ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-482/95-23

License: NPF-42

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

Facility Name: Wolf Creek Generating Station

Inspection At: Burlington, Kansas

Inspection Conducted: October 16-20, 1995

Inspectors: P. C. Gage, Reactor Inspector, Engineering Branch
Division of Reactor Safety

W. M. McNeill, Reactor Inspector, Engineering Branch
Division of Reactor Safety

P. A. Goldberg, Reactor Inspector, Engineering Branch
Division of Reactor Safety

Approved: _____ 11-15-95
Chris A. VanDenburgh, Chief, Engineering Branch Date
Division of Reactor Safety

Inspection Summary

Areas Inspected: Routine, announced inspection of followup on previous inspection findings.

Results:

Engineering

- During the review of the licensee's corrective actions for a violation involving inadequate safety evaluations, the inspectors noted that the licensee used a previous safety evaluation associated with a temporary modification for the safety evaluation of the newer temporary modification. The inspectors were concerned that this practice effectively bypassed the corrective actions the licensee had implemented to improve the safety evaluation process. The licensee committed to review this practice to prevent a recurrence of this event (Section 2.2).

- The inspectors noted that the licensee had implemented a number of improvements in the steam generator eddy current testing program. The licensee had gained an understanding of the importance of steam generator examinations and had adequately addressed all the comments identified in NRC Inspection Report 50-482/94-11. The licensee's actions were responsive to the original concern (Section 2.4).

- The licensee had adequately addressed the inspectors' previous concerns regarding the design basis for turbine-driven auxiliary feedwater pump trip and throttle valve. The licensee indicated that the vendor's decision to keep the valve in an unlatched 90-percent closed position was an acceptable compromise between rapid valve response capability on demand and minimizing the risk of experiencing thermal binding. Although the licensee did not have any documentation to substantiate this technical position, the licensee's operational history indicates that the valves have remained operable (Section 2.6).

Summary of Inspection Findings:

- Violation 482/9321-02 was closed (Section 2.1)
- Violation 482/9507-02 was closed (Section 2.2)
- Violation 482/9507-05 was closed (Section 2.3)
- Inspection Followup Item 482/9411-01 was closed (Section 2.4)
- Inspection Followup Item 482/9507-01 was closed (Section 2.5)
- Inspection Followup Item 482/9507-03 remained open (Section 2.6)
- Inspection Followup Item 482/9507-04 was closed (Section 2.7)
- Inspection Followup Item 482/9507-06 was closed (Section 2.8)

Attachment:

- Attachment - Persons Contacted and Exit Meeting

DETAILS

1 PLANT STATUS

During this inspection, the plant was operating at 100 percent power.

2 FOLLOWUP ON ENGINEERING OPEN ITEMS (92903)

2.1 (Closed) Violation 50-482/9321-02: Inadequate Corrective Action for Hardware Problems

Background

This violation involved three examples of a failure to implement corrective actions for conditions adverse to quality. NRC Inspection Report 50-482/95-19 verified that the licensee's corrective actions specified in a response to the violation, dated November 3, 1993, had been satisfactory accomplished for the generic concerns and for two of the three examples. However, the corrective actions did not adequately address the third example involving seven bellows failures in Residual Heat Removal System Relief Valves EJ8856A and EJ8856B.

The inspectors had reviewed the root cause of the bellows failure in the licensee's hardware failure analysis report completed November 29, 1993. The licensee stated in Report MA 92-004 that the bellows failure was attributed to high-cycle fatigue caused by system pressure exceeding the set pressure of the valve. Corrective actions taken to reduce the possibility of the relief valve opening included installation of a pressure gage to allow system pressure to be monitored on a daily basis and recorded. If the pressure exceeded 350 psig, the pressure would be relieved from the system without causing the valve to open. The inspectors had also reviewed Performance Improvement Request 95-0336, dated May 5, 1995, which provided additional corrective actions. The licensee had determined that relief valve cycling had been caused by leakage through the residual heat removal discharge header check valves to the safety injection accumulators or to the reactor coolant system cold legs. All of the check valves related to this issue had been scheduled to be reworked by Refueling Outage 9. The inspectors had left this third example of the violation open pending completion of the licensee's corrective actions.

