

April 15, 1999

EA 99-066

Tennessee Valley Authority  
ATTN: Mr. J. A. Scalice  
Chief Nuclear Officer and  
Executive Vice President  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: NRC INTEGRATED INSPECTION REPORT NO. 50-259/99-01, 50-260/99-01,  
AND 50-296/99-01

Dear Mr. Scalice:

This refers to the inspection conducted on February 7 through March 20, 1999, at the Browns Ferry Nuclear facility. The enclosed report presents the results of this inspection.

During the inspection period, your conduct of activities at the Browns Ferry Nuclear facility was generally characterized by safety-conscious operations, sound engineering and maintenance practices, and appropriate radiation controls and security measures.

Based on the results of this inspection, the NRC has determined that four violations of NRC requirements occurred. These violations are being treated as Non-Cited Violations (NCVs), consistent with Appendix C of the Enforcement Policy. These NCVs are described in the subject inspection report. If you contest the violation of severity level of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, Region II, and the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

TVA

2

Should you have any questions concerning this letter, please contact us.

Sincerely,

(Original signed by Peter A. Taylor for)

Paul E. Fredrickson, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

Docket Nos. 50-259, 50-260, 50-296  
License Nos. DPR-33, DPR-52, DPR-68

Enclosure: NRC Inspection Report

cc w/encl:  
Senior Vice President  
Nuclear Operations  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Jack A. Bailey, Vice President  
Engineering and Technical Services  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Karl W. Singer  
Site Vice President  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 2000  
Decatur, AL 35609

General Counsel  
Tennessee Valley Authority  
ET 10H  
400 West Summit Hill Drive  
Knoxville, TN 37902

cc w/encl continued: See page 3

cc w/encl: Continued  
Nicholas C. Kazanas, General Manager  
Nuclear Assurance  
Tennessee Valley Authority  
5M Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Robert G. Jones, Plant Manager  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 2000  
Decatur, AL 35609

Mark J. Burzynski, Manager  
Nuclear Licensing  
Tennessee Valley Authority  
4X Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

Timothy E. Abney, Manager  
Licensing and Industry Affairs  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 2000  
Decatur, AL 35609

Chairman  
Limestone County Commission  
310 West Washington Street  
Athens, AL 35611

State Health Officer  
Alabama Department of Public Health  
434 Monroe Street  
Montgomery, AL 36130-1701

April 15, 1999

EA 99-066

Tennessee Valley Authority  
ATTN: Mr. J. A. Scalice  
Chief Nuclear Officer and  
Executive Vice President  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: NRC INTEGRATED INSPECTION REPORT NO. 50-259/99-01, 50-260/99-01,  
AND 50-296/99-01

Dear Mr. Scalice:

This refers to the inspection conducted on February 7 through March 20, 1999, at the Browns Ferry Nuclear facility. The enclosed report presents the results of this inspection.

During the inspection period, your conduct of activities at the Browns Ferry Nuclear facility was generally characterized by safety-conscious operations, sound engineering and maintenance practices, and appropriate radiation controls and security measures.

Based on the results of this inspection, the NRC has determined that four violations of NRC requirements occurred. These violations are being treated as Non-Cited Violations (NCVs), consistent with Appendix C of the Enforcement Policy. These NCVs are described in the subject inspection report. If you contest the violation of severity level of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, Region II, and the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

TVA

2

Should you have any questions concerning this letter, please contact us.

Sincerely,

(Original signed by Peter A. Taylor for)

Paul E. Fredrickson, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

Docket Nos. 50-259, 50-260, 50-296  
License Nos. DPR-33, DPR-52, DPR-68

Enclosure: NRC Inspection Report

cc w/encl:  
Senior Vice President  
Nuclear Operations  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Jack A. Bailey, Vice President  
Engineering and Technical Services  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Karl W. Singer  
Site Vice President  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 2000  
Decatur, AL 35609

General Counsel  
Tennessee Valley Authority  
ET 10H  
400 West Summit Hill Drive  
Knoxville, TN 37902

cc w/encl continued: See page 3

cc w/encl: Continued  
Nicholas C. Kazanas, General Manager  
Nuclear Assurance  
Tennessee Valley Authority  
5M Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Robert G. Jones, Plant Manager  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 2000  
Decatur, AL 35609

Mark J. Burzynski, Manager  
Nuclear Licensing  
Tennessee Valley Authority  
4X Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

Timothy E. Abney, Manager  
Licensing and Industry Affairs  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 2000  
Decatur, AL 35609

Chairman  
Limestone County Commission  
310 West Washington Street  
Athens, AL 35611

State Health Officer  
Alabama Department of Public Health  
434 Monroe Street  
Montgomery, AL 36130-1701

Distribution w/encl:

L. R. Plisco, RII  
H. N. Berkow, NRR  
A. DeAgazio, NRR  
W. C. Bearden, RII  
C. F. Smith, RII  
D. W. Jones, RII  
D. H. Thompson, RII

Distribution w/encl continued: See page 4

Distribution w/encl: Continued

L. S. Mellen, RII  
PUBLIC

NRC Senior Resident Inspector  
U. S. Nuclear Regulatory Commission  
10833 Shaw Road  
Athens, AL 35611

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DRS
SIGNATURE							
NAME	R Carrion alt	W Smith	E DiPaolo 04/13/99	J Starefos 04/13/9	D Jones 04/12/99	G Salyers	D Thompson
DATE	1/ /3	1/ /3	1/ /3	1/ /3	1/ /3	1/ /3	1/ /3
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
OFFICE	RII:EICS						
SIGNATURE							
NAME	A Boland						
DATE	1/ /3	1/ /3	1/ /3	1/ /3	1/ /3	1/ /3	1/ /3
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML993510245.WPD

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Enclosure

Docket Nos: 50-259, 50-260, 50-296  
License Nos: DPR-33, DPR-52, DPR-68

Report Nos: 50-259/99-01, 50-260/99-01, 50-296/99-01

Licensee: Tennessee Valley Authority

Facility: Browns Ferry Nuclear Plant, Units 1, 2, & 3

Location: Corner of Shaw and Browns Ferry Roads  
Athens, AL 35611

Dates: February 7 - March 20, 1999

Inspectors: W. Smith, Senior Resident Inspector  
J. Starefos, Resident Inspector  
E. DiPaolo, Resident Inspector  
R. Telson, Resident Inspector, Sequoyah  
D. Jones, Reactor Engineer (Sections R2, R5, and R7)  
G. Salyers, Emergency Preparedness Inspector  
(Section P1)  
D. Thompson, Safeguards Inspector (Sections S1, S3, S5,  
and S7)

Approved by: P. E. Fredrickson, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

Enclosure



## EXECUTIVE SUMMARY

### Browns Ferry Nuclear Plant, Units 1, 2, and 3 NRC Inspection Report 50-259/99-01, 50-260/99-01, 50-296/99-01

This integrated inspection included aspects of licensee operations, maintenance, engineering, and plant support. The report covers a 6-week period of resident inspection. In addition, the licensee's emergency preparedness, security and safeguards, and radiological controls programs were inspected.

