ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-482/96-09

License: NPF-42

Licensee: Wolf Creek Nuclear Operating Corporation
P.O. Box 411
Burlington, Kansas

Facility Name: Wolf Creek Generating Station

Inspection At: Coffey County, Burlington, Kansas

Inspection Conducted: March 24 through May 4, 1996,

Inspectors: J. F. Ringwald, Senior Resident Inspector
J. L. Dixon-Herrity, Resident Inspector

Approved: W. D. Johnson, Chief, Project Branch B — 5/20/96 Date

Inspection Summary

Areas Inspected: Routine, announced inspection including plant status, operational safety verification, maintenance observations, surveillance observations, onsite engineering, and plant support activities.

Results:

Plant Operations

- A violation of 10 CFR 50, Appendix B, occurred when operators started Motor-Driven Auxiliary Feedwater Pump B to fill steam generators prior to the completion of the final packing adjustment and the postmaintenance test, including the packing run-in (Section 2.1).

- A violation of 10 CFR 50, Appendix B, occurred when an inadequate surveillance procedure failed to establish appropriate initial conditions, resulting in an inadvertent overspeed trip of the auxiliary feedwater turbine. Procedural miscoordination, weak turnover, weak surveillance test suspension guidelines, and unclear initial condition presumptions of surveillance test procedures were identified by the inspector as additional concerns (Section 4.1).

- Operators performed adequate, but weakly supported, operability evaluations on two occasions (Section 2.2).

- The inspector noted good operations supervisory response to a reactor operator who was about to shut down the electrohydraulic control system to hang a clearance order tag without referencing the system operating procedure (Section 2.3).

- The inspector identified two examples of operator inattention to detail associated with an incorrect valve description on a clearance order tag hung on the correct component, and an oncoming shift supervisor who failed to note a significant erroneous log entry (Section 2.4).

- The inspector noted good attention to detail and good operator response to the loss of one of the offsite power lines (Section 2.5).

Maintenance

- The inspector identified incomplete implementation of licensee identified corrective action associated with the reassembly of the Motor-Driven Auxiliary Feedwater Pump B outboard pump bearings (Section 3.1).

- Mechanics reassembled the Motor-Driven Auxiliary Feedwater Pump B outboard pump bearing incorrectly, resulting in a failed postmaintenance test, and the need to rework the pump bearing (Section 3.2).

- Engineering and maintenance weaknesses in addressing auxiliary feedwater pump packing concerns resulted in significant steaming of the turbine-driven auxiliary feedwater pump packing near the end of Refueling Outage VIII (Section 5.2).

Engineering

- The inspector identified a violation of 10 CFR Part 50, Appendix B, in that, operating procedures failed to require personnel to maintain auxiliary feedwater turbine oil levels in accordance with vendor guidance, without adequate engineering justification permitting the departure from the vendor guidance (Section 5.1).

- Engineering and maintenance weaknesses in addressing auxiliary feedwater pump packing concerns resulted in significant steaming of the turbine-driven auxiliary feedwater pump packing near the end of Refueling Outage VIII (Section 5.2).

- An unresolved item was opened to follow up on auxiliary feedwater pump packing steaming on April 5, 1996, and the identification of engineering errors associated with this packing (Section 5.3).

- The inspector identified test preparation weaknesses and concerns with attention to detail associated with the auxiliary feedwater turbine overspeed test (Section 5.4).

Plant Support

- The inspector noted several material concerns during the run of the security diesel generator, reviewed the security power systems, and concluded that the security power systems met the security plan requirements, and that security management promptly responded to the inspector's observations (Section 6.1).

Summary of Inspection Findings:

Opened

- Violations 482/9609-01, 482/9609-02, and 482/9609-03 (Sections 2.1, 4.1, and 5.1).

- Unresolved Item 482/9609-04 (Section 5.3).

Attachment:

- Persons Contacted and Exit Meeting

DETAILS

1 PLANT STATUS (71707)

At the beginning of this inspection period, the plant was in Refueling Outage VIII. The licensee entered Mode 4 on March 29, 1996, Mode 3 on April 2, Mode 2 on April 5, and Mode 1 on April 7. On April 20, the licensee reduced power to approximately 3 percent for main turbine balancing. The licensee returned to full-power operation on April 21, and remained at essentially 100 percent power through the end of the inspection period.

