APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-482/92-30

Operating License No.: NPF-42

Docket No.: 50-482

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

Facility Name: Wolf Creek Generating Station

Inspection At: Coffey County, Burlington, Kansas

Inspection Conducted: September 21 through October 6, 1992

Inspector: G. A. Pick, Senior Resident Inspector

Approved: A. T. Howell 10-27-92
A. T. Howell, Chief, Project Section D Date
Division of Reactor Projects

Inspection Summary

Areas Inspected: Special announced inspection to review the circumstances that resulted in degraded essential service water flow through component cooling water system Heat Exchanger A.

Results: During this inspection, seven apparent violations were identified. Two apparent violations pertained to inadequate maintenance work controls (Section 1.2.1). One apparent violation pertained to an inadequate essential service water system special test procedure (Section 1.2.2). Three apparent violations pertained to inadequate corrective actions (Sections 1.2.1, 1,2.3, and 1.2.4). One apparent violation pertained to degraded essential service water flow through component cooling water system Heat Exchanger A (Section 1.2.5).

Summary of Inspection Findings:

- Apparent Violation 482/9230-01 was opened (Section 1.2.1).
- Apparent Violation 482/9230-02 was opened (Section 1.2.1).
- Apparent Violation 482/9230-03 was opened (Section 1.2.1).

- Apparent Violation 482/9230-04 was opened (Section 1.2.2).
- Apparent Violation 482/9230-05 was opened (Section 1.2.3).
- Apparent Violation 482/9230-06 was opened (Section 1.2.4).
- Apparent Violation 482/9230-07 was opened (Section 1.2.5).
- Unresolved Item 482/9218-01 was closed (Section 2).

Attachments:

- Attachment - Persons Contacted and Exit Meeting

DETAILS

1 DEGRADED ESSENTIAL SERVICE WATER (ESW) FLOW (93702)

The inspector conducted this inspection to review the circumstances and effect of the apparent mispositioning of Manual Valve EF V058, Component Cooling Water (CCW) Heat Exchanger (HX) A-ESW Return EF HV059 bypass isolation. The mispositioning of this throttle valve by licensee maintenance personnel resulted in a degraded ESW flow condition to CCW HX A. The inspector reviewed the effect of this degraded condition relative to the operability of the ESW, emergency core cooling, and CCW systems. The inspector also reviewed the work and test control activities associated with this valve and reviewed the licensee's corrective actions associated with the degraded flow condition. This issue was initially characterized by Unresolved Item 482/9218-01, as documented in NRC Inspection Report 50-482/92-18.

1.1 System Description and Operation

Valve EF V058 is a 16-inch manual butterfly valve, which is locked in a throttled position to ensure that the proper design basis loss of coolant accident ESW flow is supplied to CCW HX A. Valve EF V058 is located on a bypass line around Motor-Operated Valve (MOV) EF HV059, ESW A return from CCW HX A. MOV EF HV051, ESW A supply to CCW HX A, provides the capability to throttle the inlet ESW flow to the HX.

During normal operation, Valve EF V058 remains in a locked throttled position while the licensee utilizes MOVs EF HV051 and EF HV059 for CCW system temperature control. When the lake temperature is warm, the licensee maintains MOV EF HV051 full open and will throttle open MOV HV059 if additional cooling is needed. During cold weather, the licensee maintains MOV EF HV059 closed and throttles MOV EF HV051 to prevent overcooling the CCW system.

Under certain accident conditions, MOV EF HV051 receives an engineered safety features signal to reposition to full open and MOV EF HV059 receives a signal to reposition to full closed. The service water (SW) pumps are shed from their respective electrical buses and the ESW pumps receive an automatic start signal. This configuration provides assurance that the proper essential service water flow is supplied to the ESW components such that these components will perform their intended functions during certain accident conditions. One of the ESW supplied components is CCW HX A. The CCW system provides an intermediate barrier between the service water systems and potentially radioactive systems. The CCW system removes heat from various safety-related equipment that is required during accident conditions. The following components are serviced by CCW HX A:

- Centrifugal Charging Pump A oil cooler,
- Safety Injection Pump A oil cooler,

- Spent Fuel Pool Cooling Pump A oil cooler,
- Residual Heat Removal Pump A seal cooler,
- Residual Heat Removal HX A (single largest heat load),
- common header to postaccident sampling system,
- reactor coolant pump motor air coolers (2 per pump),
- reactor coolant pump bearing oil coolers (2 per pump),
- seal water HX,
- letdown HX,
- positive displacement pump,
- thermal barrier HXs (4),
- reactor coolant drain tank HX, and
- excess letdown HX.