#### Operations

- Control room shift personnel continued to perform professionally and with an emphasis on safety. For example, the operators took timely action to isolate a small ASME Code Class 2 boundary leak in the Unit 2 reactor core isolation cooling steam throttle valve body (Section O1.1).
- During fuel receipt inspection activities for Unit 2, the licensee's team demonstrated excellent teamwork and attention to detail. A missing fuel rod spring was identified by the team which could have been overlooked. This was the second time the team identified such a discrepancy. In 1998, on Unit 3, an improperly fastened partial length rod was identified (Section O1.2).
- The operators responded conservatively and appropriately to the failures associated with the standby gas treatment system, which resulted in entry into Technical Specification 3.0.3 and the commencement of a shutdown of both Units 2 and 3. Engineering and Maintenance support of the troubleshooting and correction of the causes of the failures was effective (Section O1.3).
- As a result of the detailed walkdown of the emergency diesel generator (EDG) systems, the inspectors found the material condition of the equipment to be satisfactory; however, deficiencies were identified with the seals and latches on the EDG building flood/tornado/security doors (Section O2.1).

#### Maintenance

- Work activities observed during the inspection period were conducted in a professional manner. Workers demonstrated competence in their assigned tasks and proper work instructions and documentation were observed. In general, radiological controls observed during the inspection period were effective and consistent with licensee expectations (Section M1.1).

#### Engineering

- The licensee identified that a temporary plant alteration was implemented on the main turbine electro-hydraulic control circuits associated with the Units 2 and 3 stop valves without first performing a written safety evaluation as required by 10 CFR 50.59. After identification of this problem, prompt conservative immediate corrective actions were implemented to ensure that thermal limits would not be exceeded in the event of the anticipated transient, as described in the Final Safety Analysis Report (Section E1.1).

## Plant Support

- The licensee's Emergency Preparedness Program was being maintained in a state of full operational readiness. Changes to the program since December 1997 were consistent with the licensee's Emergency Plan and NRC requirements, and did not decrease the licensee's overall state of preparedness (Section P1.1).
- The licensee demonstrated improvement in the conduct of the post-drill critique subsequent to a March 3, 1999, emergency preparedness exercise (Section P5.1).
- Availability of continuous air radiation monitoring systems has improved; however, the Unit 2 monitors were not meeting established licensee performance goals due to a lack of proper attention on corrective maintenance (Section R2.1).
- Training was provided to Radiation Protection and Chemistry personnel in accordance with the descriptions delineated in the licensee's radiation protection, chemistry, and nuclear training manuals (Section R5.1).
- The licensee had established and implemented an adequate program for assuring the quality of gaseous effluent analyses (Section R7.1).
- The licensee was appropriately following the guidance provided by Regulatory Guide 5.66 and Nuclear Management and Resources Council (NUMARC) 89-01 to implement the access authorization program (Section S1.1).
- The Physical Security/Contingency Plan changes did not decrease the effectiveness of the Physical Security/Contingency Plan (Section S3.1).
- The licensee appropriately analyzed, tracked, resolved, and documented safeguards events in the security event logs in accordance with regulatory requirements (Section S3.2).
- Security officers were appropriately trained and qualified to perform their duties in accordance with the licensee's Training and Qualification Plan (Section S5.1).
- Licensee-conducted audits were thorough, complete, and effective in terms of uncovering weaknesses in the security system, procedures, and practices. The audit findings and recommendations were reviewed, appropriately assigned, analyzed, and prioritized for corrective action. The corrective actions taken were technically adequate and performed in a timely manner. The audit/self-assessment program continued to be a strength (Section S7.1).

## Report Details

### Summary of Plant Status

Unit 1 remained in a long-term lay-up condition with the reactor defueled.

Unit 2 operated at or near full power until commencing coastdown for refueling with the exception of scheduled brief reductions in power to adjust control rods, adjust final feedwater temperature, and perform routine testing. As of the end of this inspection period, Unit 2 was operating at approximately 90 percent power, and coasting down as the April 11, 1999, scheduled start of the refueling outage approached.

Unit 3 operated at or near full power with the exception of brief reductions in power to adjust control rods and perform routine testing.

On March 8, 1999, a Technical Specification (TS) required shutdown of both Units 2 and 3 was initiated because of inoperability of two trains of the standby gas treatment system (SGTS). Power was reduced by approximately 2 percent when the condition cleared and full power operation was resumed. See Section O1.3 for details.

## I. Operations

### **O1 Conduct of Operations**

#### **O1.1 General Comments (71707)**

Based on periodic inspection tours of the control rooms, the inspectors found that shift personnel acted professionally and with an emphasis on safety. Communication between watchstanders was, in general, crisp and with repeat-backs as appropriate.

On March 4, 1999, the licensee identified a through-wall leak on the body of the Unit 2 reactor core isolation cooling (RCIC) system turbine stop valve (2-FCV-071-0009), which is an ASME Code Class 2 boundary. The operators took immediate action to isolate the affected component from all operable systems, as required by Technical Requirement 3.4.3 for structural integrity. The valve was subsequently replaced in a timely manner.

#### **O1.2 New Fuel Receipt Inspection Observations (71707)**

The inspectors observed receipt inspection of the new fuel for Unit 2 at various times during the inspection period. During the inspection of one new fuel assembly, the licensee's receipt inspection team identified a spring missing from the top of one of the fuel rods. This was an indicator that the inspections performed by assistant unit operators (AUOs) during new fuel receipt demonstrated excellent attention to detail. The NRC inspectors monitored the activities associated with the replacement of the spring in the new fuel assembly and no problems were identified. This was the second occasion that operators had identified problems with new fuel assemblies in recent core reloads. A previous example of good attention to detail with respect to the on-site inspection of new fuel assemblies is documented in NRC Inspection Report

50-259,260,296/98-05, when a partial length fuel rod was identified as not being fastened to the bottom support plate.

