ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-482
License No.:	NPF-42
Report No.:	50-482/97-23
Licensee:	Wolf Creek Nuclear Operating Corporation
Facility:	Wolf Creek Generating Station
Location:	1550 Oxen Lane, NE Burlington, Kansas
Dates:	December 14, 1997, through January 24, 1998
Inspectors:	J. F. Ringwald, Senior Resident Inspector B. A. Smalldridge, Resident Inspector K. M. Thomas, Project Manager, NRR
Approved By:	W. D. Johnson, Chief, Project Branch B

ATTACHMENT: Supplemental Information

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EXECUTIVE SUMMARY

Wolf Creek Generating Station
NRC Inspection Report 50-482/97-23

Operations

- Safe and effectively controlled plant evolutions were supported by the consistent use of three-way communications. Effective turnovers were consistently noted (Section O1.1).

- In general, operators responded well to a containment atmosphere process radiation monitor failure that caused a containment purge and control room ventilation isolation. Operators in the control room did not make the expected plant announcement to inform the nuclear station operators and other plant personnel of the major ventilation system realignment (Section O1.2).

- The inspectors noted a weakness in the plant component labeling program in that the labels on the local breakers for the emergency diesel starting air compressors did not contain the name of the operated component (Section O2.1).

- When changing the charging pump lineup, several operating practices did not meet management expectations, including an operator failure to make plant announcements, an operator failure to monitor pressurizer level long enough to assure adequate controller performance after placing it in automatic, and the discovery of a general practice of reactor operators failing to wait for nuclear station operators to complete assigned procedure steps or get supervisory approval before continuing with subsequent procedure steps (Section O4.1)

- A plant safety review committee considered an unreviewed safety question determination without the benefit of pertinent reference information omitted by the issue presenter (Section O6.1).

Maintenance

- Instrumentation and control technicians' willingness to proceed with a surveillance test despite their uncertainty in lifting leads led to failures to comply with surveillance procedure instructions and caused the test equipment power source ground fault interrupter to trip (Section M1.4).

- The material condition of those plant systems and components evaluated during this inspection period were good, with few equipment deficiencies (Section M2.1).

- The licensee ended a longstanding practice of using a calibration parameter specified by health physics supervision, rather than that specified by the calibration procedure, after the issue was questioned by the inspector (Section M3.1).

Engineering

- Overall, the licensee's implementation of its 10 CFR 50.59 program was in accordance with the program requirements. Safety evaluations were performed when required and contained sufficient information to support the conclusion that unreviewed safety questions did not exist. However, procedural guidance existed regarding the conduct of tests and experiments that is not consistent with 10 CFR 50.59, and one minor weakness in updating the Updated Safety Analysis Report (USAR) was identified (Section E1.1).

Plant Support

- The licensee identified indications of a fuel leak. Chemistry personnel properly evaluated the available data and coordinated an appropriate response with operations (Section R1.2).

Report Details

Summary of Plant Status

The plant operated at essentially 100 percent power throughout the inspection period.

I. Operations

O1 Conduct of Operations

O1.1 Control Room Observations

a. Inspection Scope (71707)

The inspectors observed control room observations on a daily basis throughout the inspection period.

b. Observations and Findings

Throughout the inspection period, the inspectors observed consistent use of three-way communications between operators. This enhanced operator performance of routine evolutions, including system operating procedures and surveillance tests.

On December 17, 1997, during a shift turnover, the offgoing operator provided a briefing of the plant status to the oncoming operator that conveyed an unusually detailed sense of recognition that every indication and control discussed was associated with physical systems, structures, and components in the field.

On January 15, 1998, an operator reported that a controller had been placed in automatic. The supervising operator responded by repeating back the information while also correctly identifying the controller. This use of three-way communication also communicated supervisory expectations in an effective manner by giving the operator the supervisor's personal example of what was expected.

On January 15, 1998, operators also demonstrated the use of a practice the crew had adopted to "protect" an operator engaged in a critical task from distractions. All control room operators except the operator involved in the critical task were directed to respond to inquiries, telephone calls, and Gaitronics communications that were unrelated to the critical task. At the same time, the supervising operator directed the operator performing the critical task not to engage in any activity that was not directly involved in the critical task. During subsequent conversations, the shift supervisor stated that this was their response to NRC comments made associated with NRC Inspection Report 50-482/97-09, Section O1.1.

c. Conclusions

Safe and effectively controlled plant evolutions were effectively supported by the consistent use of three-way communications. Effective turnovers were consistently noted and one operator's turnover briefing was significantly better than most.