Several radwaste heat loads are serviced by the CCW system under normal operating conditions. Under accident conditions the radwaste heat loads are isolated.

1.2 Detailed Inspection Findings

1.2.1 Valve EF V058 Maintenance and Material History

The inspector determined that mechanics, on July 22, 1992, had implemented biennial preventive maintenance activities for five ESW Train A throttle valves in accordance with Work Request (WR) 51543-92. The WR instructions required an inspection of the actuator and verification that operations personnel returned the valve to the proper position. WR 51543-92 specified an inservice postmaintenance test that required stroking each valve.

During the performance of the preventive maintenance, the mechanics identified problems with Valve EF V058. The mechanics initiated WR 03765-92 because they determined that Valve EF V058 had three missing worm sector gear teeth. The valve operates by using a worm to turn a worm sector gear. The worm is a gear, with four lands (high spots), that turns when the valve handwheel is operated. The worm sector gear has 20 teeth that engage with the worm lands. The handwheel and worm are integrally connected so that, as the handwheel is turned, the worm rotates, thus moving the worm sector gear. As the worm sector gear moves, it repositions the valve disc in the open or closed direction. The valve position pointer, the worm sector gear, and the valve stem are integrally connected by keys, pins, and couplings. This arrangement provides a means to assure that the valve disc is at the desired position so long as the pointer is zeroed at the full closed position of the valve disc. With worm sector gear teeth missing, the worm may not be able to engage the worm sector gear thus preventing valve operation. Whenever the worm engages the worm sector gear, the valve disc will move to the desired position. The mechanics initiated WR 03765-92 in order to repair the worm sector gear and documented on WR 51543 92 that Valve EF V058 had three missing worm sector gear teeth.

From a review of WR 51543-92, the inspector determined the work instructions were inadequate because they were ambiguous, which allowed the mechanics to interpret what work should be accomplished. The work instructions stated, in Step 3, "Reinstall cover plate. Have operations cycle valve and ensure that the indicator is showing the proper position." The inspector determined from interviews that at least one of the mechanics thought the statement allowed him to realign the valve position indicator and that the mechanic had adjusted an indicator for one of the five valves. The mechanic did not believe that he had adjusted the indicator for Valve EF V058. However, the licensee concluded, as a result of their investigation of this event, that the mechanic had improperly adjusted the valve position indication for Valve EF V058. As a result of this activity, Valve EF V058 was locked in a throttle position that was less than the required position of 50° open. This condition would result in a significant reduction of ESW flow through CCW HX A during certain accident conditions. The inspector concluded that the WR did not allow the valve position indicator adjustment. Failure to provide adequate work instructions is an apparent violation of Technical Specification (TS) 6.8.1.a (482/9230-01), which requires, in part, that maintenance activities that can affect the performance of safety-related equipment should be performed by documented instructions that are appropriate to the circumstances.

The inspector noted that the postmaintenance test, which required Valve EF V058 to be stroked following the completion of the preventive maintenance activity, failed to confirm that Valve EF V058 had been restored to the position required to provide adequate ESW flow through CCW HX A. The mechanic did not inform the shift supervisor that the valve position indicator had been adjusted, nor was this activity documented on WR 51543-92. The inspector concluded that a flow verification test should have been performed to demonstrate that Valve EF V058 was locked in its required position. Failure to perform the appropriate postmaintenance test is an apparent violation of TS 6.8.1.a (482/9230-02), which requires, in part, that maintenance activities that can affect the performance of safety-related equipment should be performed by documented instructions that are appropriate to the circumstances.

As a result of a review of plant records, the inspector also determined that Valve EF V058 previously had been found out of position. On December 5, 1991, with the plant in Mode 5, while performing Procedure STS EF-100B, Revision 9, "ESW System Inservice Pump B Test and ESW B/Service Water Cross-connect Valve Test," the required flow could not be achieved. The shift supervisor requested that results engineering personnel either change the flow balance or evaluate the feasibility of changing the procedure. The licensee determined that Valve EF V058 and Valve EF V090, CCW HX B - ESW return EF HV060 bypass isolation, were mispositioned at 30° open instead of 50° and 52° open, respectively. After returning the throttle valves to their required positions, the licensee completed Procedure STS EF-100B satisfactorily. The licensee initiated Performance Improvement Request (PIR) OP 91-1116 to ensure that a root cause evaluation would be conducted to determine how the locked throttled valves were mispositioned. The inspector discussed the as-found positions of the valves with the personnel involved. The operators initiated

the PIR after they failed to identify how or when the valves became mispositioned. The licensee determined the valves were verified to be in their correct locked throttled position on November 26, 1991. During the period November 26 to December 5, 1991, the plant remained in Mode 5. In Mode 5, neither the CCW or the ESW systems are required to be operable.