### O1.3 Shutdown of Units 2 and 3 Required by Technical Specifications

#### a. Inspection Scope (71707)

The inspectors reviewed the licensee's actions in response to two trains of the SGTS being inoperable while both Units 2 and 3 were in Mode 1.

#### b. Observations and Findings

On March 8, 1999, Unit 2 was coasting down at 96 percent power and Unit 3 was operating at 100 percent power. Both units received control room alarms indicating that the SGTS C filtration unit heater temperature was high and there was a power loss to the heater. This occurred approximately 12 minutes after SGTS B was started to implement a post-maintenance surveillance requirement to restore operability. SGTS A and SGTS C were not running at the time. At about the same time, Unit 3 control room received an alarm indicating that SGTS C was not available. Subsequent investigation revealed that the fan power supply breaker for SGTS C had tripped, and that a flow switch (O-FS-65-70B) had indicated sufficient flow to energize the SGTS C heaters, even though the fan was not running.

With SGTS B inoperable pending the successful completion of post-maintenance testing, and having received the three alarms on SGTS C, the operators on both Units 2 and 3 entered TS 3.0.3, which is required by TS 3.6.4.3.D when two or three SGTS trains are inoperable with the plant in Modes 1, 2, or 3. As required by TS 3.0.3, the shutdown of both units commenced within one hour. Within the next hour, the operators submitted a one-hour report to the NRC, pursuant to 10 CFR 50.72, that they had commenced a plant shutdown required by TS 3.0.3.

The fan breaker for SGTS C was reset and the fan was started successfully with no apparent problems with the breaker. Based on the results of initial troubleshooting implemented by Engineering and Maintenance personnel, the licensee tripped the logic for the inoperable flow switches, as permitted by TS 3.3.2.1, and declared SGTS C operable provided the equipment was running and the heater was functioning. Power had been reduced by about 2 percent on both units when the operators exited TS 3.0.3 and resumed full power operation.

Subsequently, the fan breaker for SGTS C was replaced, and the old breaker was dismantled in the shop to determine the cause of the trip. The phase A overload current magnetic trip device showed evidence of overheating. The cause of the overheating was determined by the licensee to have been a loose connection inside the molded case circuit breaker that was making an intermittent poor connection. The heater control switch was found to be out of adjustment to the extent that it could have tripped at the low flow influenced by the running SGTS subsystem. The calibration process may have been improperly implemented or a poor test lead connection may have introduced an excessive calibration balance number shift. The licensee considered this to have been attributed to unclear test acceptance criteria and lack of sufficient training

on the calibration of this type of flow device. The switch was successfully recalibrated. This was considered to have been an isolated incident, based on the licensee's review of calibration data for the other similar switches and the performance of the SGTS.

The licensee initiated Problem Evaluation Report (PER) 99-003245-000. A detailed evaluation was conducted by Engineering and Maintenance with effective corrective actions as to cause. There were no violations of regulatory requirements associated with this event. The operators responded conservatively and appropriately to the indications manifested by the SGTS problems that occurred. Reporting requirements were met, and the licensee implemented the TS as required.

c. Conclusions

The operators responded conservatively and appropriately to the failures associated with the SGTS, which resulted in entry into TS 3.0.3 and the commencement of a shutdown of both Units 2 and 3. Engineering and Maintenance support of the troubleshooting and correction of the causes of the failures was effective.

**O2 Operational Status of Facilities and Equipment**

O2.1 Emergency Diesel Generator System Walkdown

a. Inspection Scope (71707, 37551)

The inspectors performed a detailed system walkdown of the emergency diesel generator (EDG) systems. The inspectors focused attention on EDG support systems which included the building support structure, air start system, fuel oil system, and fire protection. The inspectors reviewed the Final Safety Analysis Report (FSAR), TSs, plant procedures and the Probabilistic Risk Assessment Individual Plant Examination in preparing for the inspection.

b. Observations and Findings

The inspectors reviewed a sampling of plant test procedures associated with the EDGs and verified that the procedures satisfied TS surveillance acceptance criteria. Electrical breakers and valves were found to be in the required position consistent with applicable system drawings and lineup procedures. Material condition of equipment was generally good. Minor equipment deficiencies were identified and discussed with Operations and the system engineer, and were addressed by the licensee for correction.

The inspectors verified that the flame arresters on the 7-day tanks were installed as described in the FSAR. Although the arresters appeared to be functional and in good condition, a thorough inspection was not possible due to the physical configuration. The inspectors questioned whether the arresters were periodically inspected by the licensee. The licensee found that a periodic inspection did not exist. The licensee initiated PER 99-003670-000 because the National Fire Protection Association recommended periodic inspections to be performed.

The inspectors utilized licensee assistance to inspect the Unit 3 EDG building Cardox tank room door to ensure that the door seal was intact and functional. That particular door was selected because of a recent incident of water intrusion into the Unit 3 EDG building. During the inspection, the inspectors noted that the seal did not appear to completely contact the door frame. The licensee addressed the operability of the door and performed Technical Operability Evaluation (TOE) 0-99-082-14138, Revision 0.

During a review of the TOE, the inspectors questioned the reliability of the two quality-related sump pumps which were relied upon to remove the calculated leakage past the degraded door seals. The licensee did not identify any preventive maintenance performed on the pumps and explained that the pumps were not routinely used to pump down the sumps because of environmental concerns. The licensee wrote work orders to bump-start the Unit 1 and 2, and the Unit 3 EDG building sump pumps. On March 26, 1999, the inspectors observed testing of the four pumps. The successful test alleviated the inspectors' concerns about the questionable basis of the TOE.

