ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-483
License No.:	NPF-30
Report No.:	50-483/99-09
Licensee:	Union Electric Company
Facility:	Callaway Plant
Location:	Junction Highway CC and Highway O Fulton, Missouri
Dates:	September 5 through October 16, 1999
Inspectors:	J. F. Melfi, Senior Resident Inspector J. D. Hanna, Resident Inspector
Approved By:	W. D. Johnson, Chief, Project Branch B
ATTACHMENT:	Supplemental Information

EXECUTIVE SUMMARY

Callaway Plant
NRC Inspection Report No. 50-483/99-09

Operations

- Control room communications, briefings, supervisory control, and self-checking were very good during the plant shutdown and cooldown in preparation for refueling Outage 10 (Section O1.2).

- The inspectors reviewed the circumstances surrounding an axial flux difference transient during a power reduction. The inspectors concluded that axial flux difference exceeded administrative limits for axial offset before shutdown. The inspectors verified that the limits in the core operating limits report were not exceeded (Section O1.3).

- Unit operators demonstrated good attention to detail, communications, and control while draining the reactor coolant system and conducting midloop operations (Section O1.4).

Maintenance

- Maintenance personnel, operators, and support staff demonstrated poor attention to detail on several occasions while removing systems from service and restoring them to service. Some of the more significant errors included cutting out a drain valve on a depressurized system that still had a red tag on it, pulling the wrong fuse for an accumulator fill line valve, and clearing an isolation that unintentionally opened the volume control tank suction valve from the refueling water storage tank and spilled 2000 gallons into the auxiliary building drains. These maintenance errors had the potential to challenge personnel and reactor safety (Section M4.1).

Engineering

- Command and control, procedural precautions, and contingency actions in support of the Electrosleeving™ of steam generator tubes were comprehensive and the processes were deliberately conducted. Licensee and Framatome staff knowledge of systems and procedures was thorough (Section E4.1).

Plant Support

- After a radioactive filter was dropped onto some plastic sheets and rags during a filter replacement, the plastic sheets and rags were placed in a trash bag. This bag was not surveyed. Four days later, the electronic dosimeters of workers moving the trash bag alarmed, and a high radiation area was identified around the bag (300 mrem/hr at 12 inches). Failure to perform an adequate survey, which led to an unposted high radiation area, was a violation of 10 CFR 20.1501. This Severity Level IV violation is being treated as a noncited violation, consistent with Appendix C of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Suggestion-Occurrence-Solution Report 99-2022 (Section R1.2).

- The radiological controls implemented by the licensee during the ultrasonic cleaning of the fuel assemblies were appropriate (Section R1.3).

Report Details

Summary of Plant Status

The plant began the report period at approximately 100 percent reactor power. On September 18, 1999, operators started a reactor coastdown to refueling Outage 10. Operators opened the main generator output breaker to start the refueling outage on October 1, 1999. The plant ended the report period with the reactor core fully offloaded to the spent fuel pool.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

The inspectors conducted frequent reviews of ongoing plant operations. In general, the conduct of operations was professional and safety conscious. Plant status, operating problems, and work plans were appropriately addressed during daily turnover and plan-of-the-day meetings. Plant testing and maintenance requiring control room coordination were properly controlled. The inspectors observed several shift turnovers and noted no problems.

The inspectors did observe a minor problem in tracking and documenting Technical Specification action statements. On October 8 at 6:22 a.m., operators and maintenance personnel removed Train A of essential service water from service in preparation for pump replacement. This action rendered the associated train of control room emergency ventilation inoperable in accordance with Technical Specification Action Statement 3.7.6. This action statement has an allowed outage time of 7 days. The operators did not recognize the applicability of this action statement for a period of approximately one shift. Additionally, the inspectors observed that neither entry nor exit from the action statement was logged in either the operator or shift supervisor log. The control room emergency ventilation action statement was exited when defueling was completed and control room emergency ventilation system operability was no longer required. This occurred on October 10 at 8:14 a.m.

O1.2 Observation of Reactor Shutdown

a. Inspection Scope (71707)

The inspectors observed portions of the plant shutdown and cooldown for refueling Outage 10 from the control room.

b. Observations and Findings

The inspectors observed good communications within the control room and between control room and field personnel. With few exceptions, licensee personnel implemented three-way communications. Pre-evolution briefings were thorough. Control room personnel exhibited good supervisory control. Control room personnel used good self-checking techniques when manipulating plant equipment.

c. Conclusions

The inspectors concluded that control room communications, briefings, supervisory control, and self-checking were very good during the plant shutdown and cooldown in preparation for refueling Outage 10.