2 OPERATIONAL SAFETY VERIFICATION (71707)

The inspectors reviewed plant activities using Inspection Procedure 71707.

2.1 Auxiliary Feedwater Pump Use Prior to Completing Maintenance

On March 30, 1996, operators started Motor-Driven Auxiliary Feedwater Pump B to fill steam generators. Maintenance was not yet complete, in that the postmaintenance test, packing adjustment, and pump packing run-in had not been performed. Immediately prior to starting the pump, operators announced plans to start the pump using the Gaitronics site announcement system. The system engineer heard this announcement, and immediately telephoned the shift engineer to ask if they were starting the pump for the postmaintenance test. When the shift engineer said no, the system engineer ended the conversation without expressing any concerns. After operators started the pump, the nuclear station operator in the pump room noted steam coming from the pump packing and observed very little packing leakoff. The nuclear station operator immediately contacted control room operators who immediately stopped the pump. Subsequent postmaintenance testing identified the pump outboard bearing and Schnoor washer problem as described in section 3.2. The licensee subsequently initiated Performance Improvement Request (PIR) 96-1102 to document and evaluate this issue.

After reviewing licensee procedures and interviewing operations management, the inspector determined that the licensee had no programmatic requirements for operators to ensure that maintenance personnel had completed all maintenance activities including postmaintenance testing prior to operating safety-related equipment for operational needs. The inspector concluded that the failure of the licensee program to require operators to ensure the completion of maintenance prior to operating safety-related equipment was a violation of 10 CFR Part 50, Appendix B, Criterion V (482/9609-01).

2.2 Weak Operability Evaluations

The inspector noted that the shift supervisor made two operability decisions during the inspection period that were correct, but were not well supported by the written evaluations.

On April 4, 1996, operators noted that the pressure downstream of Valve EJ HV8840, a residual heat removal hot leg injection isolation valve, reached 2300 psig from leakage past two check valves. The licensee's response to NRC Generic Letter 95-07 stated that the pressure on the downstream side of the valve would be monitored and, if reactor coolant system pressures were to be observed, the pressure would be relieved to an acceptable level. Engineering performed an operability evaluation of this potential pressure locking condition, and identified several compensatory actions which would be considered should operators not be able to open this valve when needed following a loss-of-coolant accident. These compensatory actions included manually opening the valve; loosening the packing gland follower, loosening the packing, and allowing pressure to bleed off through the packing; or drilling a hole in the valve bonnet to allow pressure to bleed off. The initial engineering operability evaluation did not acknowledge that certain accident scenarios involved plant conditions where the radiation levels in the room might prohibit the performance of these compensatory actions without exceeding the planned special exposure limit. A subsequent engineering evaluation stated that radiation conditions would be assessed and appropriate radiation protection measures taken, but again did not acknowledge the potential for potentially high accident radiation dose levels. Ultimately, venting the downstream pressure to the refueling water storage tank through the safety injection test line lowered the pressure and should have relieved any pressure locking potential. The safety function of the valve during plant operation was for the valve to be closed with power removed since it has been classified as a containment isolation valve. The licensee also described an alternate method of performing hot leg injection that could be accomplished regardless of whether Valve EJ Hv8840 could be opened or not in both their Updated Safety Analysis Report and in their emergency management guidelines. The inspector concluded that while the shift supervisor's decision that the valve remained operable had been correct, the documented operability evaluation had been weak.

On April 2, 1996, while racking in the Magne-Blast breaker for Safety Injection Pump A, the operator noted an electrical arc across the secondary contact block and noted that the closing spring charging motor started. In the shift supervisor's logs, the shift supervisor documented that this occurrence did not affect the operability of the pump based on a report from electricians that there had been a problem with the positive interlock, which should have prevented the closing spring charging motor from energizing during the racking operation. Since this interlock was only for personnel protection and had no impact on the breaker operation, the shift supervisor considered the breaker and Safety Injection Pump A to be operable. The inspector questioned the work history of this breaker during the outage, whether the potential for tools or other foreign material could have caused the arcing, whether the arcing damaged secondary contact block contacts, whether fuses had blown, and other aspects of the condition. The inspector discussed this with engineering and determined that a thorough, methodological evaluation could appropriately conclude that the only possible cause of the arc could have been the positive interlock, and that this could not have impacted operability.