Subsequent to the test of the sump pumps, the inspectors identified that the Unit 1 and 2 EDG building Cardox tank room outside door bottom latch was not engaged. The operators corrected the door latch, checked the other EDG room doors, and found three more doors similarly unlatched. These latches were also corrected and PER 99-003771-000 was initiated. Engineering completed an operability evaluation which determined that the remaining latches had sufficient strength (calculated stress greater than design, but less than yield stress) to hold the doors shut under design basis conditions.

c. Conclusions

As a result of the detailed walkdown of the EDG systems, the inspectors found the material condition of the equipment to be satisfactory; however, deficiencies were identified with the seals and latches on the EDG building flood/tornado/security doors, for which the licensee initiated corrective action.

**O8 Miscellaneous Operations Issues (92901)**

- O8.1 (Closed) Licensee Event Report (LER) 50-296/1998-005-00: Mode Changes Not Allowed by TS 3.0.4 Made During Reactor Startup. This LER documented operations prohibited by plant TSs. Specifically, licensed operators failed to meet the requirements of TS 3.0.4, in that the operators incorrectly continued plant startup activities involving mode changes with required equipment in an inoperable status. The first example was identified by the NRC and a subsequent example was identified by the licensee while investigating the circumstances of the first. This issue was addressed as a violation in NRC Inspection Report 50-259,260,296/98-07. On January 25, 1999, the inspector attended training that was a commitment of the LER and found it to be acceptable.

**II. Maintenance**

**M1 Conduct of Maintenance**

### M1.1 General Maintenance Comments (62707)

The inspectors observed portions of the following work activities:

- SGTS C filter bank charcoal temperature switch (0-TS-65-63A) calibration.
- Unit 2 RCIC hydraulic snubber (2-SNUB-071-5009) replacement.
- WO 99-003415-000, main bank battery No. 1 cell replacement.

Work activities observed during the inspection period were conducted in a professional manner. Workers demonstrated competence in their assigned tasks and proper work instructions and documentation were observed. In general, radiological controls observed during the inspection period were effective and consistent with licensee expectations.

The inspector observed portions of the replacement of main battery cell separators, cleaning, and torquing to prepare the new cell for operation. Electrical Maintenance personnel were particularly attentive to their task and professional with their implementation. Questions on the intent of certain procedure steps were appropriately resolved.

### **M8 Miscellaneous Maintenance Issues (92902)**

M8.1 (Closed) Apparent Violation (EEI) 50-260,296/98-09-03: Surveillance Procedure Results in Both Trains of Control Room Emergency Ventilation (CREV) Being Inoperable. The surveillance procedure for performing CREV system flow rate and filter testing was inadequate, in that complying with the procedure as written resulted in deselecting the operable train for automatic actuation, and selecting the inoperable redundant train in order to conduct post-maintenance testing on the redundant train. With both trains of CREV inoperable, TS 3.7.3.D requires the licensee to immediately enter TS 3.0.3, which requires a plant shutdown. Both trains of CREV were inoperable for approximately 11 hours prior to the operators' recognition that selecting the inoperable train for automatic actuation rendered both trains inoperable. This was an apparent violation of TS 5.4.1 and TS 3.7.3, because the surveillance procedure inadequacy placed the plant in a condition prohibited by TS 3.7.3, which requires both trains of CREV to be operable when in Mode 1 (power operation). However, the safety consequence was minimal, in that the licensee later determined that the redundant train under test, and selected for automatic actuation, would have performed its design function. After issuance of NRC Inspection Report 50-259,260,296/98-09, a change to the NRC's Enforcement Policy became effective which revised the treatment of individual Severity Level IV violations. This Severity Level IV violation of TS 5.4.1 and TS 3.7.3 meets the criteria outlined in Enforcement Guidance Memorandum (EGM) 99-002(T) to be dispositioned as a Non-Cited Violation, consistent with the NRC's Enforcement Policy. Therefore, EEI 50-260,296/98-09-03 will be closed and NCV 50-260,296/99-01-01, Surveillance Procedure Results in Both Trains of CREV Being Inoperable, will be opened and closed. As described in NRC Inspection Report 50-259,260,296/98-09, the licensee initiated PER 99-000804-000, which entered this issue into the licensee's corrective action

program. In addition, the information regarding the reason for the violation and actions taken and planned to correct the violation and prevent recurrence were adequately addressed in LER 50-259/1999-001-000, dated February 12, 1999 (see Section M8.2)

- M8.2 (Closed) Licensee Event Report (LER) 50-259/1999-001-000: Inoperable Control Room Emergency Ventilation System During Post-Maintenance Testing. This issue was discussed in NRC Inspection Report 50-259,260,296/98-09 and Section M8.1 of this report. No new issues were identified in the LER.
- M8.3 (Closed) Apparent Violation (EEI) 50-296/98-09-02: Failure to Follow Surveillance Procedure. This EEI was opened pending review of the licensee's corrective actions. After issuance of NRC Inspection Report 50-259,260,296/98-09, a change to the Enforcement Policy became effective which revises the treatment of individual Severity Level IV violations. This Severity Level IV violation meets the criteria outlined in EGM 99-002(T) to be dispositioned as a Non-Cited Violation consistent with the NRC's Enforcement Policy. Therefore, EEI 50-296/98-09-02 will be closed and NCV 50-296/99-01-02, Failure to Follow Battery Surveillance Procedure, will be opened and closed. As described in NRC Inspection Report 50-259,260,296/98-09, the licensee initiated Problem Evaluation Report (PER) 99-000186-000 which entered this issue into the licensee's corrective action program.

### III. Engineering

#### E1 Engineering Support of Facilities and Equipment

##### E1.1 Main Turbine Stop Valve Load Limit Switches

###### a. Inspection Scope (37551)

The inspector reviewed the licensee's actions when a safety assessment for disabling the main turbine stop valve load limit (SVLL) switches was found to be inadequate because the switches were described in the Final Safety Analysis Report (FSAR).

###### b. Observations and Findings

On November 8, 1998, operators were performing periodic main turbine stop valve testing on Unit 2. While cycling stop valve Number 4, operators observed the main turbine bypass valves unexpectedly opening. The operators promptly secured from testing. Troubleshooting efforts by Engineering traced the inadvertent operation of the bypass valves to unreliable operation of the main turbine SVLL switches.

While troubleshooting, the licensee found two of the four SVLL switches in a failed closed state with the main turbine stop valves fully open. One SVLL switch is located on each of the four main turbine stop valves. Similar problems were found on Unit 3. Based on the demonstrated unreliability of the SVLL switches, the licensee postulated that closure of the Number 4 stop valve during testing on Unit 2 resulted in satisfying electro-hydraulic control (EHC) logic to cause turbine bypass valves to operate.