At the end of the special inspection, the licensee had not completed any corrective actions (other than restore the valves to their required position) related to PIR OP 92-1116. The inspector concluded that, had timely corrective actions been implemented for this event, the subsequent mispositioning of Valve EF V058 may have been precluded. Failure to implement corrective actions is an apparent violation of 10 CFR 50, Appendix B, Criterion XVI (482/9230-03), which requires, in part, that for significant conditions adverse to quality, the cause of the condition shall be determined and corrective action taken to preclude repetition.

1.2.2 Test History

During Refuel V, the licensee reduced the ESW flow to the containment coolers and increased ESW flow to other components in order to provide additional design margin for the other components. The licensee performed the ESW Train A flow balance on October 19 and 20, 1991, in accordance with Procedure TP TS-41, Revision 0, "ESW Train A Post LOCA Flow Balance." The licensee performed a similar flow balance for ESW Train B on November 3 and 4, 1991, in accordance with Procedure TP TS-50, Revision 0, "ESW Train B Post LOCA Flow Balance." While completing the flow balance of the ESW trains, the licensee established locked throttled positions for safety-related HX discharge butterfly valves which ensured that, during a design basis accident, the proper flows would be maintained. After completing Procedure TP TS-41, the licensee determined that the locked throttled position of Valve EF V058 should be 50° open. During the period November 21-23, 1991, the licensee performed Procedure TP TS-42, Revision 0, "Essential Service Water/Service Water Normal Mode Flow Verification," to measure the flow rate, with the SW pumps operating, for components supplied by ESW and to measure piping header flows to components serviced by SW. The procedure specifically prohibited changing position of the locked throttled ESW valves.

The licensee also performed quarterly HX performance testing to meet the requirements of Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment." The licensee performed the HX testing in accordance with Procedure STN PE-037, "ESW Heat Exchanger Flow and Differential Pressure Trending," which required measuring flow through the HXs and measuring the differential pressure across the HXs. The procedure provided provisions for determining a corrected differential pressure to compensate for varying SW system flow conditions. The licensee had established the baseline data during performance of Procedure TP TS-42. The licensee recognized, as evidenced by the procedure precautions, that flow rates to the HXs will vary dependent upon weather conditions. During cold weather, the licensee throttled SW flow through the CCW HXs to prevent overcooling the CCW system components. The licensee performed Procedure

STN PE-037 in November 1991, March 1992, and June 1992, under low-flow conditions. When the licensee performed Procedure STN PE-037 in August 1992, the test performance was the first full flow test conducted since establishing the baseline data during the refueling outage. On August 17, 1992, the licensee determined that the SW flow rate through CCW HX A was 836 gallons per minute (gpm) below the expected value of 7,200 gpm.

After identifying the low-flow condition, the licensee developed Procedure TP TS-115, Revision 0, "ESW Train A Flow Verification to CCW Heat Exchanger," to verify that the design-basis flow could be achieved through CCW HX A. When the licensee performed Procedure TP TS-115 on August 27, 1992, the licensee determined that the as-found ESW flow rate through CCW HX A was 7,213 gpm, which was 80 gpm below the minimum design basis flow rate of 7,293 gpm.

Since the flow was 842 gpm below the expected value of 8,055 gpm and 80 gpm below the minimum design basis flow rate, the test engineer requested that the operators cycle Valve EF V058 to verify that the valve worked properly. As a nonlicensed operator cycled the valve closed, a loud noise emanated from the valve actuator. The test personnel noted an indicated flow rate of 0 gpm with the valve position indicator at 15° open. The shift supervisor declared the CCW system inoperable in accordance with TS 3.7.3 because of insufficient flow to the HX. The Shift Supervisor declared Emergency Core Cooling System Train A inoperable in accordance with TS 3.5.2 because, without adequate CCW flow, the emergency core cooling system subsystem would not function as designed. The shift supervisor made a 1-hour notification in accordance with 10 CFR 50.72 because the ESW flow rate was found to be below the design basis flow rate.