O1.2 Containment Purge and Control Room Ventilation Isolation

a. Inspection Scope (71707)

The inspector observed operators' response to a containment purge isolation and control room ventilation isolation signal.

b. Observations and Findings

On January 15, 1998, operators received engineered safety feature signals for a containment purge isolation and control room ventilation isolation. Operators noted that Containment Atmosphere Process Radiation Monitor GT RE32 spiked above the Hi-Hi setpoint. The supervising operator appropriately directed operators to stop the evolutions in progress when they could do so safely and entered the appropriate alarm response and off-normal procedures. The supervising operator demonstrated positive control, and operators performed thorough walkdowns of the control boards to assess the plant condition.

During subsequent troubleshooting, technicians found that the power supply had failed and that the failure mode created spiking of the monitor output. After replacing the power supply and completing all postmaintenance tests, the monitor returned to normal operation and operators declared it operable.

Neither the shift supervisor nor the supervising operator made plant announcements to inform the nuclear station operators and other plant personnel that this major ventilation realignment had occurred. While this did not create any observable problems, it had the potential to create confusion. During subsequent discussions, the operations manager stated that this did not meet management expectations and that the operations manager would address this with the shift supervisor.

c. Conclusions

In general, operators responded well to a containment atmosphere process radiation monitor failure that caused a containment purge and control room ventilation isolation. Operators in the control room did not make the expected plant announcement to inform nuclear station operators and other plant personnel of the major ventilation system realignment.

O2.1 Plant Component Labeling Program

a. Inspection Scope (71707)

The inspectors observed plant component labels during routine plant walkdown.

b. Observations and Findings

On January 7, 1998, the inspectors noted that the component labels for the emergency diesel starting air compressor local breakers did not contain the noun name of the operated component or the main power supply. The component labels contained only the unique alpha-numeric identifier. The central work authority initiated an engraving request to make and install the labels.

c. Conclusion

The inspectors noted a weakness in the plant component labeling program in that the labels on the local breakers for the emergency diesel starting air compressors did not contain the name of the operated component.

O4 Operator Knowledge and Performance

O4.1 Operator Controller and Procedure Use

a. Inspection Scope (61726)

The inspector observed a portion of a surveillance test on a centrifugal charging pump.

b. Observations and Findings

On January 15, 1998, operators performed a portion of Surveillance Procedure STS BG-100A, "Centrifugal Charging System "A" Train Inservice Pump Test," Revision 19. During the test the operator used Procedure SYS BG-201, "Shifting Charging Pumps," Revision 31, to start the charging pump. The inspector noted that the operator performing the test made a plant announcement for starting the charging pump, but failed to make the expected announcement for stopping the normal charging pump. The inspector also noted that, after shifting the controller for Valve BG PCV-121, charging header flow control valve, to automatic, the operator only waited 20 seconds prior to signing off the procedure step to monitor pressurizer pressure level to ensure that the controller functioned properly to control level. During subsequent discussions with the operations manager, the manager stated, that for this controller, if the valve position failed as is, it may take 4 or 5 minutes for pressurizer level to trend sufficiently for an operator to notice it. During discussions with the system engineer, the engineer said that it would take minutes, rather than seconds, for one to detect a problem if the valve failed

as is, given the large volume of the reactor coolant system compared to the charging flow rates involved. However, every controller application can be different, and operators tend to learn how quickly a given controller responds to changes.

After starting the charging pump, the reactor operator directed the nuclear station operator to perform Steps 6.1.7 through 6.1.10 of Procedure SYS BG-201. The reactor operator then performed subsequent steps, and completed Steps 6.1.11 through 6.1.17, before receiving the notification that the nuclear station operator completed Steps 6.1.7 through 6.1.10. Administrative Procedure AP 15C-002, Section 6.2.3, requires procedure performers to complete or properly mark a step as not applicable before proceeding to the next step. When the inspector asked the shift supervisor what the procedure use expectations were, the shift supervisor stated that the standard operator practice had been for operators to continue with procedure steps in the control room without waiting for nuclear station operators to complete the assigned steps.