Because access to the SVLL switches was not possible at power, the licensee implemented a temporary alteration to disable the SVLL inputs to EHC system logic.

The licensee performed a safety assessment/screening review to implement the temporary alteration. The licensee concluded that the change did not affect any information contained in the FSAR and that a 10 CFR 50.59 safety evaluation was not required. The licensee implemented the temporary alteration to disable the Unit 2 SVLL switches on November 13, 1998, and Unit 3 on January 6, 1999. The licensee initiated steps to make the changes to the facility a permanent plant modification.

During review of the proposed permanent plant modification, the licensee discovered that the SVLL switches were described in Section 14.5.1.3 of the FSAR. The licensee determined that this was overlooked during the initial safety assessment because of a human performance error. The main turbine trip abnormal operating transient subsection discussed that position switches on the stop valves provide the means of sensing the trip and initiate bypass valve opening. Although the plants were analyzed for turbine trips without bypass, the licensee found that the outcome of the feedwater controller failure abnormal operating transient, which results in a turbine trip, depended on whether the bypass valves were operable or out of service. Operability of the bypass valves requires that they respond within the time limits of the analysis. This is the basis for TS 3.7.5, which applies to the operability of the main turbine bypass system. If the bypass valves are not operable, penalties against thermal limits are to be taken as specified in the core operating limits report (COLR). The COLR requires penalties against the operating limit minimum critical power ratio (OLMCPR) if the turbine bypass system is out of service.

The licensee promptly enabled the Unit 3 SVLL switches on February 2, 1999, when the operability of the turbine bypass system was questioned. Because of SVLL reliability concerns on Unit 2, the licensee left the switches disabled and applied the specified penalty to the OLMCPR in accordance with TS 3.7.5 and the COLR. In addition, the licensee performed a safety evaluation for maintaining the SVLL switches disabled.

Further licensee review concluded that the bypass system was operable and that an unreviewed safety question did not exist while the SVLL switches were disabled. The licensee found that bypass system response to pressure signal/control valve demand signal during a turbine trip was faster than the operation of the SVLL switches. This was because the control valves have an immediate affect on steam pressure due to being only partially open during full power operation. This was demonstrated by review of transient data from previous plant turbine trips.

The inspector reviewed the licensee's basis for concluding that the bypass system was operable during the time period in question. In addition, the inspector reviewed the FSAR, TS, and the abnormal operating transient analysis design inputs. The inspector concluded that the licensee's basis for concluding that the bypass system was operable when the SVLL switches were disabled was justified.

The changes to Unit 2 on November 13, 1998, and to Unit 3 on January 6, 1999, to disable the main turbine SVLL switches which were described in the FSAR without performing a written safety evaluation is a violation of 10 CFR 50.59. This Severity

Level IV violation is being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. This violation was placed in the licensee's corrective action program as PER 99-001611-000. This issue is identified as NCV 50-260,296/99-01-03 (EA 99-006), Failure to Perform a Safety Evaluation to Disable Main Turbine SVLL Switches.

c. Conclusions

The licensee identified that a plant alteration was implemented on FSAR-described EHC circuits associated with the Units 2 and 3 stop valves without first performing a written safety evaluation as required by 10 CFR 50.59. The licensee took conservative immediate corrective actions to ensure that thermal limits would not be exceeded in the event of the anticipated transient, as described in the Final Safety Analysis Report.

**E8 Miscellaneous Engineering Issues (92903, 71707)**

- E8.1 (Closed) Apparent Violation (EEI) 50-260,296/98-09-04: Failure to Establish Procedures to Properly Test CREV System Logic. After issuance of NRC Inspection Report 50-259,260,296/98-09, a change to the NRC's Enforcement Policy became effective which revised the treatment of individual Severity Level IV violations. This Severity Level IV violation meets the criteria outlined in EGM 99-002(T) to be dispositioned as a Non-Cited Violation consistent with the NRC's Enforcement Policy. Therefore, EEI 50-260,296/98-09-04 will be closed and NCV 50-260,296/99-01-04, Failure to Establish Procedures to Properly Test CREV System Logic, will be opened and closed. As described in NRC Inspection Report 50-259,260,296/98-09, the licensee initiated Problem Evaluation Report (PER) 99-001227-000 which records this issue in the licensee's corrective action program.

**IV. Plant Support**

**P1 Conduct of Emergency Preparedness (EP) Activities**

P1.1 Review of EP Program

a. Inspection Scope (82701)

The inspector reviewed EP program activities to verify that the licensee's emergency response capability was maintained in a state of operational readiness, and to verify that changes to the program since the last such inspection (December 1997) met commitments, NRC requirements, and affected the licensee's overall state of preparedness.

b. Observations and Findings

The inspector toured the Technical Support Center (TSC) and Operational Support Center (OSC) and assessed their standby and operational readiness by:

- Testing the operability of telephones, fax machines, Emergency Response Facility Information System monitors, and computers,
- Auditing inventories of emergency cabinets and lockers,
- Auditing controlled volumes of the Emergency Plan Implementing Procedures (EPIPs) for latest revision.

The inspector determined that the facilities (TSC and OSC), equipment, inventories, and procedures were well-maintained and operation-ready.

The inspector reviewed completed EPIP-17, Emergency Equipment and Supplies, Appendices ("surveillance" forms for maintaining TSC and OSC ) from January 1998 through February 1999. All completed appendices indicated that inventories were satisfactorily maintained and that surveillances were completed at the required frequencies.

The inspector reviewed licensee documentation from January 1998 through February 1999 of biweekly silent tests, monthly soundings, and an annual sounding for the 100 sirens used for the public alert and notification system within the emergency preparedness zone. Particulars of a siren's failure were documented when the siren was tested and repaired. Test results were trended on a matrix which gave a quick visual trend of a sirens' overall performance. The documents clearly documented that the siren system performance was satisfactory and that the system was tested at the required frequencies. The 1998 Browns Ferry Nuclear Plant Siren Availability Report summary indicated a siren availability of 99.2 percent compared to the Federal Emergency Management Agency's acceptance criterion of 90 percent.