Inspector Followup

The inspectors reviewed Performance Improvement Request 94-0167, dated January 25, 1994, which documented that Relief Valve EJ8856A had cycled during the January 1994 outage which resulted in bellows failure due to the reactor coolant system check valve leakage at decreased plant pressure. This document recommended that during plant reduced pressure, plant heatup, or operation of the residual heat removal pumps, the installed pressure gage should be monitored at a frequency which would allow control room notification if the pressure was approaching the relief valve set pressure. The inspectors noted

that the corrective actions included revising a number of operating procedures to provide for frequent monitoring of the residual heat removal discharge pressure to the relief valves and provide a means to relieve the pressure when it became high.

The inspectors reviewed Procedure GEN 00-002, "Cold Shutdown to Hot Standby," Revision 34, and Procedure GEN 00-006, "Hot Standby to Cold Shutdown," Revision 30. The inspectors noted that both procedures required monitoring residual heat removal pressure hourly for increasing pressure, and if the local pressure exceeded 500 psig, the residual heat removal system was to be depressurized. The inspectors reviewed Procedure SYS EJ-120, "Startup of a Residual Heat Removal Train," Revision 27; Procedure SYS EJ-121, "Startup of a RHR Train in Cooldown Mode," Revision 7; Procedure SYS EJ-320, "Placing RHR System in Safety Injection Standby Conditions," Revision 21; and Procedure SYS EJ-321, and "Shutdown of a Residual Heat Removal Train," Revision 19. The inspectors determined that these procedures contained appropriate instructions to prevent the relief valves from opening.

The inspectors reviewed Performance Improvement Request 95-0336, dated March 1, 1995, which documented a relief valve bellows failure during normal plant operation. The inspectors noted that this performance improvement request listed a condition not previously identified, which was while performing a surveillance test, a pressure increase occurred on pump start up to approximately the discharge pressure then continued to increase to the relief valve set pressure. The corrective actions included revising the inservice pump test procedures. The inspectors reviewed Procedure STS EJ-100A, "RHR System Inservice Pump A Test," Revision 17, and Procedure STS EJ-100B, "RHR System Inservice Pump B Test," Revision 14. The inspectors found that the procedures had been revised to maintain the discharge pressure less than 40 psig by providing an additional flow path to ensure the header pressure remained low.

The inspectors reviewed Temporary Modification 94-054-EJ, Revision 0, which installed pressure gages for monitoring residual heat removal system pressure. The inspectors reviewed Change Package 05838-94, "RHR Discharge Pressure Gage Installation," Revision 0, which converted the gage installed by the temporary modification into a permanent "interim" gage until the permanent gage was installed. The inspectors noted that the gages installed by these packages were not safety-related. The inspector reviewed the calibration records for the nonsafety-related gages and determined that the gages were calibrated frequently. The inspectors reviewed Design Change Package 05121, Revision 1, which was prepared to install a safety-related pressure gage for monitoring system pressure. This change package was scheduled to be installed during Refueling Outage 13. The inspectors concluded that, although nonsafety-related gages were being used for monitoring system pressure, they were acceptable since they were calibrated frequently.

The inspectors reviewed a work plan for Refueling Outage 13 and noted that a number of the leaking check valves associated with the relief valve bellows problems were scheduled to be disassembled and inspected for wear. The licensee stated that the remainder of the valves would be inspected during Refueling Outage 14.

The inspectors concluded that the licensee completed corrective actions and plans for refurbishing the check valves by Refueling Outage 9 resolved the original concerns.

2.2 (Closed) Violation 482/9507-02: Two Examples of Inadequate Safety Evaluations

Background

This violation involved two examples of the failure to perform an adequate safety evaluation. In the first example, the safety evaluation for the change from intermittent to continuous operation of the emergency diesel generator's fuel oil transfer system did not address the agitation and suspension of sediment in the fuel oil by recirculation flow. The suspension of the sediment could impact the performance of the stainers and filters and then the performance of the emergency diesel generator. In the second example, the safety evaluation of the removal of motor operators in the essential service water system did not evaluate the consequence of the weight change on the seismic analysis and did not provide the basis for determination that the seismic consequences of a previously evaluated event would not increase.

