portions of 10 CFR 50. The inspector had the following comments with respect to the review of:

a. SU7-SF03.1, Rev. 0, "Rod Drop Time Measurement (Cold, No Flow)"

(1) The note at Step 6.0 stated "Rod Position Indication System, SU7-SF04.1 should be done concurrently with this procedure." Both procedures required that rods be withdrawn a certain number of steps and then stopped so that data could be taken. Numerous transfers from one procedure to the other would be needed as the procedures were performed because one procedure required that data be taken at 18, 210 and 228 steps (shutdown banks) or at 24 step intervals (control banks) while the other procedure required that data be taken at 48 steps (all banks). The procedures did not contain statements to coordinate transferring from one to the other. At the time that the inspector discussed this with the Reactor Engineering Supervisor, he indicated that he had been considering combining these procedures (and possibly an additional procedure) in a manner similar to the procedures that were combined into SU7-S011 "Initial Criticality and Low Power Test Sequence." This is considered an unresolved item (482/84-43-04(DRS)) pending licensee action to revise the procedures to eliminate any ambiguities related to coordination between the procedures.

(2) During the conduct of the test this procedure requires the Residual Heat Removal (RHR) pumps to be stopped. Step 4.8 stated "The Residual Heat Removal pumps should not be operated during this test. If their operation is deemed absolutely necessary to maintain equilibrium cold plant conditions, the recorder traces for the affected rod drops should be marked with the RHR flow rate." However, there was no statement within the procedure to identify the Proof and Review Technical Specification 3.4.1.4.1 requirement that, after being deenergized for one hour, an RHR pump must be restarted. Also, Section 8.0, "System Restoration", did not contain a requirement to return the RHR pumps to service when the test was complete. The licensee's Reactor Engineering Supervisor indicated that the procedure would be modified to address these concerns; that the Reference Section would be modified to include references to Technical Specification 3/4.4.1, and to add the procedure that will be used to start the RHR pumps. This is considered an open item (482/84-43-05(DRS)) pending procedure revision.

b. SU7-SF03.3, Rev. 0, "Rod Drop Time Measurement (Hot, Full Flow)"

(1) The note at Step 6.0 stated "Rod Position Indication System, SU7-SF04.2, should be done concurrently with this procedure."

[The details of this comment are the same as for comment a.(1) above; resolution of this comment will be tracked via the unresolved item mentioned in a.1].

(2) Prerequisite 5.4 specified that the reactor coolant temperature be between 500°F and 557°F. This was different from the Hot, Full Flow Rod Drop surveillance described in Proof and Review Technical Specification 3.1.3.4 which required that T_{ave} be greater than or equal to 551°F. The licensee agreed to change the procedure to agree with the Proof and Review Technical Specification. This is an open item (482/84-43-06(DRS)) pending procedure revision.

c. SU7-SF03.4, Rev. 0, "Rod Drop Time Measurement (Hot, No Flow)"

During the inspector's review, it was noted that Proof and Review Technical Specification 3/4.10.5, "Special Test Exceptions: Position Indication System-Shutdown", was listed in Section 2.0, "References", and addressed in the body of the procedure at Step 6.0. However, Proof and Review Technical Specification 3/4.10.4, "Special Test Exceptions: Reactor Coolant Loops", which also applied directly to this procedure, was not mentioned in either location. This is an open item (482/84-43-07(DRS)) pending revision of this procedure to address Proof and Review Technical Specification 3/4.10.4.

d. SU7-0004, Rev. 0, "Initial Criticality", and SU7-0003, Rev. 0, "Inverse Count Rate Ratio Monitoring for Approach to Initial Criticality"

Regulatory Guide 1.68, Revision 2, states that a critical boron concentration should be predicted so that any anomalies may be noted and evaluated. The initial criticality procedures did not address this statement. This is considered an unresolved item (482/84-43-08(DRS)) pending procedure revision.

The inspectors commenced review of the startup test procedure listed below. This review will be documented in a subsequent inspection report.

SU-SF08, Rev. 0, "RCCA or Bank Worth Measurement at Zero Power" (This procedure is incorporated in SU7-S011, Rev. 0, "Initial Criticality and Low Power Test Sequence").

No items of noncompliance or deviations were identified.

9. Voiding of Completed Preoperational Tests

The inspectors observed that several safety-related preoperational tests have recently been voided due to numerous administrative procedure violations. The inspectors noted that these tests had been completed and had proceeded through various levels of the normal review process before this action was initiated. The inspectors felt that this was indicative of lack of overview and monitoring by the licensee in allowing this situation to develop. This concern in no way should inhibit the voiding of

tests that have problems but should indicate more involvement by monitoring groups within the licensee's organization. The inspectors further indicated that this trend will continue to be evaluated to determine if adequate corrective action has been implemented and to determine the impact on the acceptability of the preoperational test program.