The licensee maintained tone-alert radios for notifying area schools and day care centers in the event of an emergency. The tone-alert transmitter and frequency was the property of the licensee and not associated with the Emergency Broadcast System. Documentation reviewed by the inspector indicated that the licensee satisfactorily distributed and maintained the tone-alert radios.

The inspector reviewed Revisions 37 through 44 to the licensee's Emergency Plan. Changes to Revisions 37 through 42 were mainly clerical or organizational changes and did not decrease the effectiveness of the Plan. Revisions 43 and 44 were emergency action level (EAL) technical changes which resulted from emergency operating instructions (EOI) and EOI technical bases document changes. The inspector discussed the technical bases for the EAL changes in Revision 43 and 44 with the licensee's technical staff and concluded that the changes did not decrease the effectiveness of the Emergency Plan. All of the revisions reviewed were approved and distributed in accordance with the licensee's procedures, and the NRC was notified within 30 days of all changes, as required by 10 CFR 50, Appendix E. The revisions involving EAL changes were reviewed by the State before implementation.

The licensee continued to maintain classroom training of the Emergency Response Organization (ERO) in accordance with Section 15 of the Emergency Plan, EPIP 19,

Radiological Emergency Preparedness Training and Drills, and TRN-30, Radiological Emergency Preparedness Training, which described the site's emergency preparedness training.

The inspector reviewed four lesson plans and associated exams. The lesson plans were well-organized and the subject matter content was commensurate with the position being taught. The exams were well-written and adequately challenging for the position.

The inspector used the licensee's computer system and randomly sampled the training records of approximately twenty ERO members and verified their training was current. The inspector verified training dates against class attendance rosters. No discrepancies were identified.

The inspector reviewed the licensee's response to NRC Information Notice 98-20, Problems With Emergency Preparedness Respiratory Protection Programs. The Tennessee Valley Authority (TVA) had established a goal of having a minimum of sixty percent of its ERO personnel respirator qualified. The inspector reviewed individual ERO work group reports (i.e., electrical, mechanical, and instrumentation and control) that indicated that the site had exceeded the licensee's ERO respirator qualification goal. The inspector performed a random sample and verified the respirator qualification for the different work groups. No concerns were identified by the inspector.

The inspector verified the licensee had conducted the required drills in accordance with Section 14, Drills and Exercises, of the Emergency Plan by reviewing 1998 and 1999 documentation of quarterly TSC/OSC staffing drills; post-accident sampling system (PASS) drills; an annual exercise which included dose assessment and radiological control drills; and medical drills with Huntsville Hospital and Athens-Limestone Hospital. Each of the three ERO teams (Red, Blue, and Green) received an equal number of drills. The inspector reviewed the findings from the licensee's drill critiques and verified that drill comments were being tracked and satisfactorily resolved by the licensee. The inspector randomly selected and reviewed three closed items and concluded that drill comments and emergency preparedness issues were being satisfactorily resolved and closed in a timely manner.

The inspector verified that drill participants attended post-drill critiques by reviewing the drill participants list from the last drill, and the post-drill critique attendance sign-in sheet. The documentation indicated that all drill participants had attended the drill critique.

The organization and management of the Emergency Preparedness Program were reviewed and discussed with licensee representatives. Since the last inspection, personnel changes had occurred in the site vice president and plant manager positions. The Emergency Preparedness Program was transferred from the training manager to the business and work performance manager. The emergency preparedness manager stated that none of the organizational changes affected the operation of the ERO and that emergency preparedness still receives strong management support.

The inspector reviewed Audit SSA9805, dated August 20, 1998. The audit was a combined audit for the Browns Ferry, Sequoyah, and Watts Bar Nuclear Plants, and also the Corporate Offices. The audit adequately addressed the elements required in

10 CFR 50.54(t). The audit identified one minor issue at Browns Ferry, in that the responsibilities for the technical assessment manager were not adequately described in EPIP-6, Activation and Operation of the Technical Support Center.

c. Conclusions

The licensee's Emergency Preparedness Program was being maintained in a state of full operational readiness. The licensee continued to meet Emergency Plan commitments and NRC requirements.

**P5 Staff Training and Qualification in Emergency Planning**

P5.1 Emergency Preparedness Integrated Training Drill (71750)

The licensee conducted an emergency preparedness drill on March 3-4, 1999. The drill included full participation with the State of Alabama. The resident inspectors participated as "players" during the first day of the drill and attended the post-drill critique. In NRC Inspection Report 50-259,260,296/98-08, the inspectors noted that the post-drill critique following the licensee's first severe accident management guidelines drill was not well-attended and there was limited interaction and discussion on areas for improvement. The post-drill critique conducted on March 5, 1999, was well-attended. The inspectors noted significant improvements in the subject matter and conduct of the critique. The discussion was focused on ways to improve the operation and interaction of the various organizations participating in the drill. For example, recommendations for TSC operator aids and communications improvement were actively discussed.

**R2 Status of Radiological Protection and Chemistry (RP&C) Facilities and Equipment**

R2.1 Process and Effluent Radiation Monitors

a. Inspection Scope (84750)

The inspector reviewed the operational status of the continuous air monitors (CAMs) described in Section 7.13.5.3.1 of the FSAR.

b. Observations and Findings

The licensee's performance in the area of radiation monitor availability was reviewed during this inspection. The inspector noted that the overall unavailability for all 20 CAMs was 18 percent during the last quarter of 1997 and ranged from 46 to 78 percent for the five CAMs with the highest percentage of unavailability. Performance improved significantly during 1998, in that, the overall average unavailability for all 20 CAMs during the year 1998 was 7.5 percent and ranged from 16 to 43 percent for the five CAMs with the highest percentage of unavailability. The radiation monitoring system Status Report for the eight CAMs tracked as Unit 3 monitors indicated that they had met their established performance goal during the period July through September 1998. However, the Status Report for the twelve CAMs tracked as Unit 2 monitors, for that same period, indicated that those CAMs had not met their established performance goal due to lack of proper attention on corrective maintenance. The licensee indicated that this area would be given further attention.

During a tour of the SGTS building, the inspector noted that CAM 0-RM-90-127 was out-of-service. The inspector verified that compensatory air sampling was being performed in accordance with Section 3.2.9 of RCI-11.1, Radiation Protection Instrument Program Implementing Procedure.

c. Conclusions

Availability of continuous air radiation monitoring systems has improved but the Unit 2 monitors were not meeting established licensee performance goals due to a lack of proper attention on corrective maintenance.