In response to the inspector's question regarding management expectations in this area, the operations manager determined that this understanding of procedure use was not isolated to one crew or a few operators and was not consistent with management expectations. The manager initiated management briefings for all operators to correct this understanding of procedure usage. The failure of operators to use Procedure SYS BG-201 in accordance with the requirements of AP 15C-002 is a violation of Technical Specification 6.8.1.a. (50-482/9723-01).

Conclusions

During an operator surveillance test, several operating practices did not meet management expectations, including an operator failure to make plant announcements, an operator failure to monitor pressurizer level long enough to assure adequate controller performance after placing it in automatic, and the discovery of a general practice of reactor operators failing to wait for nuclear station operators to complete assigned procedure steps before continuing with subsequent procedure steps.

O6 Operations Organization and Administration

O6.1 Plant Safety Review Committee Meeting

a. Inspection Scope (71707)

The inspector attended one plant safety review committee meeting.

b. Observations and Findings

On December 23, 1997, the inspector observed a plant safety review committee meeting that considered an unreviewed safety question determination which, if approved, would permit plant personnel to wear contact lenses with respiratory protection equipment. The committee did not approve the unreviewed safety question determination for several

reasons, including lack of preparation by the presenters, concerns about licensee commitments, and lack of clarity in the wording of the unreviewed safety question determination.

After the meeting, the inspector asked the chairman and a presenter about a reference document which suggested that hard contact lenses should not be used with respiratory protection equipment. The presenter did not provide this information to the committee, and suggested that contact lens technology had improved to the point that prior concerns about wearing contact lenses while using respirators were no longer applicable. In subsequent discussions with the chairman, the inspector expressed concern that the committee was vulnerable to presenters not providing pertinent information such as in this case. The committee discussed this concern during a subsequent meeting, and the chairman expressed the expectations that committee members review available documents and question presenters in a manner that minimized the potential for recurrence.

c. Conclusions

A plant safety review committee considered an unreviewed safety question determination without the benefit of pertinent reference information omitted by the issue presenter.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments on Maintenance Activities

a. Inspection Scope (62707)

The inspectors observed all or portions of the following work activities:

103636, Task 3	Baseline as-left motor-operated valve test on EM HV8293B
126932, Task 1	EF LE27, Conduit repair
RPP06-305, Task 1	Eberline PM-7 Calibration, restricted area exit portal monitor
STN FP-211, Revision 6	Diesel fire pump monthly test
WP 126671, Task 1 and 2	SGK04B, Removal and rigging

b. Observations and Findings

The inspectors found no concerns with the maintenance observed.

c. Conclusions

The inspectors concluded that the maintenance activities were being performed as required.

M1.2 General Comments on Surveillance Activities

a. Inspection Scope (62707)

The inspectors observed all or portions of the following surveillance activities.

STS BG-100A, Revision 19	Centrifugal Charging System A train inservice pump test
STS IC-450B, Revision 12	Channel calibration containment atmosphere and reactor coolant system leak detection radiation Monitor GT RE-31

b. Observations and Findings

Except as noted in Section M1.3, the inspectors found no concerns with the surveillance observed.

c. Conclusions

Except as noted in Section M1.3, the inspectors concluded that the surveillance activities were being performed as required.

M1.3 Process Radiation Monitor Surveillance

a. Inspection Scope (61726)

The inspector observed a portion of the performance of Surveillance Test STS IC-450B.

b. Observations and Findings

On January 7, 1998, technicians performed a calibration check on Containment Atmosphere Radiation Monitor GT RE0031. As the technicians began setting up for the test, the inspector noted that a technician failed to provide the information specified in the caution block just prior to Step 8.4.1.2 to the control room operator. The technician provided this information after being prompted by the inspector. A few minutes later, Step 8.4.2.4 required the technician to remove the field wires from Terminal Block TB1-1. When the inspector asked the technician how the field side of the terminal block was identified, the technician replied that it appeared to be the field side based on how the

wiring was routed in the cabinet, but if the test did not complete as expected, the technician would initiate a change to the procedure to clarify the proper lead to lift. Then the technician connected the leads from an autotransformer to the two terminals specified in Step 8.4.1.5. The technician reading the procedure properly identified the two terminals, but failed to identify which was to receive the hot lead and which was to receive the neutral lead. After the technician connected the leads, the technician reading the procedure re-read the step, including the details regarding where the hot and neutral leads were to be connected. The inspector noted that the hot and neutral leads were on opposite terminals from what the procedure required and that the technician did not notice this error. The inspector asked what the color code was for hot and neutral wires and this prompted the technicians to detect and correct the miswiring.