10. Preoperational Test Scheduling

The inspector has again informed the licensee that the published preoperational test completion date, plus the exhibited time frame for licensee review of completed test results packages does not support the proposed fuel load date. The inspector's concern is that attention to meeting proposed fuel load date may negatively influence the licensee's results review process. The inspector also indicated that the level of review by qualified people must not decrease due to pressure to meet proposed schedules. The licensee has acknowledged the concerns. This item is of particular interest due to the recent voiding of completed test packages by the licensee as discussed in paragraph 9.

11. Technical Specifications Review

The inspector reviewed the draft proof and review technical specifications in detail in preparation for procedure and results reviews.

No items of noncompliance or deviations were identified.

12. Preoperational Test Content

Review of procedures and test results packages during both this and the previous inspection period revealed deficiencies in the technical content of approved preoperational test procedures. These deficiencies can be categorized into four areas and are listed below along with examples of these deficiencies.

a. Failure to provide verification of designed safety features

(1) The ability of an SIS or Feedwater Isolation Signal to override the exercise mode of the Main Feedwater Isolation Valves was not verified in SU3-AE01, "Main Feedwater System". This item was discussed fully in inspection report 50-482/84-30(DRS).

(2) The ability of an SIS to override the slow closure mode of the MSIVs was not verified in SU3-AB04, "Main Steam System". This item is discussed in paragraph 3.a of this report.

(3) The ability of an SIS to override the Automatic Test Insertion sequence in the Load Shed/Emergency Load Sequencer system was not verified in SU3-NF01, "Load Shedding and Load Sequencer". This item is discussed in paragraph 4 of this report.

Failure of preoperational test procedures to verify the proper operation of designed safety functions is considered an item of noncompliance (482/84-43-09(DRS)).

b. Failure to verify an FSAR commitment

Preoperational test SU3-NK01, "125 VDC Class 1E Electrical System", did not monitor and record hydrogen concentration during battery operations for retention as a plant permanent record. This item is discussed in paragraph 3.b of this report.

Failure to verify an FSAR commitment is an item of noncompliance (482/84-43-10(DRS)).

c. Improper test methods

(1) Failure mode testing of air operated valves (AOV) did not verify correct fail position on loss of air and loss of electrical power to the solenoid air valve. This item was discussed in report 50-482/84-30(DRS) and in paragraphs 5.b and 5.c of this report.

(2) An improper pressure gage was used to record pump performance data for acceptance criteria in SU3-EJ01, "Residual Heat Removal System". This item is discussed in paragraph 5.d of this report.

(3) The method used for conducting the 35 start diesel generator reliability test did not provide correct test conditions. This item is discussed in paragraph 3.c of this report.

Incorporation of improper test methods and failure of the review processes to identify and correct them is an item of noncompliance (482/84-43-11(DRS)).

d. Failure to test equipment in the conditions under which it is expected to operate

(1) SU3-NF02, "LOCA Sequencer", did not provide proper environmental conditions for the diesel generator during its 24 hour load test. This item is fully discussed in report 50-482/84-30.

(2) SU3-NF03, "Shutdown Sequencer", did not test the emergency pumps' ability to start and accelerate to full load under degraded voltage conditions. This item was discussed in report 50-482/84-30.

Failure to test equipment in the condition under which it is expected to operate in the event of an actuation is an item of noncompliance (482/84-43-12(DRS)).

These items of noncompliance identified in preoperational test content were discussed at an Enforcement Conference held on December 4, 1984. Any enforcement action based on these findings will be discussed in inspection report 50-482/84-57.

13. 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, the licensee or both. Open items disclosed during the inspection are discussed in paragraphs 5.a, 5.b.(2), 5.d.(2), 8.a.(2), 8.b.(2), and 8.c.

14. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during the inspection are discussed in paragraphs 8.a.(1) and 8.d.

15. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) on November 29, 1984 to discuss the scope and findings of the inspection. The licensee acknowledged the statements made by the inspectors with respect to items discussed in the report.

bcc to DMB (IE01)

bcc distrib. by RIV:
RPB2
Resident Inspector
Section Chief (RPB2/A)
EP&RPB
R. D. Martin, RA
R. P. Denise, D/DRSP
W. L. Brown, RC
RIV File
Myron Karman, ELD, MNBB (1)
J. Harrison, RIII
M. Resner, OIA
J. G. Keppler, RIII
R. L. Spessard, RIII
W. J. Dircks, EDO