**R5 Staff Training and Qualification in RP&C**

R5.1 Training and Qualification of Personnel

a. Inspection Scope (83750, 84750)

The inspector reviewed implementation of the licensee's training and qualification program for RP&C personnel. The review included an evaluation of the training provided to selected individuals for consistency with the training program descriptions in the licensee's RP&C Program manuals and training procedures.

b. Observations and Findings

The licensee's Radiological Controls and Chemistry Controls Program manuals (SPPs 5.1 and 5.3) and training procedures (TRN 20 and 21) described the training and qualification programs for health physics technicians and chemistry technicians. Those programs included initial training, consisting of basic health physics/chemistry classroom training and in-plant task qualification, and continuing training, consisting of refresher

training on fundamentals, industry experience, and changes to plant equipment and procedures. The inspector observed two randomly selected health physics technicians and one chemistry technician performing routine assigned tasks and then verified that those individuals had been trained and qualified for those tasks. The tasks observed included contamination surveys, high radiation area work coverage, and filter efficiency testing. The inspector also verified, through review of task qualification records, that a chemistry technician who had recently analyzed a gaseous effluent sample had been trained and qualified to perform that task.

c. Conclusions

Training was provided to RP&C personnel in accordance with the descriptions delineated in the licensee's radiation protection, chemistry and nuclear training manuals.

**R7 Quality Assurance in RP&C Activities**

**R7.1 Laboratory Quality Assurance for Gaseous Effluent Measurements**

a. Inspection Scope (84750)

The inspector reviewed implementation of the licensee's quality assurance program for gaseous effluent measurement instrumentation. The review included an evaluation of licensee practices for consistency with procedures for assuring the quality of effluent measurements.

b. Observations and Findings

The inspector reviewed Procedure CI-1101, Quality Assurance/Quality Control, and determined that it included schedules and acceptance criteria for calibration and performance tests of analytical instrumentation. Section 3.16 of CI-1101 prescribed the frequency for calibration and seven performance tests for gamma spectroscopy systems used to measure concentrations of gamma-emitting radionuclides in gaseous effluents. The inspector reviewed the records for the most recent calibration and performance tests of system number two of the four systems in use. Those records indicated that the calibration and performance tests were current and that the test acceptance criteria were met.

c. Conclusions

The licensee had established and implemented an adequate program for assuring the quality of gaseous effluent analyses.

## **S1 Conduct of Security and Safeguards Activities**

### **S1.1 Access Authorization Program**

#### **a. Inspection Scope (81700)**

The licensee's Access Authorization (AA) program and its implementation were reviewed against regulatory requirements and Security Plan commitments.

#### **b. Observations and Findings**

The licensee had developed its AA Program requirements from 10 CFR 73.56 and 73.57. The licensee had committed to Regulatory Guide (RG) 5.66, Access Authorization Program for Nuclear Power Plants. Regulator Guide 5.66 endorses Nuclear Management and Resources Council (NUMARC) 89-01, Industry Guidelines for Power Plant Access Authorization Programs, as providing guidance that meets the intent and substance of 10 CFR 73.56.

The inspector reviewed active unescorted access records and a sample of records of personnel who had been denied access or had had their access removed. The licensee's measures to limit access to personal information and to safeguard the access authorization process were also reviewed and considered to be in accordance with regulatory requirements.

While reviewing the licensee's denial of access authorization, the inspector determined that the licensee had denied two contractors access because they had falsified information on their Personal History Statement (PHS).

In the first case, an individual, when completing the Stone & Webster Construction Company (SWCC) PHS, dated September 10, 1998, answered "No" to the suitable inquiry question, "Have you, in the past, ever tested positive for drugs or alcohol or been removed from or made ineligible for activities due to fitness for duty concerns"? The individual further listed the reason for leaving the employer was that the job was complete. During the full background investigation, the previous employer reported that the individual had been terminated for failing a drug and alcohol test. The individual acknowledged that he had failed a drug and alcohol test at his previous employment. The individual, a low-level worker, was terminated by SWCC for falsifying the PHS, and was entered into the Personnel Access Data System (PADS), which will alert other licensees of the event. Based on the licensee's actions and the level of the worker, the inspector concluded that no further actions were warranted.

In the second case, an individual, when completing the SWCC PHS, dated September 4, 1998, answered "No" to the suitable inquiry question, "Have you, in the past, ever tested positive for drugs or alcohol"? During the full background investigation the licensee learned that the individual had not listed a previous employment from March 25-27, 1998, which had resulted in termination for testing positive for drugs. The individual, a low-level contractor, was terminated by SWCC for falsifying his PHS, and was entered into PADS, which will alert other licensees of the event. Based on the



licensee's actions and the level of the worker, the inspector concluded that no further actions were warranted.

c. Conclusions

The licensee was appropriately following the guidance provided by Regulatory Guide 5.66 and Nuclear Management and Resources Council (NUMARC) 89-01 to implement the access authorization program.

**S3 Security and Safeguards Procedures and Documentation**

S3.1 Security Program Plans and Procedures

a. Inspection Scope (81700)

The inspector reviewed the licensee's Physical Security/Contingency Plan, Revision 5, against the provisions of 10 CFR 50.54(p).

b. Observations and Findings

Review of Revision 5 to the Physical Security/Contingency Plan, submitted for approval, verified the licensee's compliance to the requirements of 10 CFR 50.54(p). The changes were made to define the requirements for rotating keys and locks; to reapprove the access list on a quarterly basis; to clarify security officer search requirements prior to granting access into the protected area; and to define the vehicle escort requirements.

c. Conclusions

The approved Physical Security/Contingency Plan changes did not decrease the effectiveness of the Physical Security/Contingency Plan.

S3.2 Security Event Logs

a. Inspection Scope (81700)

The inspector reviewed a sampling of event logs generated since the last inspection to verify that the licensee appropriately analyzed, tracked, resolved, and documented safeguards events that the licensee determined did not require to be reported to the NRC within one hour.

b. Observations and Findings

The inspector reviewed the security event logs for the third and fourth quarters of 1998 and for the first quarter of 1999. The licensee logged security events, as required, and no adverse equipment or human error trends were noted.

c. Conclusions

The licensee appropriately analyzed, tracked, resolved, and documented safeguards events in the security event logs in accordance with regulatory requirements.