Inspector Followup

As corrective action for the first example, the licensee evaluated the potential suspension of sedimentation in the fuel oil due to continuous operation of the fuel oil transfer pump when the generator was operating. The evaluation determined there was no impairment of the diesel generator operation. The licensee documented this evaluation in Revision 2 to Plant Modification Request 04253. As corrective action for the second example, the licensee reevaluated the seismic analysis and determined that the removal of valve operators did not result in the system being susceptible to damage or increase the consequences of a previously evaluated event. The licensee revised the design change package to document this evaluation.

As a further corrective action, the licensee had developed written expectations and measures of excellence for engineering personnel and transmitted these to the engineering staff in a July 7, 1995, memorandum. These expectations addressed the lack of attention to detail and the failure to provide effective management oversight. Also, they modified the design change process to streamline the process and incorporate lessons-learned from the self-assessment. The licensee planned to complete training of the engineering staff on the enhanced design change process by December 1995. The inspectors reviewed the revised design documents and verified the close out of Performance Improvement Requests 95-0987 and 95-1000 initiated in

response to these concerns. In addition, the inspectors reviewed the close out of the self-assessment report. The self-assessment resulted in enhancement and revision of the 10 CFR 50.59, Safety Evaluation Procedure AP 26A-003, "Screening and Evaluation of Changes, Tests, and Experiments," Revision 0. The inspectors also verified that the licensee had provided training on the newly revised procedures. The newly revised procedures were:

- AP 05-002, "Disposition, Configuration Change Packages, and Design Change Packages," Revision 0
- AP 05-005, "Permanent Modification Configuration Control," Revision 0, and
- AP 05-017, "Engineering Change Process," Revision 1

The licensee planned to revise, as well as, train personnel on more procedures of the enhanced design change process.

The inspectors noted that the licensee's management expectations had identified indicators of good engineering; however, the licensee had not implemented any measurement of these indicators. For example, one indicator was trending licensee event reports attributed to engineering errors. At the conclusion of the inspection, the licensee indicated they were considering implementing such trending.

During the inspectors' review of the safety evaluation process, the inspectors noted that a recent resident inspection (NRC Inspection Report 50-482/95-22) identified an additional example of a violation involving an inadequate safety evaluation. The violation was not cited because the licensee had prepared a revised safety evaluation and the error was of minor safety significance. The safety evaluation was inadequate, in that the spent fuel pool level could decrease to the elevation of anti-siphon hole; however, the safety evaluation did not acknowledge any loss of level.

During the review of the associated Temporary Modification 95-026-EC, the inspectors found that the licensee had used a previous safety evaluation associated with Temporary Modification 92-040-EC as the safety evaluation for the newer temporary modification. Therefore, the process changes and lessons-learned discussed above were not implemented. When questioned by the inspectors, the licensee estimated the use of a previous safety evaluation occurred less than 1 percent of the time based on a review of the records. Nevertheless, the inspectors were concerned that this practice of using previous safety evaluations effectively bypassed all the improvements the licensee had incorporated into their safety evaluation process. The licensee committed to review this practice with possible elimination of it from the procedure so there would not be a reoccurrence of this event. The inspectors closed this item based upon this commitment and the few occasions where a previous safety evaluation had been substituted.

2.3 (Closed) Violation 50-482/9507-05: Inadequate Corrective Actions for Emergency Diesel Generator Calculation Concerns

Background

This violation involved the failure to promptly correct conditions adverse to quality. Specifically, in early 1995 a system engineer failed to document his concerns regarding deficiencies in the calculations for fuel oil transfer pump start/stop day tank levels, or the day tank low level alarm setpoints. The deficiencies involved the calculation for establishing the minimum level for starting the fuel oil transfer pump. Rather than determining a value which would assure at least 510 gallons for the lowest density fuel, the calculation determined the value for the most dense fuel. Although the lesser volume would still meet the Technical Specification requirements due to its higher heat value, the setpoint would allow levels below the Technical Specifications limit without starting the transfer pump.