The inspector concluded that the operability decision was correct, but was not adequately supported.

The operations manager stated that the individuals involved had been counseled, and that adequate justification of operability decisions would be discussed during a future shift supervisor and supervising operator meeting.

2.3 Good Operations Supervision Response

On April 20, 1996, the inspector observed a reactor operator begin to hang a clearance on the electrohydraulic control system as part of the power reduction for turbine balancing. The reactor operator questioned whether the clearance order should be hung at that time because it would, in effect, shut down the electrohydraulic control system. The supervising operator promptly responded by informing the operator that the system should be shut down per the system operating procedure, then proceeded to obtain a copy of the procedure and showed the operator the appropriate steps. The inspector considered this to be effective supervisory oversight of plant operations and effective communication of management expectations. The operations superintendent documented this as a "Positive Incident Report" of supervisory positive attitude.

2.4 Operations Inattention to Detail

The inspector noted two examples of poor attention to detail on the part of operators. The first example occurred on March 26, 1996, and involved the inspector's identification of Clearance Order Tag 96-0516-AL, on Valve AL V0031, Motor-Driven Auxiliary Feedwater Pump B discharge isolation valve, that described the component as "MD AUX FDW [motor-driven auxiliary feedwater] PUMP B DISCH[arge] ISOLATION VENT VALVE 3/4" 1500# ROOM 1324." The inspector questioned why the valve description on the clearance order tag described a 3/4-inch vent valve when the valve was a 6-inch isolation valve. Operations personnel responded by explaining that their clearance order computer system contained an inaccurate component description field for this component, and that the field for this valve had been corrected following the inspector's comments. The second example occurred on March 29, 1996, when the plant entered Mode 4. The shift supervisor logged the mode change as an entry into Mode 3. The inspector identified this error and questioned why the oncoming shift supervisor did not note this error during the log review prior to turnover. The oncoming shift supervisor stated that the error had simply been missed. The operations manager stated that the individuals involved in both of these issues had been counseled, and that attention to detail will continue to be reinforced as one of the seven operations divisional standards. In addition, the operations manager stated that attention to detail will also be discussed during future shift supervisor and supervising operator meetings.

2.5 Unexpected Loss of Offsite Power Source

On April 4, 1996, the inspector observed operators in the control room recognize a degradation in the megawatts on the grid. In response to this concern, the supervising operator contacted system operations and was informed that the Rosehill line, one of three offsite power sources for the site, was deenergized. This occurred as a result of breaker problems offsite. The operators appropriately referred to Offnormal Operating Procedure OFN AE-025, "Unit Limitations," Revision 2, and a system dispatch operating bulletin. Operators immediately commenced lowering power to 950 megawatts, as required by the procedure. The purpose of this action was to prevent stability problems that could occur if a second of the three offsite power sources were lost. The inspector concluded that the event demonstrated good attention to detail on the part of the operators. The actions taken in response to the event were prompt and appropriate.

3 MAINTENANCE OBSERVATIONS (62703)

The inspectors witnessed portions of the following work packages using Inspection Procedure 62703:

Work Package	Task	Title
107850	1	Motor-driven auxiliary feedwater Pump B rotating assembly replacement
109170	5	Troubleshoot turbine-driven auxiliary feedwater pump
STN FC-002	Rev 9	Auxiliary feedwater turbine overspeed test
111202	3	Motor-driven auxiliary feedwater Pump B outboard bearing reassembly
SYS AL-123	Rev 0	Maintenance run of the turbine-driven auxiliary feedwater pump
INC S-241	Rev 1	Turbine-driven auxiliary feedwater pump speed check
109554	1	Turbine-driven auxiliary feedwater pump packing gland maintenance
109554	1	Turbine-driven auxiliary feedwater packing gland leakoff adjustment
110712	3	Replace essential service water Orifice EF FE0003

Selected observations from the activities witnessed are discussed in the following sections.