The caution block just prior to Steps 8.4.1.3 through 8.4.1.10 warned the technicians to "Use EXTREME caution while working inside the Motor Controller Assy. [assembly], Use insulated tools, 120 VAC may be present." The technician used a screwdriver with a taped shaft, but an uninsulated bit. While the technician was correcting the miswiring in Step 8.4.1.5, the inspector noted that the technician's finger contacted the uninsulated portion of the flat screwdriver bit with each revolution. The inspector questioned this practice while the technician performed the step. The response confirmed that the technician had not noticed the touching.

When the technicians energized the autotransformer, the ground fault interrupter on the extension cord tripped. This prompted the technicians to call a timeout to review the circuitry in the shop. The technicians determined that they had lifted the vendor lead from Terminal TB1-1, rather than the field wires as directed by the procedure. This led the technicians to initiate Performance Improvement Request 98-0057 and prepare On-The-Spot Change 98-0030 to Surveillance Procedure STS IC-450B. The failure of the technicians to comply with the surveillance procedure is a violation of Technical Specification 6.8.1.a (50-482/9723-02).

c. Conclusions

Instrumentation and control technicians' willingness to proceed with a surveillance test despite their uncertainty in lifting leads led to failures to comply with surveillance procedure instructions and caused the test equipment power source ground fault interrupter to trip.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Review of Material Condition During Plant Tours

a. Inspection Scope (61726)

During this inspection period, routine plant tours were conducted to evaluate plant material condition.

b. Observations and Findings

In general, where equipment deficiencies existed, the deficiencies had been identified for corrective action. The following exceptions were identified:

- While observing the conduct of STN FP-221, "Diesel Driven Fire Pump Monthly Test," Revision 6, the inspectors noted that oil and grease leakage on and around the diesel-driven fire pump engine had not been cleaned. In addition, much of the lighting in the diesel-driven fire pump room was inoperable.

  The inspectors noted that the licensee had initiated material condition improvements to the diesel-driven fire pump and pump room soon after the deficiencies were identified.

- After a walkdown of the control room ventilation system, the inspectors noted in NRC Inspection Report 50-482/97-14 (Section E2.1) that the control room ventilation system had not received as much attention as other safety systems. The inspectors noted corrosion on the valves and tubing leading to Valve GK V0775, the access control fan coil unit chilled water supply line drain valve, and Valve GK V0776, the access control fan coil unit chilled water supply line vent valve. The inspectors also noted that the copper tubing supporting these valves vibrated noticeably while the unit was operating.

  During this inspection period, the inspectors noted that the material condition of Valves GK V0775 and -V0776 appeared unchanged from the condition identified 4 months previously in NRC Inspection Report 50-482/97-14. The licensee identified that the tubing and valves had been inspected and cleaned in September 1997, as a result of the original observation per Action Request 23883. The licensee generated Action Request 27177 in response to this observation.

c. Conclusion

The material condition of those plant systems and components evaluated during this inspection period were good with few equipment deficiencies.

M3 Maintenance Procedures and Documentation

M3.1 Exit Turnstile Portal Radiation Monitor

a. Inspection Scope (62707)

The inspector observed a portion of the calibration of the restricted area exit portal radiation monitor.

b. Observations and Findings

On December 22, 1997, a technician performed a calibration of the restricted area portal radiation monitor using Radiation Protection Procedure RPP 06-305, "Eberline PM-7 Calibration Restricted Area Exit Portal Monitor," Revision 1. During the procedure, the inspector and technician discussed the technician's use of a reliably detectable activity value of 500, rather than 200 as specified in the procedure. The technician explained that the previous superintendent of radiation protection directed the technicians to use the higher value in order to limit the detector count time. The technician also explained that the note prior to Step 9.2.14 permitted the technician to use values different from the procedure with the approval of health physics supervision. The technician also explained that this practice of setting reliably detectable activity to 500 had been in effect for the past 3 years.

The inspector discussed this issue with the manager of chemistry and radiation protection. After evaluating the issue, the manager said that this practice had been changed to require the technicians to perform the calibration using the reliably detectable activity value of 200 as specific by the procedure.

c. Conclusions

The licensee ended a long-standing practice of using a calibration parameter specified by health physics supervision, rather than that specified by the calibration procedure, after the issue was questioned by the inspector.