The team noted that although the above inconsistencies demonstrated a weakness in the performance of engineering and technical work, the standpipe on the fuel oil day tank provided assurance that the volume of the fuel in the day tank would remain above 510 gallons under nonoperating conditions, and that the licensee's plans to maintain the fuel oil transfer pumps energized during diesel operation assured that 510 gallons would be maintained in operation.

Inspector Followup

The inspectors noted that the licensee had taken immediate corrective action to document the emergency diesel fuel oil tank volume calculation concerns in Performance Improvement Request 95-0965, dated April 25, 1995. The inspectors reviewed the request and concluded that the concerns identified in NRC Inspection Report 50-482/95-07 with day tank volumes were adequately resolved. Corrective actions identified by the licensee included the implementation of revisions to Calculations M-JE-321, "Minimum Fuel Oil Day Tank Level," and JE-J-001, "Day Tank Level Instrumentation Setpoints." The revisions to these calculations were conservative, using the lowest density fuel in determining the minimum day tank level volumes and start/stop setpoints for the fuel transfer pumps. The inspectors also noted that licensee had submitted a revision to their Technical Specifications regarding day tank fuel oil level requirements. The inspectors verified that the revision, dated October 18, 1995, was consistent with the latest calculations regarding minimum day tank level and fuel oil transfer pump start/stop setpoints.

Additionally, the licensee initiated an internal assessment to review the circumstances surrounding the initial failure to utilize the performance improvement request process to document conditions adverse to quality, and to determine whether there was a site-wide reluctance to document similar problems. The licensee subsequently issued Performance Improvement Requests 95-1172 and 95-1739 to address the failure to use the performance information request process. To resolve these requests, the licensee selected and interviewed an arbitrary sample of 42 engineers, 9 supervisors, and 5

managers within the engineering department to determine personnel support for and use of the corrective action program. The licensee stated that all personnel interviewed indicated an understanding of the responsibility to identify concerns encountered during the performance of their duties.

The licensee determined that the root cause for the violation was insufficient management oversight, in that management had not assured the existence of a positive work culture. The licensee's corrective action to prevent recurrence addressed an extensive meeting schedule with the system engineer and his supervisor re-emphasizing management's expectations on corrective actions. The inspectors verified through interviews and reviews of Performance Improvement Request 95-1739 that these corrective actions were completed.

Additional corrective actions provided training on the corrective action program for all engineers. The inspectors verified the completion of this training by interviews and reviewing the computer printout of Training Course ES 13 366 00, "Corrective Action Training For Engineers," Revision 000. The inspectors noted that all engineers in the engineering department had received the corrective action training, with one minor exception that the licensee corrected.

The inspectors concluded that the licensee's completed corrective actions were responsive to the original concerns.

2.4 (Closed) Inspection Followup Item 9411-01: Eddy Current Program Improvements

Background

A previous inspection of steam generator tube integrity (NRC Inspection Report 50-482/94-11) identified shortcomings in the licensee's eddy current testing program when compared to industry practices and the Electric Power Research Institute NP-6201, "PWR Steam Generator Examination Guidelines," Revision 3, Appendix D. The licensee initiated three Performance Improvement Requests to resolve the concerns identified in the inspection. As a result, the licensee revised Procedures ENG 06-350, "Steam Generator Eddy Current Data Analysis Guidelines"; STS PE-022, "Steam Generator Tube Inspection"; AP 29A-003, "Steam Generator Management"; and PRO-CHG-001, "Probe Change Guidelines for Eddy Current Bobbin Probes," Revision 0. Training on the new revisions and the new procedure would be done before the next refueling outage in March 1996.

Inspector Followup

The inspectors reviewed these procedures and found that the licensee had addressed all the concerns identified in the inspection report. The licensee's procedures were in compliance with the Electric Power Research Institute NP-6201, "PWR Steam Generator Examination Guidelines," Revision 3,

Appendix D. Document NP-6201 is an industry standard that provides direction for the examinations of steam generators over and above the limited requirements of the American Society of Mechanical Engineers code. The inspectors concluded that the licensee's actions were responsive to the original concern.