3.1 Corrective Action Implementation Weakness

On March 25, 1996, mechanics identified minor damage to the shaft of the Motor-Driven Auxiliary Feedwater Pump B. The damage involved accelerated shaft wear requiring repair, but had not progressed to the point where it affected pump operability. After consultation with their vendor representative, mechanics identified the root cause as inadequate cold tightening of the pump outboard bearing shaft nut. The outboard bearing required heating to expand the bearing so it would fit on the shaft. As the bearing cooled, it shrunk to form a tight fit on the shaft. This shrinkage also reduced the preload on the shaft nut. Corrective action for this problem involved proper tightening of the shaft nut after allowing the bearings to cool to ambient temperature. After identifying this root cause, maintenance personnel checked but did not find problems with similar bearings on Motor-Driven Auxiliary Feedwater Pump A, and the turbine-driven auxiliary feedwater pump. However, during reassembly of Motor-Driven Auxiliary Feedwater Pump B, the inspector noted that Work Package 107850T1 did not contain work instruction steps to require cold tightening of the shaft nut, nor a criterion for adequate cooling. The inspector determined that the vendor technical manual also did not provide this guidance. The mechanics stated that despite this omission, they had planned to perform the cold tightening, and subsequently documented the completion of the cold tightening in the comments section of the work instructions. The inspector concluded that not revising the work instruction represented incomplete implementation of identified corrective actions to prevent recurrence of a similar failure.

The inspector also noted that the mechanics did not perform the work instructions in the order written. While this was permitted by the work package, the inspector learned, during discussions with the mechanic, that the pump could not be reassembled using the work instruction steps in the order presented in the work package. In response to these issues, the licensee initiated PIRs 96-0964 and 96-1008.

3.2 Motor-Driven Auxiliary Feedwater Pump Assembly Error

On April 1, 1996, during the postmaintenance run of Motor-Driven Auxiliary Feedwater Pump B, rapidly rising outboard bearing temperature prompted operators to shut down the pump, and the mechanics to disassemble the pump outboard bearing to identify and repair the problem. Maintenance personnel found a crushed Schnoor washer and initiated PIR 96-0964. During discussions with a maintenance supervisor, the inspector learned that the work instructions had been generic. As a result, the mechanic set the balance drum improperly, which caused excessive load on the bearings and the crushed Schnoor washer. According to the maintenance supervisor, the cause of this improper setting could not be determined, but was believed to be the result of an improper positioning of the Schnoor washer. The mechanic who positioned

the Schnoor washer and performed the balance drum setting was a vendor representative. The maintenance supervisor stated that the PIR 96-0964 resolution will include revisions to the work instructions to replace generic assembly instructions with specific instructions for Schnoor washer positioning and proper balance drum setting.

After ensuring that there were no other problems, the mechanics reassembled the pump. Subsequent testing demonstrated that the pump had been reassembled properly. The inspector concluded that this represented weak work instructions and inappropriate reliance on the skill of the craft.

4 SURVEILLANCE OBSERVATIONS (61726)

Using Inspection Procedure 61726, the inspectors observed portions of the following surveillance tests:

- STS IC909B Channel calibration accumulator pressure, Revision 4
- STS PE019E Reactor coolant system isolation check valve test, Revision 12
- STS RE014 Cross calibration of wide and narrow range RTDs, Revision 5
- STS RE011 Reactor coolant system total flow rate measurement, Revision 8
- STS IC441 Channel calibration NIS Power Range N-41
- STS AL-103 Turbine-driven auxiliary feedwater pump inservice pump test, Revision 20

The inspectors concluded that the surveillance tests were performed as required.

4.1 Inadvertent Overspeed of the Auxiliary Feedwater Turbine

On March 31, 1996, operators inadvertently started the auxiliary feedwater turbine while performing Procedure STS RP-004, "Auxiliary Shutdown Panel Control Switch Test," Revision 7. Earlier that day during the previous shift, operators began Procedure STN FC-002, "Aux[iliary] Feedwater Turbine Overspeed Test," Revision 9. Operators performed Step 8.4.6 of Procedure STN FC-002, that opened Valve FC V004, auxiliary steam supply to the turbine-driven auxiliary feedwater pump isolation. The auxiliary boiler subsequently tripped, stopping the auxiliary steam supply needed to operate the auxiliary feedwater turbine. Operators stopped the test, documented the test suspension, and notified the supervising operator of the test suspension, but did not clearly communicate that Valve FC V004 remained open. As a result, after the morning shift turnover, none of the control room operators specifically knew that Valve FC V004 remained open. Consequently, when

Procedure STS RP-004 opened the turbine-driven auxiliary feedwater pump trip and throttle valve, auxiliary steam was admitted to the turbine causing the overspeed trip. The licensee initiated PIR 96-1043. The system engineer evaluated the consequences of the inadvertent overspeed, and concluded that the event did not damage the turbine.