M8 Miscellaneous Maintenance Issues (92902)

M8.1 (Closed) Violation 50-482/9719-04: Failure to replace a shield plug per the maintenance procedure. The licensee's response letter referred to their violation response letter for NRC Inspection Report 50-482/97-20. The inspector verified the corrective actions described in the licensee's response letters for NRC Inspection Report 50-482/97-19, dated December 12 and 23, 1997, to be reasonable and complete. No similar problems were identified.

III. Engineering

E1 Conduct of Engineering

E1.1 10 CFR 50.59 Implementation (37001)

a. Inspection Scope

The inspector reviewed the licensee's program guidance and assessed the licensee's performance implementing its 10 CFR 50.59 safety evaluation program during 1996 and 1997. Specifically, the inspector reviewed a sample of 10 CFR 50.59 screenings (i.e., applicability determinations) and associated unreviewed safety question determinations and a sample of 10 CFR 50.59 screenings that did not require an unreviewed safety question determination. In addition, a sample of USAR changes was reviewed.

b. Observations and Findings

The licensee's safety evaluation process for changes to the facility is controlled by Procedure AP 26A-003, "Screening and Evaluating Changes, Tests, and Experiments," Revision 3. The procedure delineated the licensee's methods, training requirements, and responsibilities to determine and document whether facility changes can be made without prior NRC approval. The following observations were made regarding the licensee's 10 CFR 50.59 program:

- The "10 CFR 50.59 USQD Worksheet" is a valuable tool for performing safety evaluations. The addition of the requirement in Procedure AP 26A-003 in September 1997 for individuals performing safety evaluations to use the worksheet should ensure that rigorous safety evaluations are performed.

- The inspector identified that the definition for "Conduct of Tests and Experiments not Described in the Updated Safety Analysis Report" contained in Procedure AP 26A-003 is not consistent with 10 CFR 50.59. Specifically, the definition states, "The tests and experiments which are relevant to this phrase are those which are not described in the scope of the USAR and may: (1) degrade the margin(s) of safety during normal plant operations or during anticipated transients, or (2) adversely affect the adequacy of structures, systems, or components designed to prevent accidents or to mitigate the consequences of an accident." The licensee informed the inspector that the definition was developed using guidance contained in NSAC-125, "Guidelines for 10 CFR 50.59 Safety Evaluations." However, the NRC has not endorsed this guidance and 10 CFR 50.59 does not provide for this screening of tests and experiments to determine if a safety evaluation is required. The inspector did not identify any instances where a safety evaluation was not performed for a test or experiment.

The inspector evaluated the implementation of the 10 CFR 50.59 program by reviewing a sample of the completed 10 CFR 50.59 screenings, a sample of safety evaluations

described in the Wolf Creek Generating Station Annual Safety Evaluation Report for 1996, and a sample of 10 CFR 50.59 safety evaluations performed in 1997. In addition, the inspector performed a review to verify that changes being made in the plant were being reflected in the USAR. The following observations were made:

10 CFR 50.59 Screenings

The inspector reviewed the following 10 CFR 50.59 screenings to verify that safety evaluations were not required for the changes:

LS-05694 R/O: Change high and low level alarms for the secondary spent resin storage tank

LS-05745 R/O: Steam generator lower level tap root valve encapsulation

LS-05999 R/O: Approval of alternate disc valve assembly and valve connector

LS-06179 R/O: Change fuse size for heat tracing

LS-06521 R/O: Elimination of lubrication for O-rings in diesel generator system

CKL 2L-008: Change high/low level limits for potable water tank level and basin

WP 108639-15: Installation of temporary thermocouple probes into the inboard and outboard bearing housings for normal charging pump

WP 121651: Temporary modification to disable alarms due to failure of an electric hydraulic controller power supply cooling fan flow switch

WP 114490-64: Temporary relocation of excore nuclear instrumentation system audio count volume control

WP 126420: Temporary modification to revise setpoint for Annunciator 38B (Loop 3 Delta T low deviation)

AP 28-006: Revision to Procedure AP 28-006, "Nonconformance Control"

RNM-C-0574: Revision to Procedure RNM-C-0574, "Multi-Contact Aux Relay HFA"

AP 27-006: Revision to Procedure AP 27-006, "WCGS Security Organization"

LS-06604 R/O: Installation of packing in a motor-driven auxiliary feedwater pump

WP 113971-03: Temporary modification on startup transformer oil level switch

WP 118801: Temporary modification to install recorder on battery buses

WP 107034-51: Installation of metal guard on inverter

MPM C151Q-01: Revision to Procedure MPM C151Q-01, "Containment Equipment Hatch Maintenance and Operation"

GEN 00-004: Revision to Procedure GEN 00 004, "Power Operation"

SYS EJ-121, SYS EJ-120: Revision to Procedures SYS EJ-121, "Startup of A RHR Train In Cooldown Mode," and SYS EJ-120, "Startup of B RHR Train In Cooldown Mode"

STS AE-001: Revision to Procedure STS AE-001, "Main Feedwater Isolation Valve Acc Discharge Test"

LS-05922 R/O: Replacement of radioactive waste pump impeller

LS-07589 R/O: Removal of handwheel for essential service water traveling water screens

WP 119878: Temporary modification to install recorder for troubleshooting

Based on the inspector's review of the changes and the USAR, the inspector concluded that the screenings were performed in accordance with the licensee's procedure (AP 26A-003) and 10 CFR 50.59 and that safety evaluations were not required for the changes.

10 CFR 50.59 Safety Evaluations

The inspector reviewed the following safety evaluations for permanent modifications, temporary modifications, USAR changes, and defacto design changes to verify that the safety evaluations were adequate and prior NRC approval was not required for the changes:

96-0009: Temporary modification to install electric heaters to remove ice from essential service water traveling screens

96-0037: Temporary modification to provide cooling water to induction heater

96-0038: Procedure revision to allow the use of the safety injection system as an operable boration flowpath in Mode 6 with the reactor vessel head removed

96-0041: Temporary modification to install pressure gauge in residual heat removal system

96-0060: Change in refueling machine overload and load reduction requirements

96-0072: Change to USAR regarding containment recirculation sump mesh size

96-0073: Installation of tubing for safety injection pump mechanical seal drainage

96-0096: Changes to Reactor Coolant Pump No. 1 seal leakoff local indication

96-0117: Installation of resistance temperature detectors to monitor temperature in the essential service water pump house piping and lake

96-0139: Replacement of motor operators with handwheels from moisture separator/reheater main steam supply bypass valves

96-0159: Temporary modification to repair contact block for containment isolation signal Phase B control switch

96-0180: Correction to USAR regarding description of main steam isolation valves

96-0202: Revision to USAR regarding pressure drop for essential service water strainers

97-0001: Modification to change speed of refueling machine

97-0026: Revision to USAR to clarify description of emergency makeup requirements from the ultimate heat sink

97-0053: Temporary modification to install test equipment to troubleshoot ground alarms on Bus PK02

97-0068: USAR revision to enhance the description for several valves

97-0084: USAR revision to clarify auxiliary feedwater system description

97-0108: Temporary test procedure for postmodification testing of transfer switches for Battery Charger NK25

97-0132: Revision of numbering scheme for several emergency plan procedures

97-0141: Temporary test procedure to verify main steam isolation valve performance at reduced accumulator pressure

The inspector concluded that, in general, the safety evaluations contained sufficient information to support the conclusion that an unreviewed safety question did not exist. The inspector did not identify any changes that were made that required prior NRC approval.

Annual 10 CFR 50.59 Report and USAR Updates

The inspector reviewed the licensee's Annual Safety Evaluation Report, dated March 11, 1997, and determined that the safety evaluation summaries were of high quality and

contained sufficient detail for NRC review. In addition, the inspector selected the following plant modifications that were summarized in the report to verify that the USAR was appropriately updated:

96-0038: Procedure revision to allow the use of the safety injection system as an operable boration flowpath in Mode 6 with the reactor vessel head removed

96-0060: Change in refueling machine overload and load reduction requirements

96-0086: Changes to Reactor Coolant Pump 1 seal leakoff local indication

96-0117: Installation of resistance temperature detectors to monitor temperature in the essential service water pump house piping and lake

96-0139: Replacement of motor operators with handwheels on moisture separator/reheater main steam supply bypass valves

The inspector concluded that, for Changes 96-0038, -0086, and -0117, the USAR had been properly updated to reflect the associated changes and for 96-0139 the USAR update was being processed. However, the inspector identified that for 96-0060 the USAR was not consistently updated. Specifically, the change was to allow one of the two automatic overload cutoffs to be automatically bypassed when a fuel assembly bottom nozzle is less than or equal to 2 inches above the full-down position in the core, upender, and rod cluster control assembly change fixture during raising of the fuel assembly. However, when page 9.1-34 of the USAR was updated to reflect this change (Revision 10), the information added to page 9.1-34 of the USAR indicated that a specific overload will be bypassed instead of one of the two overload cutoffs. The change was made correctly to page 16.9-3 of the USAR. The licensee initiated a change notice to revise the USAR. The inspector concluded that the minor weakness in updating the USAR for 96-0060 was an isolated occurrence.

c. Conclusion

Overall, the licensee's implementation of its 10 CFR 50.59 program was in accordance with the program requirements. Safety evaluations were performed when required and contained sufficient information to support the conclusion that unreviewed safety questions did not exist. However, procedural guidance existed regarding the conduct of tests and experiments that is not consistent with 10 CFR 50.59, and one minor weakness in updating the USAR was identified.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Potential Unlocked High Radiation Area Boundary

a. Inspection Scope (71750)

The inspector reviewed the results of the licensee's investigation of a reported unlocked high radiation area boundary.

b. Observations and Findings

On December 14, 1997, a health physics technician reported that the radwaste filter bay crane, a locked high radiation area boundary, was unlocked, when the technician did not recall unlocking it. The health physics technician, two operators, and two maintenance technicians went to the filter bay to replace the filter element in one of the filter housings. During the setup, the health physics technician heard the crane movement and questioned whether the crane had been unlocked. The technician subsequently initiated Performance Improvement Request 97-4069, which prompted a Severity Level II investigation.

The inspector reviewed the results of the licensee's investigation and determined that it was thorough. The inspector agreed with the conclusion that the only plausible explanation for the issue was that the health physics technician who questioned the unlocked crane was preoccupied and did not recall unlocking the crane. The sound of the crane movement captured the technician's attention and this prompted the question. The licensee's investigation determined that other matters contributed to the technician's likely preoccupation.

c. Conclusions

The licensee's investigation of a reported unlocked high radiation area boundary was appropriate and thorough. The licensee's conclusion that the boundary was unlocked per their administrative procedures appeared to be appropriate.

R1.2 Fuel Leak

a. Inspection Scope (71750)

The inspector reviewed the data the licensee used to determine that they had a small fuel leak, and reviewed their response.

b. Observations and Findings

On December 15, 1997, chemistry personnel determined that the fuel reliability index exceeded 5E-4 micro-curies per gram. Seven days later the licensee followed their administrative procedure by entering Action Level 1 for failed fuel and increased the charging and letdown flow rate to 120 gallons per minute. Since detecting the leak the reactor coolant gross activity remained essentially constant, the fuel reliability index has remained essentially constant just above the Action Level 1 point, and the Xenon-133 to Xenon-135 activity ratio has slowly risen from 0 to 3.4. These indications were consistent with what would be expected from a single, tight fuel leak.

Chemistry personnel consulted with their fuel vendor, and the fuel vendor believes that the leak is from a previously burned assembly. However, this conclusion is not supported by available data since the gross activity and cesium activity levels are too low to permit an accurate analysis. The licensee will continue to monitor this leak.

c. Conclusions

The licensee identified indications of a fuel leak. Chemistry personnel properly evaluated the available data and coordinated an appropriate response with operations.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on January 23, 1998. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. J. Angus, Manager, Licensing and Corrective Action
G. D. Boyer, Chief Administrative Officer
J. W. Johnson, Manager, Resource Protection
O. L. Maynard, President and Chief Executive Officer
B. T. McKinney, Plant Manager
R. Muench, Vice President Engineering
W. B. Norton, Manager, Performance Improvement and Assessment
C. C. Warren, Chief Operating Officer

INSPECTION PROCEDURES USED

IP 37001	10 CFR 50.59 Implementation
IP 37551	Onsite Engineering
IP 61726	Surveillance Observations
IP 62707	Maintenance Observations
IP 71707	Plant Operations
IP 71750	Plant Support Activities
IP 92902	Followup-Maintenance

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-482/9723-01	VIO	Procedure Steps Performed Out of Sequence (Section O4.1).
50-482/9723-02	VIO	Process Radiation Monitor Surveillance (Section M1.3).

Closed

50-482/9719-04	VIO	Unposted locked HI rad area due to incomplete maintenance (Section M8.1).