On August 28, 1992, after repair of Valve EF V058 (refer to Section 1.2.3), the licensee again performed Procedure TP TS-115 to verify that the correct design basis ESW flow rate could be achieved. The test engineer determined that the flow was 8,536 gpm. Since the flow rate exceeded the expected flow rate of 8,055 gpm by 481 gpm, the test engineer informed the control room that the test was satisfactory. The shift supervisor exited TS 3.7.3 and 3.5.2. Following the test, the test engineer discussed the test results with his supervisor.

Approximately 30 minutes after the completion of the test, the test engineer's supervisor contacted the control room to inform the shift supervisor that the ESW flow to CCW HX A was too high and that this condition could result in unacceptably low flow to other components supplied by the ESW system. The shift supervisor closed EF HV051 and reentered TS 3.7.3 and 3.5.2. The test engineer reperformed Procedure TP TS-115 after incorporating a test change that allowed repositioning Valve EF V058 to obtain the proper flow. The licensee changed the locked throttled position of Valve EF V058 from 50° to 47° open and determined that the as-left flow rate was 7,933 gpm. Subsequently, the test engineers performed Procedure STN PE-037, obtaining a new baseline SW flow rate of 7,508 gpm.

The inspector determined that Procedure TP-TS-115 specified an expected flow value and range in Step 2.3.1. The procedure stated: "If variance is greater than ± 200 gpm, send a work request to the system engineer for evaluation." The measured flow rate was 281 gpm above the upper limit; however, the test engineer contacted the shift supervisor and informed him that the test had been completed satisfactorily. The inspector noted that the procedure failed to specify that the system was inoperable if the acceptance criteria were exceeded, nor did the procedure require that the test results be reviewed by a supervising licensed operator. The failure to provide appropriate procedural guidance is an apparent violation of 10 CFR 50, Appendix B, Criterion V (482/9230-04), which requires, in part, that activities affecting quality shall be prescribed by procedures of a type appropriate to the circumstances.

1.2.3 Cause of Worm Sector Gear Damage

Following the failure of Valve EF V058, the actuator was disassembled. The licensee discovered that two additional worm sector gear teeth had broken off from the gear. A new worm sector gear was installed and the valve actuator was reassembled. The inspector reviewed the industry operating experience that pertained to Valve EF V058. In response to Industry Technical Information Program (ITIP) Item 00221, "Fisher Anomaly Notice 86-2: Operational limitation on Fisher Size 2, Type 1073-1076 Manual Valve Actuators With 3/4-inch Cast Iron Worm Sector Gears," the licensee implemented an operator aide to provide an administrative control for closing the affected size 2 Fisher Control butterfly valves. Procedure KGP-1311, Revision 0, "Industry Technical Information Program," is intended to ensure, in part, that industry experience is translated into corrective actions to improve plant safety and reliability. Step 6.4.4 of Procedure KGP-1311 implemented the requirement to evaluate industry information for appropriate corrective actions. The inspector verified that Operator Aide 86-004, which states, "Use of torque in excess of 8,000 inch-pounds (666 foot-pounds) may damage valve operator," became a permanent valve label in April 1987. The licensee placed the operator aide on Valve EF V058 and on five other valves.

The inspector determined that the operator aide was misleading because it implied that the amount of rotational force applied to the handwheel could be as much as 8000 inch-pounds. From discussions with licensee personnel, the inspector determined that they agreed with this interpretation. The inspector determined from discussions with the system engineer and review of ITIP Item 00221, that the ITIP recommendations failed to clearly specify what components of the valve actuator should be subjected to the maximum torque of 8000 inch-pounds. As a result of a review of the individual valve data specifications and the vendor notice, the system engineer concluded that the 8000 inch-pounds applied to the gears inside the manual actuator gear box. The licensee concluded that applying 8000 inch-pounds of torque to the valve handwheel would result in excessive force being applied to the valve actuator internal parts, thereby damaging the worm sector gear. The licensee's failure to correctly translate the vendor information into an appropriate administrative control is an apparent violation of 10 CFR 50, Appendix B, Criterion XVI

(482/9230-05), which requires, in part, that measures shall be in place to ensure that conditions adverse to quality are promptly identified and corrected.