The inspector noted four additional concerns associated with this event.

- There was poor coordination of the suspended Procedure STN FC-002 with Procedure STS RP-004.

- There was a weak turnover, in that, few oncoming watchstanders knew that Valve FC V004 remained open, and operators apparently did not question the status of suspended Procedure STN FC-002.

- There were weak programmatic administrative requirements for surveillance test suspension. Administrative Procedure AP 29B-003, "Surveillance Testing," Section 6.6, provided four steps associated with the suspension of surveillance testing. None of these four steps required the test performers to restore the system lineup to any particular configuration and, therefore, permitted the suspension of Procedure STN FC-002 with Valve FC V004 open.

- The inspector noted that system operating procedures established an initial condition to ensure that the system was lined up in accordance with the applicable system lineup checklist procedure. However, surveillance test procedures had no similar requirement. As a result, the program relied on the individual surveillance procedure and the shift supervisor to ensure that appropriate initial conditions supported the performance of the test.

The plant manager stated that these four additional concerns would be addressed during the resolution of PIR 96-1043. The inspector concluded that Procedure STS RP-004 was inadequate, in that it failed to direct operators to ensure that Valve FC V-004 was shut prior to opening Valve FC HV0312. This is a violation of 10 CFR Part 50, Appendix B, Criterion V (482/9609-02).

5 ONSITE ENGINEERING (37551)

The inspectors reviewed and evaluated engineering activities using Inspection Procedure 37551.

5.1 Auxiliary Feedwater Turbine Oil Level

During August and September 1995, the auxiliary feedwater system engineer received two facsimiles from the Terry Corporation Engineering Department. These facsimiles provided vendor recommendations for high and low oil level limits. In the August 1995, facsimile, the vendor provided high and low oil level limits, and stated "DO NOT ALLOW OIL LEVEL TO EXCEED THESE LIMITS." In

the September 1995, facsimile, the vendor stated "The proper oil level per this gauge insures the optimum performance of the oil ring lubrication and operating outside this range is not recommended. Your turbine also has a shaft-driven pump (SP) lube system. As long as you can see oil in the sight gauge, there is sufficient oil for the pump to operate and properly lubricate the turbine and the governor. However, continuous operation outside the correct range will result in a higher frequency of various bearing-related problems and required maintenance." The system engineer evaluated these two facsimiles, and documented the evaluation in PIR 95-2222. The system engineer resolved the PIR without specifically acknowledging the vendor recommendations regarding oil level high and low limits. Consequently, the system engineer did not identify that any further actions were needed to close out the PIR. Two "enhancements" were identified, the first to initiate an action request to replace the single centerline mark with high and low marks and, the second, to incorporate the additional information into the vendor manual.

The inspector determined that the facsimiles provided by the vendor constituted a vendor recommendation, and that the vendor comments regarding a "higher frequency of various bearing-related problems" clearly cautioned that physical degradation would occur unless the oil level was maintained within the recommended operating band. The inspector concluded that the engineering evaluation in PIR 95-2222 was weak.

As discussed in Section 5.4, on March 31, 1996, the inspector noted that turbine lube oil level was below the low-level mark as operators prepared to start the turbine. Licensee procedures written to start the turbine-driven auxiliary feedwater pump generally provided guidance for operators to ensure that the oil level was satisfactory as a procedural prerequisite. Satisfactory oil level was defined in Procedure CKL ZL-004, "Turbine Building Reading Sheets," Revision 36, as greater than one-eighth of the height of the sight glass. The inspector noted that at the end of the inspection period, Procedure CKL ZL-004 did not direct operators to maintain the auxiliary feedwater turbine oil level within the range specified by the vendor. The inspector concluded that this was inappropriate to the circumstances, and therefore, a violation of 10 CFR Part 50, Appendix B, Criterion V (482/9609-03). Prior to the exit meeting, the operations manager stated that Procedure CKL ZL-004 had been revised to incorporate the vendor guidance.