2.5 (Closed) Inspection Followup Item 50-482/9507-01: Heat Exchanger Data Analysis Inconsistencies

Background

The NRC Engineering and Technical Support Inspection (NRC Inspection Report 50-482/95-07) identified several inconsistencies in the licensee's methodology of analyzing heat exchanger test results for the component cooling water heat exchangers. The inspectors had determined that the formula used to convert the calculated effectiveness to the corrected effectiveness did not appear to be accurate and that the licensee had used different effectiveness curves to compute the nominal and the curve effectiveness. The inspectors had identified these concerns as a weakness in the licensee's evaluation of heat exchanger test data.

Inspector Followup

The inspectors reviewed Performance Improvement Request 95-1250, dated May 18, 1995, which the licensee initiated to address the component cooling water heat exchanger concerns. The inspectors noted that the licensee's corrective actions included validating the heat exchanger performance criteria and effective heat transfer by using independent performance testing methods or formulas. In addition, the licensee revised the component cooling water heat exchanger test to use a different method of deriving an acceptance criteria. The inspectors also reviewed Procedure STN PE-033, "CCW Heat Exchanger Performance Test," Revision 4, which the licensee revised to change the methodology for analyzing test results for the heat exchangers.

The inspectors noted that the revised method used fouling resistance instead of the effectiveness method previously used. The licensee had converted the test data points from an estimated effectiveness to an estimated fouling resistance. The inspectors concluded that the fouling resistance method was an acceptable method for evaluating the heat exchangers. In addition, the inspectors reviewed draft fouling resistance data that the licensee had calculated from the last test performed. The licensee stated that they would formalize this data. The inspectors noted that the calculated fouling resistance was significantly less than the design fouling resistance.

The inspectors concluded that the licensee's actions were responsive to the original concern and that utilizing a fouling resistance was an acceptable method for evaluating the heat exchangers.

2.6 (Open) Inspection Followup Item 50-482/9507-03: Design Basis for Turbine-Driven Auxiliary Feedwater Pump Trip and Throttle Valve Actuator

Background

As documented in NRC Inspection Report 50-482/95-07, the team found that the relatch safety function of the actuator for the Trip and Throttle Valve FCHV-0312 was not identified in the design basis for the auxiliary feedwater system, nor clearly reflected in the setting for the torque switch. This normally closed globe valve was operated by a Limitorque motor-actuator, and had a safety function to open and admit steam to the Terry turbine to facilitate starting the auxiliary feedwater pump. The team found that in order to open the valve, the actuator first had to drive the valve further closed to relatch the trip mechanism, actuate the closed torque switch, and finally reverse direction to open. The team questioned why the valve was unlatched in its standby safety condition. The licensee stated that additional clarification of the design basis for the actuator control logic would be obtained as part of the review under Work Request 02219-95.

Inspector Followup

The inspectors reviewed Work Request 02219-95 and found that the sequence of work activity involved taking a measurement between the trip lever and the tappet nut to verify their engagement conforms to the configuration shown on Drawing M-021-00132. The licensee's measurement, as documented in Work Request 02219-95, was found to be 0.040 inches, which is between the acceptable range of 0.030 to 0.060 inches. The inspectors found no clarification of the design basis for the actuator control logic as part of this work request.

The inspectors identified that the licensee's control circuit design differs from the literal reading of the vendor's recommendations. Specifically, the trip and throttle valve vendor, Gimpel, recommended that the valve be left in the tripped position (valve closed, actuator full open and unlatched) until turbine use is imminent to ensure the valve will not be susceptible to thermal binding. Present plant operations, as documented in Performance Information Request 95-2223, indicate the valve should not be left in the tripped condition, as previously identified. Rather, the valve should be left closed with the actuator at the 90-percent closed position and unlatched.