1.2.4 Failure to Implement Timely Corrective Action

On October 3, 1992, the inspector determined during review of control room procedures that Procedure CKL EF-120, Revision 18, "Essential Service Water Valve, Breaker and Switch Lineup," failed to list the correct locked valve position for Valve EF V058 (i.e., 47° open) that was determined on August 28, 1992, while performing Procedure TP TS-115 subsequent to the repair of the valve actuator. After informing the shift supervisor of this discrepancy, he promptly initiated Procedure Change Form (PCF) MI 92-725 to correct this condition. Discussions with licensee personnel and a review of control room logs, the inspector determined that the Operations Supervisor had previously approved PCF MI 92-664, on August 31, 1992, in order to change the locked throttled position of Valve EF V058. This change was intended to be incorporated into Procedure CKL EF-120, Revision 17. The inspector verified that PCF 92-664 specified changing the lock throttled position of Valve EF V058. However, PCF 92-664 was not incorporated, and the licensee had not identified the reason why it had not been incorporated into the procedure. The inspector considered the failure to correct Procedure CKL EF-120 to be an apparent violation of 10 CFR 50, Appendix B, Criterion XVI (482/9230-06), which requires, in part, that identified conditions adverse to quality are promptly corrected.

1.2.5 Degraded ESW Flow

Updated Safety Analysis Report (USAR) Change Request 90-158, dated December 3, 1990, added a note in USAR (Revision 4) Table 9.2-3, "Essential Service Water System Flow Requirements Post-LOCA Operation," allowing a decrease in ESW flow to CCW HX A from 7,350 gpm to 7,150 gpm. The change in the flow rate was necessary because the licensee had implemented a design change that lowered the flow to the containment coolers to provide additional margin to other ESW components. Table 9.2-3 lists the required ESW flow to CCW HX A, which ensures that the temperature of the CCW system cooling water does not exceed design-basis temperatures. The licensee inadvertently deleted the note to Table 9.2-3 that specified the flow reduction when USAR Revision 5 was issued. The licensee initiated USAR Change Request 92-109, dated August 20, 1992, to reinsert the note into USAR Table 9.2-3.

The inspector also noted that low SW flow through CCW HX A was identified 10 days before the licensee identified the low ESW flow condition. On August 17, 1992, test engineers identified lower than expected SW flow through CCW HX A. Because the flow rate agreed closely with the CCW HX B SW flow rate identified during Refueling Outage 5, the test engineers presumed that the documented flows might be reversed for the two CCW HXs. The test engineers informed the shift supervisor about the condition on August 21, 1992. They waited 4 days to inform the control room because they believed that the flow values were reversed and because the testing of all other heat exchangers was

not completed until August 21, 1992. The shift supervisor determined the system remained operable on the basis of this information. However, the inspector concluded that there was insufficient basis for disputing the SW flow value that was determined on August 17, 1992. Test Procedure TP IS-115 was approved on August 20, 1992. The purpose of this procedure was to verify ESW flow to CCW HX A. The inspector could not determine a cause for the subsequent delay in implementing the test procedure to verify the ESW flow to CCS HX A.

When the test engineers performed Test Procedure TP TS-115 on August 27, 1992, they used ultrasonic flow instruments that had an instrument error of 2 percent. A minimum CCW HX A inlet flow rate of 7,293 gpm (accounting for 2 percent instrument error) ensures that the flow rate through the HX is at least 7,150 gpm. The as-found ESW flow rate was 7213 gpm. Taking into account the 2 percent error, the as-found flow rate could have been as low as 7068 gpm.

The licensee did not identify the cause of the low ESW flow condition (i.e., an unauthorized and undocumented modification to Valve EF V058) until several weeks later following the initiation of an NRC special inspection for this event. The failure to provide the required design basis ESW flow to CCW HX A during the period July 22 through August 27, 1992, and to identify and correct the condition in a timely manner is an apparent violation of 10 CFR 50, Appendix B, Criterion XVI, which requires, in part, that measures shall be in place to ensure that conditions adverse to quality are promptly identified and corrected (482/9230-07).

Previously, the licensee performed Calculation EG-09-W, Revision 0, "Tube Plugging for CCW Heat Exchangers EEG01A/B Maximum CCW Temperature-LOCA," which allowed a limited number of tube-pairs to be plugged in the CCW HXs. The calculation provided operational flexibility by eliminating the need to perform an analysis each time the licensee plugged an HX tube. The calculation demonstrated that, with the HX fouled (the degree of fouling is assumed in the calculation) and with 46 out of 2,232 tube-pairs plugged, the flow rate through the HX could be as low as 7,002 gpm without the CCW system temperature exceeding the design basis values.