O1.3 Axial Flux Difference Exceeding Licensee Curves

a. Inspection Scope (71707)

The inspectors reviewed the circumstances surrounding an axial flux difference transient during the power reduction. The inspectors compared the administrative limits to the reduced axial offset curves in the core operating limits report to verify that these limits were not reached.

b. Observations and Findings

During the reactor coastdown, the indication of axial flux difference continued to increase. Technical Specification 3.2.1 delineates the acceptable axial flux difference while above 50 percent of rated thermal power. This Technical Specification states that if axial flux difference exceeds the value shown in the core operating limits report, to restore axial flux difference to within the limits within 15 minutes. To assure that the Technical Specification limits would not be exceeded, the licensee generated a more conservative curve than the one in the core operating limits report.

Because of the strong positive movement of axial flux difference, at 7:44 p.m. on September 29, 1999, the licensee began reducing power from 75 percent. During the power reduction, the licensee noted that axial flux difference exceeded the internal reduced axial flux difference curve for 9 minutes. After reaching an indicated power level below 50 percent, Technical Specification 3.2.1 no longer applied and the licensee stopped the power reduction. Subsequently, at 12:20 a.m. on September 30, 1999, the licensee readjusted the nuclear instruments based on the calorimetric power indication. Operators found that they were above 50 percent power and they entered Technical Specification 3.2.1. This condition existed for 8 minutes until they achieved 48 percent power.

The inspectors reviewed the trends on axial flux difference and core power. The inspectors found that the licensee did not exceed the core operating limits. The inspectors questioned which was the correct measurement of core power to use: the calorimetric, the nuclear instruments, or the differential temperature across the core. The licensee used the nuclear instrumentation as the indication of core power, not the calorimetric or core differential temperature. The inspectors reviewed computer data on axial flux difference and the calorimetric indicated power and found that axial flux difference exceeded the internal axial flux difference curves for more than 30 minutes based on calorimetric power. The nuclear instruments indicate lower than actual power following a power reduction, but overestimate power when power is increasing. For this event, using the nuclear instruments on a power reduction gave a wider indicated

margin to the axial flux difference curve than the calorimetric estimate of power would have provided.

The inspectors questioned whether the licensee's curves were conservative enough to use following a power reduction if the nuclear instruments were used. The licensee performed an evaluation that showed that the use of the nuclear instruments was appropriate. The inspectors reviewed the licensee's evaluation and concluded that the use of nuclear instruments provided enough margin to the core operating limit report curve.

c. Conclusions

The inspectors reviewed the circumstances surrounding an axial flux difference transient during a power reduction. The inspectors concluded that axial flux difference exceeded administrative limits for axial offset before shutdown. The inspectors verified that the limits in the core operating limits report were not exceeded.

O1.4 Draining of the Reactor Coolant System to Midloop Operation

a. Inspection Scope (71707)

On October 5, operators drained the reactor coolant system to establish midloop conditions to allow installation of the steam generator nozzle dams and subsequent steam generator tube inspections. Operators performed the reactor coolant system draining in accordance with Procedure OTN-BB-00002, "Reactor Coolant System Draining," Revision 19, and Procedure OTN-EJ-00001, "Residual Heat Removal System," Revision 14. The inspectors reviewed the licensee's preparations for draining the reactor coolant system and operating in reduced inventory, attended the prejob briefing, and observed operators conducting the evolution.

b. Observations and Findings

The inspectors determined that the licensee's preparations for draining the reactor coolant system and operating in reduced inventory were very good. The prejob briefing was thorough and included a discussion of individual assignments, command and control of the activity, communications, limits and precautions, potential problems, termination criteria, and lessons learned. All required initial conditions were satisfied prior to commencing the draining of the reactor coolant system.

The inspectors also observed good coordination between the control room operators and the reactor vessel head crew. Specifically, nitrogen blowdown of the primary side of the steam generator tubes was secured, and a slight drain rate was achieved in order to stabilize level and maintain a suction on the reactor vessel head while openings were being made. Operators also demonstrated good control of the unit by eliminating all work on and limiting access to vulnerable areas (e.g., the switchyard and safety-related 4160 volt breaker rooms).

Operators performed a time-to-boil estimate prior to draining the reactor coolant system. Calculations were made using the decay heat load and the expected reactor coolant system level after draining to midloop.

The inspectors observed three operators monitoring reactor coolant system level indication during the draining evolution. Operators continuously monitored reactor vessel level and the difference among the three reactor coolant system level indications. All instrumentation was in place and functional. The inspectors also observed good control room operator procedural adherence, attention to detail, and caution with regard to ongoing work activities.

Management oversight of reduced inventory activities was excellent. A management structure designed for additional support while the reactor coolant system was at midloop was in place and functioning.

c. Conclusions

Unit operators demonstrated good attention to detail, communications, and control while draining the reactor coolant system and conducting midloop operations.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments - Maintenance

a. Inspection Scope (62707)

The inspectors observed or reviewed portions of the following itemized work activities, modification packages, and associated work activities:

- Modification Package 97-1004, "S/G Feedwater Check Valve Replacement,"
- Modification Package 98-1036, "ESW 'A' Pump Replacement,"
- Modification Package 98-2010, "Replace LP Heater '1A' & '1B',"
- Work Authorization W185371 - Replace Battery NK11,
- Work Authorization A194831D - Bring in empty Reactor Coolant Pump A Shipping Container, and
- Modification Package 97-1011, "BGF00001 and BGV0001 to be replaced with a drag valve."

b. Observations and Findings

The inspectors had no concerns with the maintenance observed. All work observed was performed with the work packages present and in active use. The inspectors frequently observed supervisors and system engineers monitoring job progress, and quality control personnel were present when required.

M1.2 General Comments - Surveillance

a. Inspection Scope (61726)

The inspectors observed or reviewed all or portions of the following test activities:

- Test Procedure ISL-BB-0P455, "Loop Pressure, Rx Pzr Press-Prot Set I," Revision 17,
- Test Procedure ISL-BB-0P456, "Loop Pressure, Rx Pzr Press-Prot Set II," Revision 17,
- Test Procedure ISL-BB-0P457, "Loop Pressure, Rx Pzr Press-Prot Set III," Revision 17,
- Test Procedure ISL-BB-0P458, "Loop Pressure, Rx Pzr Press-Prot Set IV," Revision 17,
- Procedure OSP-SA-0007B, "Train B AFAS Slave Relay Test," Revision 7,
- Procedure OSP-AL-P001B, "Motor Driven Aux. Feedwater Pump 'B' Inservice Test," Revision 20,
- Procedure OSP-BG-V001A, "Chemical & Volume Control Train 'A' Operability," Revision 20,
- Procedure OSP-EJ-00002, "RCS/RHR Suction Valves Automatic Actuation Test," Revision 8,
- Procedure ISP-SA-2413A, "Diesel Generator and Sequencer Testing (Train A)," Revision 11, and
- Procedure MSE-NK-QB011, "Refueling Outage Inspection and Surveillance of NK11 Battery and Battery Charger NK21/NK25," Revision 6.

M4 Maintenance Staff Knowledge and Performance

M4.1 Work Control Errors During the Refueling Outage

a. Inspection Scope (62707)

The inspectors reviewed the licensee's work control process and tagging program in response to several errors that occurred during the outage. Specifically, the inspectors reviewed the following aspects of the work control process:

- adequacy of work instructions,
- operator/worker compliance with work instructions, and
- control of the maintenance process and the work being performed.

b. Background

During refueling Outage 10, the inspectors reviewed the following events:

- On October 5, an operator pulled the incorrect set of fuses in the control room while isolating circuits for upcoming work. Fuses were pulled for the safety injection accumulator Tank C fill line isolation valve instead of the safety injection accumulator Tank C nitrogen supply valve. No personnel were injured. The identification numbers of the affected fuse pairs differed by one digit. This error was entered into the licensee's corrective action program as Suggestion-Occurrence-Solution 99-2269.

- On October 6, a contractor employee cut out the main feed Pump A recirculation upstream drain valve from the system with an attached workman's protection tag still in effect. This tag was required to be attached for isolation; however, the system had been drained and vented. Consequently, no one was injured. The work permit to remove this component had not been authorized to start. This was entered into the licensee's corrective action program as Suggestion-Occurrence-Solution 99-2298.

- Also, on October 6, an activity coordinator released approximately one dozen work packages to be performed. This group included a package to repack the component cooling water to containment outer isolation valve for which the isolation had not been established. Work was initiated and completed on the valve before the licensee realized the isolation had not been established. This was entered into the licensee's corrective action program as Suggestion-Occurrence-Solution 99-2299.

- On October 6, workman's protection was established for planned work on an operator for a containment recirculation isolation valve. Two required tags were not installed because they were not independently verified by a second reactor operator and consequently not recognized by the computer program printing the tags. No work was performed on the component due to a sequencing concern.

This condition was discovered when the isolation was cleared. This error was entered into the licensee's corrective action program as Suggestion-Occurrence-Solution 99-2432.

- On October 13, while clearing isolation on Train A of the refueling water system, the workman's protection tag was cleared on the breaker for centrifugal charging pump suction from refueling water storage tank isolation valve. When the breaker was shut, the logic circuitry was actuated to open the isolation valve based upon low level in the volume control tank. This aligned the refueling water storage tank to the affected piping and spilled approximately 2000 gallons of slightly contaminated water into the auxiliary building through open vent and drain valves. No personnel were injured or contaminated and no equipment was damaged. Affected areas were decontaminated. This was entered into the licensee's corrective action program as Suggestion-Occurrence-Solution 99-2599.

- On October 16, there was a loss of off-site power to nonsafety-related 4160 volt buses due to Ameren relay services personnel operating an incorrect relay. The effect on the plant was a loss of all power to nonsafety-related components including all lighting in the auxiliary and containment buildings. No safety-related components were affected and no personnel were injured. This was entered into the licensee's corrective action program as Suggestion-Occurrence-Solution 99-2698.

c. Observations and Findings

The inspectors observed that lack of attention to detail was a common contributing cause in the aforementioned occurrences. The inspectors also determined that the personnel involved in the incidents were not from a single functional area but from various disciplines (e.g., maintenance department, Ameren relay services group, operations department, etc.).

In two of the work control errors, confusion over component labeling was a contributing factor. The component label numbers differed from the component numbers specified in the procedure by one digit in each case. In one event (the removal of a valve with a workman's protection tag still physically attached), the contractor did not understand the importance of component tagging.

The inspectors reviewed the licensee's corrective actions for these events. The remedial actions included a "safety stand down" for all site personnel on October 6, counseling of individuals, convening formal Event Review Team meetings, and entering the occurrences in the licensee's corrective action program. While the actions taken were comprehensive in scope, they were largely unsuccessful at preventing recurrence.

The inspectors also noted that although no individuals were injured and immediate plant safety was not jeopardized, the safety significance of the events increased over the course of the inspection period. The release of 2000 gallons of refueling storage tank water through five vent and drain valves on October 13 had the potential to wet electrical

equipment and contaminate personnel. On October 16, the loss of both nonsafety-related 4160 volt buses did not directly affect safety systems (e.g., the spent fuel cooling pumps or safety-related buses), but did challenge the plant. Affected components included the plant computer, the security diesel generator, and the Train B residual heat removal room sump pump. (During this event, the reactor core was entirely offloaded to the spent fuel pool and Train A was the protected train.) Both of these events had the potential to challenge personnel and reactor safety.

d. Conclusions

Maintenance personnel, operators, and support staff demonstrated poor attention to detail while removing systems from service and restoring them to service. Some of the more significant errors included cutting out a drain valve on a depressurized system that still had a red tag on it, pulling the wrong fuse for an accumulator fill line valve, and clearing an isolation that unintentionally opened the volume control tank suction valve from the refueling water storage tank and spilled 2000 gallons into the auxiliary building drains. These maintenance errors had the potential to significantly challenge personnel and reactor safety.

III. Engineering

E4 Engineering Staff Knowledge and Performance

E4.1 Electrosleeving™ of Steam Generator Tubes

a. Inspection Scope (37551)

From October 11-15, the inspectors observed the licensee's activities during the Electrosleeving™ of tubes in Steam Generators A and C. (The Electrosleeving™ process was used to sleeve tubes that had flaws identified during the eddy current inspections.) In particular, the inspectors assessed the command and control of the evolution, licensee and Framatome staff knowledge levels, procedural precautions, and contingency actions associated with the hazardous chemicals used.

b. Observations and Findings

The inspectors observed good command and control during the sleeving process. This was evident in part from the close coordination between equipment operators in containment and process controllers. Operators and controllers also demonstrated detailed communications throughout the evolutions. The inspectors also found the licensee's engineering staff and Framatome's staff to be very knowledgeable when questioned.

During the plating process, the inspectors observed the numerous indications available to detect both process and safety problems. Process variables that were monitored to ensure satisfactory plating included applied electrical current, pH, and conductivity of the

solutions. Potential safety problems, such as leakage of highly acidic solution into the steam generator bowl, were effectively prevented by monitoring various parameters and through use of physical barriers. Equipment used included seal pressure sensors, leak detectors, multiple video cameras, berms in containment areas, and sleeving on chemical transfer hoses. The inspectors reviewed the compensatory actions for both process and safety problems and found them to be adequate.

c. Conclusions

Command and control, procedural precautions, and contingency actions in support of the Electrosleeving™ of steam generator tubes were comprehensive, and the processes were deliberately conducted. Licensee and Framatome staff knowledge of systems and procedures was thorough.

E8 Miscellaneous Operations Issues (92903)

E8.1 (Closed) Licensee Event Report 50-483/99003-00: Manual Reactor Trip Due to Heater Drain System Pipe Rupture Caused by Flow Accelerated Corrosion.

The circumstances surrounding this licensee event report are described in NRC Inspection Report 50-483/99-11. This licensee event report is closed.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Radiological Controls at Power and During Refueling Outage

a. Inspection Scope (71750)

The inspectors observed radiological controls at power and during the refueling outage.

b. Observations and Findings

The inspectors observed health physics personnel, including supervisors, routinely touring the radiologically controlled areas.

Contaminated areas and high radiation areas were properly posted, except as noted in Section R1.2. Step off pads were conspicuous and well placed. Area surveys posted outside rooms in the auxiliary building were current. The inspectors verified that the locally posted surveys were correct. The inspectors checked a sample of doors, required to be locked for the purpose of radiation protection, and identified problems. The inspectors identified no further concerns.

c. Conclusions

The inspectors found that the radiological controls implemented by the licensee were appropriate.

R1.2 Unposted High Radiation Area

a. Inspection Scope (71750)

The inspectors reviewed the circumstances surrounding an unposted high radiation area which was identified by the licensee.

b. Observations and Findings

On September 25, 1999, the electronic dosimeters of three decontamination laborers alarmed while they were removing a trash bag from the filter change area in the auxiliary building. The electronic dosimeters for two of the decontamination laborers read 109 mrem/hour and 142 mrem/hour. The decontamination laborers immediately left the area. They received about 1 mrem of dose. A survey of the bag indicated that a high radiation area existed, with 300 mrem/hour at 12 inches and 5000 mrem/hour on contact. The licensee immediately transferred this bag to a high level drum in the radwaste building.

Licensee review of this event revealed that the elevated dose rates on the bag were most likely due to contaminated plastic and rags from a filter replacement on September 21, 1999. The general process for the filter replacement is to remove the filter from the filter housing using a long-handled hook and place it in a drum hoist. Plastic sheeting and rags are placed under the path that the filter traverses to the drum hoist. During this filter replacement, the filter slipped from the hook and dropped 12 inches onto the plastic. Residual water dripped from the filter. After the filter was secured in the drum hoist, dose rates of 5 rem/hour on contact and 2 rem/hour at 12 inches from the hoist lid were measured. Contamination surveys identified low level contamination outside the boundary following the filter replacement, and two workers were slightly contaminated. The plastic was placed in a nearby radioactive trash receptacle and then pushed back approximately 10 feet to clear the area, but it was not surveyed for radiation levels. This failure to survey led to an unposted high radiation area for approximately 4 days.

The licensee initiated Suggestion-Occurrence-Solution 99-2022 for this event. The inspectors attended the event review team meeting. Licensee review indicated several problems with this event, including failure to write a Suggestion-Occurrence-Solution for the initial dropped filter, failure to survey the trash since the filter dropped on the plastic, the size of the work area, and the use of plastic instead of an absorbent barrier. The licensee determined that the potential for other personnel to receive unplanned exposure from this unposted area were minimal since the area is a low traffic area, and a review of access control logs did not reveal any abnormal or unusual exposures that could be attributed to the unposted area.

The licensee has proposed several corrective actions for this event. They include a better filter handling tool, evaluation of better ways to contain the water drippings from the filter, and to evaluate new electronic dosimeter setpoints.

The inspectors concluded that the failure to survey led to an unposted high radiation area. The failure to perform an adequate survey, which led to an unposted high radiation area, is a violation of 10 CFR 20.1501a. This Severity Level IV violation is being treated as a noncited violation, consistent with Appendix C of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Suggestion-Occurrence-Solution Report 99-2022 (50-483/99009-01).

c. Conclusions

After a radioactive filter was dropped onto some plastic sheets and rags during a filter replacement, the plastic sheets and rags were placed in a trash bag. This bag was not surveyed. Four days later, the electronic dosimeters of workers moving the trash bag alarmed, and a high radiation area was identified around the bag (300 mrem/hr at 12 inches). Failure to perform an adequate survey, which led to an unposted high radiation area, was a violation of 10 CFR 20.1501. This Severity Level IV violation is being treated as a noncited violation, consistent with Appendix C of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Suggestion-Occurrence-Solution Report 99-2022 (50-483/99009-01).

R1.3 Radiological Controls During Ultrasonic Cleaning of Fuel Assemblies

a. Inspection Scope (71750)

The inspectors observed and assessed portions of the ultrasonic cleaning activities performed on fuel assemblies.

b. Observations and Findings

The inspectors observed portions of the ultrasonic cleaning of fuel assemblies. The licensee cleaned the fuel assemblies to remove lithium borate from the top of the assemblies. The assemblies are cleaned in the cask loading pit, which is connected to the spent fuel pool.

The licensee maintained good health physics controls for contaminated areas and high radiation areas. The fuel movement from the spent fuel pool to the cask loading pit was done with appropriate caution. The amount of lithium borate removed was checked with cameras and radiation detectors. The ultrasonic cleaning was effective in removing most of the lithium borate from the assemblies.

c. Conclusions

The radiological controls implemented by the licensee during the ultrasonic cleaning of the fuel assemblies were appropriate.

V. Management Meetings

X1 Exit Meeting Summary

The exit meeting was conducted on October 21, 1999. The licensee did not express a position on any of the findings in the report.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. Proprietary information related to the Electrosleeving™ process which was reviewed during the inspection was returned to the licensee.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. D. Affolter, Manager, Callaway Plant
G. N. Belchik, Supervising Engineer, Operations
H. D. Bono, Supervising Engineer, Quality Assurance Operations
M. S. Evans, Superintendent, Protective Services
G. A. Hughes, Acting Manager, Quality Assurance
P. R. Heiberger, Superintendent, Instrumentation and Controls
R. T. Lamb, Superintendent, Work Control
J. B. McInvale, Supervising Engineer, Reactor Engineering
P. J. McKenna, Shift Supervisor, Operations
D. J. Maxwell, Acting Superintendent, Design Engineering
T. A. Moser, Superintendent, Systems Engineering
D. W. Neterer, Assistant Superintendent, Operations
A. C. Passwater, Manager, Corporate Nuclear Services
J. T. Patterson, Shift Supervisor, Operations
J. R. Peevy, Manager, Emergency Preparedness
M. A. Reidmeyer, Senior Engineer, Quality Assurance Regulatory Support
R. R. Roselius, Superintendent, Radiation Protection and Chemistry
J. D. Schnack, Supervising Engineer, Quality Assurance Regulatory Support
M. E. Taylor, Manager, Nuclear Engineering

NRC

W. D. Johnson, Chief, Project Branch B

INSPECTION PROCEDURES USED

37551	Onsite Engineering
61726	Surveillance Observations
62707	Maintenance Observations
71707	Plant Operations
71750	Plant Support Activities
92700	Onsite Followup of Written Reports of Nonroutine Events at Power Reactor Facilities
92903	Followup - Engineering

ITEMS OPENED AND CLOSED

Opened		
99009-01	NCV	Unposted High Radiation Area (Section R1.2)
Closed		
99003-00	LER	Manual Reactor Trip Due to Header Drain System Pipe Rupture Caused by Flow Accelerated Corrosion (Section E8.1)
99009-01	NCV	Unposted High Radiation Area (Section R1.2)