The inspectors observed that with the actuator in the ninety percent closed position, the trip spring would transmit a corresponding 90-percent compression force to the valve seating surfaces. The licensee maintained that ninety percent compressed and unlatched was better than latched at 100 percent closed, because the 10 percent decrease in spring compression and being unlatched allowed the sliding nut to continue to move during thermal growth. The licensee stated that Dresser-Rand (who supplied the valve as part of the turbine package) was aware of the vendor's recommendation, but had made a decision to trade off risk of thermal binding with the need for quick valve response times. Although the inspectors found no documentation to

substantiate that the thermal binding concern had been addressed by the 90-percent closed position of the actuator, the licensee estimated that over 600 demands have been placed on the auxiliary feedwater system during plant operations at the Wolf Creek and Callaway Nuclear Stations with no indication of thermal binding of the trip and throttle valves to date.

The licensee initiated Performance Improvement Request 95-0999 to address the concern that operator training does not specifically include guidance to ensure that the tappet nut is fully depressed and in contact with the head bracket. Proper contact between the tappet nut and the head lever minimizes the possibility of prematurely tripping the turbine-driven auxiliary feedwater pump due to vibration. The request stated that operator training should include checking for the following: the tappet nut is fully depressed against the head bracket when resetting the trip linkage; the tappet nut is parallel to the head bracket, and if not, the head bracket is worn and a work request should be written for replacing the head bracket. The inspectors observed that this is the present condition and that Work Request 01984-95 had been submitted. The inspectors verified that the above operator verification checks were incorporated within the training curriculum, and that the last class was scheduled for completion on October 19, 1995.

The inspectors concluded the licensee's actions had not addressed the difference between recommendations of the valve supplier and the valve manufacturer regarding the design basis for the actuator control logic of the trip and throttle valve. In a subsequent discussion on November 13, 1995, with the licensing manager, the inspectors stated the concern that the design basis of the valve was not fully implemented, and that further effort was needed to resolve this apparent discrepancy in the design basis.

2.7 (Closed) Inspector Followup Item 482/9507-04: ASME Code Inquiry

Background

The inspectors questioned the practice of using statistical control chart methods in check valve testing as corrective action for valve testing failures. The licensee torque tested check valves to meet ASME code requirements. The ASME Code, Operations and Maintenance, Part 10, Section 4.3.2.4(b), requires corrective action for valves, which fail to meet a 50-percent tolerance requirement on torque. The licensee established a practice of using statistical control charts to analyze the valve torque testing trends as the corrective action. The licensee determined the operability of the valves based on three standard deviations (sigma) control chart acceptance limits. The inspectors were concerned that this practice was not conservative, in that a trend of degraded performance could go undetected. The licensee documented this concern in Performance Improvement Request 95-1183.

Inspector Followup

As a result of this concern, the licensee had submitted an inquiry to the ASME code committee to address the use of analysis as corrective action. The code committee did not reach consensus on the inquiry; therefore, the licensee withdrew the inquiry and revised the Check Valve Testing Procedure STS AL-210, "Auxiliary Feedwater System In-Service Check Valve Test," Revision 12, to remove the practice of using statistical control charts.

The inspectors reviewed Performance Improvement Request 95-1183 and the revision of Procedure STS AL-210. The inspectors verified that control charting was no longer used to determine operability and that the licensee's current practices were in compliance with ASME code. The inspectors concluded that the licensee's actions were responsive to the original concern.

2.8 (Closed) Inspection Followup Item 50-482/9507-06: Lack of Analysis in Terry Turbine Exhaust Line Calculation

Background

The licensee's Updated Safety Analysis Report, Section 10.4.9.3, stated that the turbine-driven auxiliary feedwater pump turbine exhaust line passed through the nonseismic Category I auxiliary boiler building. This arrangement was justified by a statement that the line could be crimped by 90 percent and still deliver design flow. During the previous NRC inspection the inspectors had reviewed Calculation AL-31, "AFWP Turbine Exhaust Evaluation," Revision 0, which was the basis for the statement in the updated safety analysis report. The inspectors found a number of discrepancies in the calculation, which included a nonconservative model for the cross-section of the crimped pipe, a statement that the backpressure could be increased without hindering the performance of the turbine, and a lack of evidence that the availability of sufficient steam had been verified for all core life conditions with the exhaust line crimped. During the inspection, the licensee had revised the calculation, which reduced the crimping to 50 percent. However, the revision calculation failed to address the steam availability to compensate for the crimped condition.

Inspector Followup

The inspectors reviewed Performance Improvement Request 95-0984, dated August 17, 1995, which was initiated to evaluate if the auxiliary feedwater turbine-driven pump would deliver design flow rates with the turbine exhaust pipe crimped. The licensee's corrective actions included: revising Calculation M-AL-31 to Revision 1 to account for the possibility of exhaust line crimping; preparing Analysis AN 95-034 (PROPRIETARY), Revision 0, which supported the conclusion that there would be sufficient feed flow and steam flow to support operation of the auxiliary feedwater pump turbine during the

most limiting conditions; preparing Safety Classification Analysis SCA 95-0068 to determine the appropriate classification of the turbine exhaust pipe and supports; and preparing Design Change Package DCP 05849 to reclassify the pipe and supports.

The inspectors reviewed the two calculations and concluded that there would be sufficient feed and steam flow for the turbine auxiliary feedwater pump with the turbine exhaust pipe crimped by 50 percent. The inspectors reviewed Safety Classification Analysis SCA-95-0068, Revision 0, which re-examined the safety classification of the auxiliary feedwater turbine-driven pump exhaust line and support. The inspectors noted that the analysis concluded that the components were properly classified as nonsafety related, however, the recommendation was made to re-classify the pipe and support as Special Scope II/I.

The inspectors reviewed Design Change Package DCP 05849, Revision 0, which re-classified the auxiliary feedwater turbine exhaust line and support to Special Scope II/I. The licensee had revised the classification to reduce the chances of a modification or maintenance activity causing degradation of the turbine exhaust line. The inspectors reviewed Drawings M-13FC01(Q), "Piping Isometric Auxiliary Feedwater Pump Turbine Steam Inlet & Exhaust," Revision 3; M-15FC01(Q), "Hanger Location Drawing Auxiliary Feedwater Pump Turbine Steam Inlet & Exhaust," Revision 2; and, C-1S4481, "Turbine Building Area 8 Structural Steel Framing Plan at El.2035 Feet & El.2017 Feet," Revision 1. The inspector noted that the three drawings had been revised to add a note that stated the auxiliary feedwater turbine exhaust line was classified as Special Scope II/I. The structural steel framing plan drawing stated that any modifications or work activities in the Area 8 of the turbine building would be treated as Special Scope. The inspectors noted that quality requirements for II/I components were described in the licensee's Corporate Quality Manual 12.1, "Non-Category I Seismic and Seismic II/I Items," Revision 1.

The inspectors concluded the licensee's actions were responsive to the original concern.

ATTACHMENT

1 PERSONS CONTACTED

1.1 Licensee Personnel

K. Harvey, Manager Document Services
D. Brown, Relief Valve Program Coordinator
N. Hoadley, Manager Support Engineering
W. Lindsay, Manager Performance Assessment
W. Goshorn, Wolf Creek Coordinator, Kansas Electric Power Company
D. Hooper, Licensing Engineering Specialist
S. Hatch, Performance Assessment
P. Kennamore, Senior Engineer Nuclear Engineering
D. Claridge, Senior Engineer Licensing
J. Yunk, Engineering Specialist
W. Norton, Manager System Engineering
K. Scherich, Nuclear Steam Supply System, System Engineering Supervisor
R. Johannes, Chief Administrative Officer
R. Holloway, Project Engineer Design Engineering
O. Maynard, Vice President Plant Operations
M. Williams, Manager Plant Support
B. McKinney, Manager Operations
T. Damashek, Licensing Manager

1.2 NRC Personnel

J. Dixon-Herrity, Resident Inspector

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 October 20, 1995. During this meeting, the inspectors reviewed the scope and findings of the report. The licensee did not express a position on the inspection findings documented in this report. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspectors. Subsequent to the initial exit meeting, additional discussions were held on November 13, 1995, by telephone regarding the design basis of the turbine-driven auxiliary feedwater pump trip and throttle valve (Section 2.6). Licensee personnel acknowledged a difference between the valve manufacturer and the valve supplier recommendation for valve operations regarding a thermal binding concern. As a result, Inspection Followup Item 50-482/9507-03 will remain open, pending future inspection efforts involving the design basis documentation of the trip and throttle valve.