## **S5 Security Safeguards Staff Training and Qualification**

### **S5.1 Security Training and Qualification**

#### **a. Inspection Scope (81700)**

The inspector reviewed security training and qualifications to verify that, before being permitted to act as a security officer or armed response person, individuals were trained, equipped, and qualified to perform each assigned security-related job task or duty in accordance with the NRC-approved Training and Qualifications Plan (TQP). The inspector also verified that security personnel received refresher training and were requalified as described in the TQP.

#### **b. Observations and Findings**

The inspector reviewed ten training files of currently employed security officers to ascertain whether qualification scores and assigned duties, physical fitness test results, and weapon requalification scores met the requirements of the TQP. All reviewed records reflected accurate record keeping and compliance with the provisions of the TQP. In addition, the inspector interviewed four officers to determine depth of knowledge of requirements. The interviewed officers observed in the course of their duties were knowledgeable and cognizant of their responsibilities.

#### **c. Conclusions**

Security officers were appropriately trained and qualified to perform their duties in accordance with the licensee's TQP.

## **S7 Quality Assurance in Security and Safeguards Activities**

### **S7.1 Audits and Self-Assessment Program**

#### **a. Inspection Scope (81700)**

The inspector evaluated the licensee's audit program against the commitments of Chapter 11 of the Physical Security/Contingency Plan. During the inspection, a representative sample of the problems identified by audits was evaluated by the inspector to determine whether review and analysis were appropriately assigned, analyzed, and prioritized for corrective action and whether the corrective action taken was technically adequate and performed in a timely manner.

b. Observations and Findings

The licensee's program commitments included auditing the security program at least every 12 months. The audits included a review of routine and contingency security procedures and practices. This review evaluated the effectiveness of the physical protection system testing and maintenance program, protected area lighting, training and qualification, central alarm station operation, storage of safeguards information, access authorization, access control, security communications, and compensatory measures. These audits were conducted during the periods of July 21 through August 20, 1998; August 21 through September 20, 1998; October 21 through November 20, 1998; and November 21 through December 20, 1998. In addition, the security section had conducted 20 self-assessments in November and December 1998. The audit reports concluded that the security program was effective and recommended several actions to improve the effectiveness of the security program. The licensee had acted appropriately in response to recommendations made in the audit reports. The audits and self-assessments were thorough, complete, and effective in determining that the security force was capable of meeting the regulatory requirements.

c. Conclusions

Licensee-conducted audits were thorough, complete, and effective in terms of uncovering weaknesses in the security system, procedures, and practices. The audit findings and recommendations were reviewed, appropriately assigned, analyzed, and prioritized for corrective action. The corrective actions taken were technically adequate and performed in a timely manner. The audit/self-assessment program continued to be a strength.

## V. Management Meetings

### **X1 Exit Meeting Summary**

The resident inspectors presented inspection findings and results to licensee management on March 25, 1999. Additional formal meetings to discuss inspection findings were conducted on February 12, February 26, and on March 12, 1999. The licensee acknowledged the findings presented. The licensee did not identify any of the materials reviewed during this inspection as proprietary.

## **PARTIAL LIST OF PERSONS CONTACTED**

### Licensee

T. Abney, Licensing Manager  
 J. Brazell, Site Security Manager  
 T. Burzese, Supervisor, Radiation Protection  
 R. Coleman, Radiological Control Manager  
 J. Corey, Radiation Protection and Chemistry Manager  
 R. Greenman, Site Support Manager  
 J. Johnson, Site Quality Assurance Manager

R. Jones, Plant Manager  
 J. Ledgerwood, Maintenance Superintendent  
 G. Little, Operations Manager  
 R. Moll, System Engineering Manager  
 W. Nurnberger, Chemistry Superintendent  
 D. Olive, Operations Superintendent  
 R. Ryan, Site Engineering Manager  
 D. Sanchez, Training Manager  
 J. Schlessel, Maintenance Manager  
 J. Shaw, Design Engineering Manager  
 B. Shriver, Assistant Plant Manager  
 K. Singer, Site Vice President

### **INSPECTION PROCEDURES USED**

IP 37551	Engineering
IP 62707	Maintenance Observations
IP 71707	Plant Operations
IP 71750	Plant Support Activities
IP 81700	Security and Safeguards Activities
IP 82701	Operational Status of the Emergency Preparedness Program
IP 83750	Occupational Radiation Exposure
IP 84750	Radioactive Waste Treatment, and Effluent and Environmental Monitoring
IP 92901	Follow-up Plant Operations
IP 92902	Follow-up Maintenance
IP 92903	Follow-up Engineering

### **ITEMS OPENED AND CLOSED**

#### **Opened**

50-260,296/99-01-01	NCV	Surveillance Procedure Results in Both Trains of CREV being Inoperable (Section M8.1).
50-296/99-01-02	NCV	Failure to Follow Surveillance Procedure (Section M8.3).
50-260,296/99-01-03	NCV	Failure to Perform a Safety Evaluation to Disable Main Turbine SVLL Switches (Section E1.1).
50-260,296/99-01-04	NCV	Failure to Establish Procedures to Properly Test CREV System Logic (Section E8.1).

**Closed**

50-296/1998-005-00	LER	Mode Changes Not Allowed by TS 3.0.4 Made During Reactor Startup (Section O8.1).
50-260,296/99-01-01	NCV	Surveillance Procedure Results in Both Trains of CREV being Inoperable (Section M8.1).
50-260,296/98-09-03	EEI	Surveillance Procedure Results in Both Trains of CREV being Inoperable (Section M8.1).
50-259/1999-001-000 LER		Inoperable Control Room Emergency Ventilation System During Post-Maintenance Testing (Section M8.2).
50-296/99-01-02	NCV	Failure to Follow Surveillance Procedure (Section M8.3).
50-296/98-09-02	EEI	Failure to Follow Surveillance Procedure (Section M8.3).
50-260,296/99-01-03	NCV	Failure to Perform a Safety Evaluation to Disable Main Turbine SVLL Switches (Section E1.1).
50-260,296/99-01-04 NCV		Failure to Establish Procedures to Properly Test CREV System Logic (Section E8.1).
50-260,296/98-09-04	EEI	Failure to Establish Procedures to Properly Test CREV System Logic (Section E8.1).