5.2 Turbine-Driven Auxiliary Feedwater Pump Packing Concerns

On April 4, 1996, the inspector observed operators start the turbine-driven auxiliary feedwater pump to perform the packing run-in per Procedure SYS AL-123, "TDAFW [Turbine Driven Auxiliary Feedwater] Pump Post Maintenance Run," Revision 0. During this run, a significant "cloud" of steam continually issued from both pump packing glands even though packing leakoff flow exceeded the minimum vendor recommendation. After packing adjustments were completed, mechanics measured packing follower surface temperatures in excess of 180°F.

In addition, the licensee found abnormal pump outboard bearing vibration readings, and normal bearing wear products in the bearing oil. The oil sample showed no signs of abnormal wear products, or indications of actual or imminent bearing damage. Following the pump run, mechanics found the outboard shaft sleeve loose. Mechanics tightened the sleeve and replaced the outboard bearing oil. During subsequent pump runs, vibration readings returned to normal levels, and the subsequent oil samples improved. Engineering personnel evaluated all the relevant data and concluded that there was no abnormal degradation of the outboard pump bearing, and that, after the maintenance, it appeared to operate normally. The inspector agreed with the engineer's conclusion. No reason could be determined for the shaft sleeve becoming loose.

Later the same day, the inspector observed operators attempt to perform Surveillance Procedure STS AL-103, "TDAFW [Turbine-Driven Auxiliary Feedwater] Pump Inservice Pump Test." One minute after starting the pump the operator tripped the pump locally after observing steam issuing from the packing and noting rapid heating of the inboard packing gland.

Following this trip, mechanics repacked the pump using the same John Crane Style 1636 packing material that had been used approximately 1 month earlier. Mechanics noted that the removed packing material exhibited signs of considerable degradation. The subsequent pump run resulted in similar packing steaming conditions. Upon the advice of the vendor, mechanics removed one ring of packing and attempted the test again with similar results. After additional consultation with the vendor, mechanics repacked the pump with John Crane Style 1625G packing material, a stiffer style of packing using a different packing technique. The different technique involved ensuring that the packing rings had a definite gap, and that the gaps in subsequent rings were installed in a spiral 90 degree offset from ring to ring, rather than the traditional 180 degrees offset. Subsequent testing resulted in no steam, and packing follower surface temperatures at approximately 100°F. Subsequent surveillance testing resulted in similar packing performance, and operators successfully completed all required surveillance testing and declared the pump operable.

The inspector concluded that these packing problems were the result of engineering and maintenance weaknesses. After identifying the packing problems described in Section 5.3 of this report, the inspector concluded that the licensee had not completely resolved all the auxiliary feedwater issues stemming from the frazil icing event described in NRC Inspection Reports 50-482/96-03 and 50-482/96-05. The inspector noted that the system engineer initiated PIR 96-1338 to capture lessons learned to date and to identify and resolve all remaining auxiliary feedwater pump packing issues.

5.3 Motor-Driven Auxiliary Feedwater Pump Packing Steaming

Following the turbine-driven auxiliary feedwater pump packing problems described in Section 5.2 of this report, system engineering performed an

operability evaluation of the motor-driven auxiliary feedwater pumps given the use of similar packing in one of the two pumps. This evaluation, completed on April 5, 1996, stated that the packing material in both motor-driven auxiliary feedwater pumps was John Crane Style 1636 packing, while the packing in Motor-Driven Auxiliary Feedwater Pump A was actually John Crane Style 1630 packing. This error was acknowledged in a subsequent operability evaluation completed on May 3, 1996. Engineering personnel also initiated PIR 96-1355 to evaluate this error. Engineering initiated a second operability evaluation, following the surveillance test of Motor-Driven Auxiliary Feedwater Pump B performed on May 1, 1996, when operators noted steam issuing from both inboard and outboard packing glands. Leakoff for both glands exceeded the minimum acceptable flowrate. Maintenance personnel replaced the packing with John Crane Style 1625G packing. After two separate periods of pump operation to adjust and run-in the packing, packing temperatures returned to near ambient conditions, and operators no longer observed steaming from the packing glands. Operators performed the surveillance test and declared the pump operable. On May 3, 1996, engineering personnel discovered that the 1625G packing material installed in the Motor-Driven Auxiliary Feedwater Pump B had not been procured as safety-related packing, and was not dedicated for safety-related applications. The packing was subsequently dedicated for safety-related use. This issue will be tracked as an unresolved item pending further evaluation during a future inspection (482/9609-04).

5.4 Test Preparation Weakness

On March 31, 1996, operators prepared to perform Procedure STN FC-002, "Aux[iliary] Feedwater Turbine Overspeed Test," Revision 9. Prior to starting the turbine, the inspector noted that the turbine lube oil level was below the low-level mark discussed in Section 5.1 of this report. The inspector noted that the operator and system engineer observed the oil level, but did not recognize that it was below the low-level mark on the sightglass. The inspector questioned the system engineer, who suspended the test and directed maintenance personnel to add oil to the turbine. The inspector noted that Procedure STN FC-002 had no requirement for the test performers to check the turbine oil level prior to starting the turbine. After the inspector questioned the oil level, operators initiated On-The-Spot-Change 96-0499 to Procedure STN FC-002 to check the oil level and to address other identified procedural concerns.

The inspector also noted that the shift supervisor expressed concerns regarding the turbine bearing temperatures. Bearing temperatures had increased during the inadvertent overspeed trip discussed in paragraph 4.1 of this report. The shift supervisor expressed concern that bearing temperatures could reach the upper limit during the overspeed trip test without the installation of temporary oil cooler hoses. This test is performed with the turbine decoupled from the pump, and normal oil cooling is supplied from the pump discharge flow. To address these concerns, operators performed procedural steps previously marked as Not Applicable to connect hoses to provide cooling to the lube oil cooler during the performance of the overspeed test.

The inspector concluded that these issues represented operator and system engineer inattention to detail, a procedural weakness, and weak test preparation.

6 PLANT SUPPORT ACTIVITIES (71750)

The inspectors reviewed and evaluated plant support activities using Inspection Procedure 71750.

6.1 Security Power Supply

The inspector observed the weekly run of the security diesel generator on April 23, 1996, and reviewed the power systems for the plant security system. During the run of the security diesel generator, the inspector noted that the diesel generator speed oscillated enough to cause voltage and frequency oscillations, and oscillation of the images produced by certain pan-tilt-zoom cameras. Security officers stated that some of the cameras consistently performed in this manner whenever the security diesel generator provided power. The inspector concluded that security officers were aware of this issue, but did not initiate corrective action to address the concerns. In response to the inspector's comments, security management initiated an action request for maintenance to correct this speed oscillation problem.

The inspector also noted a number of additional minor concerns with the security diesel generator. Examples of these concerns included fuel oil leaks, an inoperable air intake damper, loose fuel line supports, missing fasteners, a missing cap on the fuel pump, and corrosion on the exhaust muffler drain valve. Security management initiated action requests for these issues. In addition, security management scheduled a special run of the security diesel generator on April 26 to allow maintenance personnel to observe these concerns, and stated that they intend to utilize maintenance personnel to periodically observe scheduled diesel generator runs in the future.

The inspector discussed these concerns with the Region IV physical security and safeguards inspector, who also reviewed these issues and the adequacy of licensee testing of the security diesel generator. These conclusions are discussed in NRC Inspection Report 50-482/96-10.

7 REVIEW OF UPDATED SAFETY ANALYSIS REPORT COMMITMENTS

A recent discovery of a licensee operating their facility in a manner contrary to the Updated Safety Analysis Report (USAR) description highlighted the need for a special focused review that compares plant practices, procedures, and parameters to the USAR descriptions. While performing the inspections discussed in this report, the inspectors reviewed the applicable portions of the USAR that related to the areas inspected. The inspectors verified that the USAR wording was consistent with the observed plant practices, procedures and parameters.

ATTACHMENT

1 PERSONS CONTACTED

G. D. Boyer, Director of Site Support
N. S. Carns, President and Chief Executive Officer
O. L. Maynard, Chief Operating Officer
B. T. McKinney, Plant Manager
R. Muench, Vice President Engineering
W. B. Norton, Manager, Performance Improvement and Assessment
J. M. Pippin, Manager, Integrated Planning and Scheduling

The above licensee personnel attended the exit meeting. In addition to the personnel listed above, the inspectors contacted other personnel during this inspection period.

2 EXIT MEETING

An exit meeting was conducted on May 8, 1996. During this meeting, the inspectors reviewed the scope and findings of the report. The licensee asknowledged the findings discussed by the inspectors. The licensee identified one document provided to the inspector as proprietary. Material from that document is not discussed in this report, and the document will be returned to the licensee when the inspector's review is complete.