Because of potential operability concerns and required disposition for the reportability evaluation, the licensee evaluated the minimum inlet flow possible to CCW HX A on the basis of the CCW HX A conditions that existed on August 27, 1992. CCW HX A had no tube-pairs plugged and was cleaned 9 months previously; therefore, the licensee assumed no fouling with zero tube-pairs plugged. Since heat transfer through the HX (with no tubes plugged) was greater than that assumed in Calculation EG-09-W, the licensee concluded that the flow rate of 7,068 gpm through the HX would provide sufficient heat transfer. As a result, the licensee retracted the 10 CFR 50.72 notification for this event.

1.3 Licensee Corrective Actions

The licensee implemented several corrective action documents in response to this event. The licensee initiated PIR TS 92-0632 to evaluate corrective actions needed to improve the test controls for temporary procedures. The licensee initiated PIR NP 92-0653 to correct the programmatic controls related to this event, such as work control and postmaintenance testing. The licensee initiated Hardware Failure Analysis Request NP 92-003 to identify the root cause of the worm sector gear failure. Additionally, following announcement of the special inspection, the licensee formed a task group to determine the facts related to this event.

The licensee attributed the test control deficiency to unclear actions specified to be taken if the acceptance criteria were not satisfied. The licensee considered a contributing factor to be a communication deficiency. A supervising engineer and the system engineer stressed that any flow rate greater than 7,293 gpm would be acceptable, but they failed to clearly specify that any flow rate not in the range of 8,055 gpm ± 200 gpm would require an engineering evaluation to determine system operability.

The licensee revised the procedure writing guide for temporary procedures to require the addition of a signoff step to compare test results to the acceptance criteria. The licensee changed Procedure ENG 09-506, Revision 2, "Results Engineering Pre-job Checklist," to require another prejob brief whenever any work activity is in progress during a change in plant status, if there is a delay in performing the work, or as directed by a group supervisor.

The system engineer determined by barrier analysis that several administrative control breakdowns occurred. These breakdowns included: no WR deficiency tag was placed on Valve EF V058 when the broken worm sector gear was first identified on July 22, 1992; the use of an information tag or a clearance order tag was not considered; and although the valve remained operable with the damaged worm sector gear, the licensee failed to put in place controls to ensure that the valve remained throttled in the proper position. The system engineer documented the results of his analysis in the PIR NP 92-0653 response. The licensee placed PIR NP 92-0653 into required reading for appropriate personnel

Hardware Failure Analysis Request NP 92-003 determined the root cause of the worm sector gear failure to be overtorquing of the actuator internals while repositioning the valve to the closed position. The licensee determined they have 18 Model 1073, manually actuated, Fisher Control, wafer-type butterfly valves installed. There are 6 size 2 actuators and 12 size 1 actuators. Hardware Failure Analysis Request NP 92-003 listed several contributing causes to overtorquing of the worm sector gear. These included: an incorrect operator aide; the position indicator dial did not precisely indicate the closed position; a lack of indicator dial precision; and the flow sensitivity of the butterfly valve disc in the midrange position. The system engineer recommended the following corrective actions: (1) inscribe an alignment mark on the valve position indicator dial after repositioning the valve closed;

(2) provide training on proper operation of these valves; (3) inscribe an alignment mark on the indicator dial at the valves' throttled position; and (4) correct the operator aide.

2 FOLLOWUP OF PREVIOUSLY IDENTIFIED NRC ITEMS (92701)

(Closed) Unresolved Item 482/9218-01: Inadequate ESW Flow

On the basis of Special NRC Inspection 50-482/92-30, this item is closed.

ATTACHMENT

1 PERSONS CONTACTED

1.1 Licensee Personnel

O. L. Maynard, Vice President, Plant Operations
R. B. Flannigan, Manager, Nuclear Safety Engineering
L. M. Bossard, Licensing Engineering Specialist
J. D. Lutz, Licensing Engineer
W. B. Norton, Manager, Technical Support
T. L. Riley, Supervisor, Regulatory Compliance
B. B. Smith, Manager, Modifications
C. M. Sprout, Manager, System Engineering
J. D. Stamm, Manager, Plant Design Engineering
J. A. Tarr, Licensing Engineer
J. D. Weeks, Manager, Operations
S. G. Wideman, Supervisor, Licensing

1.2 NRC Personnel

G. A. Pick, Senior Resident Inspector
W. D. Reckley, Project Manager, Office of Nuclear Reactor Regulation

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

2 EXIT MEETING

An exit meeting was conducted on October 7, 1992. During this meeting, the inspector reviewed the scope and findings of the report. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspector.