ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-416
License No.:	NPF-29
Report No.:	50-416/97-03
Licensee:	Entergy Operations, Inc.
Facility:	Grand Gulf Nuclear Station
Location:	Waterloo Road Port Gibson, Mississippi
Dates:	February 9 through March 22, 1997
Inspectors:	K. Weaver, Resident Inspector W. Smith, Senior Resident Inspector, River Bend Station
Approved By:	P. Harrell, Chief, Project Branch D Division of Reactor Projects

ATTACHMENT: Supplemental Information

EXECUTIVE SUMMARY

Grand Gulf Nuclear Station
NRC Inspection Report 50-416/97-03

The inspectors evaluated aspects of licensee operations, maintenance, engineering, and plant support activities. This report covers a 6-week period of resident inspection.

Operations

- Conduct of plant operations was professional and reflected a focus on safety (Section 01.1).

- The licensee's administrative controls over safety-related keys were effective (Section O1.2).

- Valves in the flow path of the scram discharge volume portion of the control rod drive system were properly positioned and locked as required by procedure (Section 02.1)

Maintenance

- All maintenance activities observed were conducted in accordance with the instructions and procedures provided in the work packages (Section M1.1).

- Due to an inadequate review, the impact statement for a work order identified that the Reactor Recirculation Loop "A" flow transmitter would be out of service instead of the Recirculation Loop "B" flow transmitter (Section M1.1).

- Operators performed steps of the Division I standby diesel generator (SDG) operability test out of sequence because of personnel error. Management took appropriate corrective actions to address the deficient performance (Section M1.2).

- Housekeeping continued to be generally good; however, examples of poor material condition of equipment were identified (Section M2).

Engineering

- Engineering demonstrated poor performance throughout the 6 years it took to resolve the issue of properly testing containment isolation boundaries. A violation was identified for failure to timely generate a condition report (Section E1.1).

Plant Support

- A poor radiation work practice was noted when a worker mistakenly put the screwdriver that he was using to disassemble a potentially contaminated flow transmitter in his mouth (Section M1.1).

- A violation for failure to document the results of a contamination survey and to update an area radiological survey map was identified (Section R1.1).

Report Details

Summary of Plant Status

The plant remained at or near 100 percent power throughout this inspection period.

I. Operations

O1 Conduct of Operations

O1.1 General Comments

The inspectors conducted frequent reviews of ongoing plant operations including control room observations, attendance at the licensee's plan-of-the-day meetings, and plant tours. In general, the conduct of plant operations was professional and reflected a focus on safety. The control room was operated in a formal manner with good communications. Operator responses to alarms were observed to be appropriate to the circumstances and the alarm response instructions were consulted in each case observed.

O1.2 Review of Safety Related Key Controls

a. Inspection Scope (71707)

The inspectors reviewed the licensee's administrative controls over keys used by plant operating and maintenance personnel for the purpose of locking valves, switches, and cabinets associated with safety-related systems.

b. Observations and Findings

On March 11, 1997, the inspectors reviewed Operations Section Procedure 02-S-01-9, "Key Control," Revision 18. The procedure specified in detail what keys were to be controlled by the Shift Superintendent in a locked cabinet in the control room. The procedure also provided instructions on the use of operator locks and implemented monthly key control reviews to ensure that the administrative controls were being met and that all required keys were accounted for.

The inspectors reviewed the Shift Superintendent's key locker and picked keys at random and found them to be properly accounted for. The inspectors reviewed the documentation of the monthly key control reviews for the past several years and found the reviews had been completed every month, as specified by Procedure 02-S-01-9. As an area for improvement, the inspectors noted that the Monthly Key Control Review attachment provided by the procedure did not contain a signature blank for the reviewer to sign. There was, however, a blank for the Shift Superintendent to sign in acknowledgement that he was informed of any missing keys. The records indicated that the Shift Superintendent always signed

the form acknowledging whether or not keys were missing. The licensee's reviewer stated that he always signed a separate cover indicating, for the record, who the reviewer was. This was considered acceptable.

c. Conclusions

The licensee's administrative controls over safety-related keys were effective and adequately documented. The licensee demonstrated that all keys were consistently accounted for on a monthly basis.

O2 Operational Status of Facilities and Equipment

O2.1 Engineered Safety Feature System Walkdown (71707)

The inspectors used Inspection Procedure 71707 to walk down the scram discharge volume portion of the control rod drive system (C11). Valves in the flow path were properly positioned and locked as required by Procedure 04-1-01-C11-1, "Control Rod Drive Hydraulic System," Revision 103. Housekeeping in the area and the material condition of the components was good. No problems were identified with the exception of a missing component label from the C11-F134D scram discharge volume Channel D test connection valve. The inspectors notified the licensee and a label was promptly installed on the valve.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Maintenance Comments

a. Inspection Scope (62707)

The inspectors observed portions of maintenance activities, as specified by the following WOs:

- WO 00136035: Recirculation Loop A Flow Transmitter; Replace Electronics
- WO 00180928: Accident Range Monitor AXM-1 Calibration
- WO 00183260: Local Power Range Monitor Calibration

b. Observations and Findings

In general, the inspectors found the performance of this work to be satisfactory. All work observed was conducted in accordance with the instructions and procedures provided in the work packages. Maintenance craft personnel were found to be knowledgeable of the work activities and equipment. One instance of poor radiation

worker practices was noted when a worker mistakenly put in his mouth the screwdriver that he was using to disassemble the Recirculation Loop A Flow Transmitter 1B33N014B, which was located in a radiologically controlled area.

During a subsequent review of the completed work package for WO 00183260, the inspectors noted that the impact statement identified that the work activity would require Reactor Recirculation Loop B Flow Transmitter 1B33N014B to be out of service; however, the work activities were for the Reactor Recirculation Loop A flow transmitter. The inspectors interviewed maintenance planning personnel to determine if a review was conducted for the impact statement prior to issuance. The licensee responded that a review was performed, but the error was not identified. No problems due to the inaccurate impact statement were noted by the inspectors during the performance of this work and the appropriate Technical Specification (TS) action statements were entered. The licensee initiated CR 1997-0291 to address the incorrect impact statement. In addition, the licensee reviewed the repetitive tasks for the Recirculation Loop A Flow Transmitters 1B33NO14A, B, C, and D and for the Recirculation Loop B Flow Transmitter 1B33NO24A, B, C, and D to ensure they referenced the correct recirculation loop.

c. Conclusions

The performance of observed maintenance activities was satisfactory. All work observed was conducted in accordance with the instructions and procedures provided in the work packages. Maintenance craft were found to be knowledgeable of the work activities and equipment. One instance of poor radiation work practices was noted when a worker mistakenly put in his mouth the screwdriver that he was using to disassemble the Recirculation Loop A Flow Transmitter 1B33N014B, which is located in a radiologically controlled area.

M1.2 Division I SDG Operability Surveillance Test

a. Inspection Scope (61726)

The inspectors observed portions of, and reviewed the results of, the monthly operability test performed in accordance with Surveillance Procedure 06-OP-1P75-M-0001, "Standby Diesel Generator (SDG) 11 Functional Test," Revision 102.

b. Observations and Findings

On March 11, after the operators obtained permission to start the test in accordance with Step 5.3.1 of Procedure 06-OP-1P75-M-0001, the SDG was placed in the "maintenance" mode per Step 5.3.2 and liquid levels were checked per Step 5.3.3. Step 5.3.3.a required the operators to verify engine lubricating oil temperatures between 130 and 170°F. This criterion was not met because the temperature was 174.5°F. The operators then proceeded to air roll the SDG per

temperature was 174.5°F. The operators then proceeded to air roll the SDG per Step 5.3.5. At this point, the inspectors questioned where the operators were in the procedure and the operators responded by stating that they had made an error by skipping Step 5.3.4, which required an operational check of the auxiliary jacket water and lubricating oil pumps. The operators then proceeded to perform the pump checks per Step 5.3.4. Subsequently, the operators informed the control room that they had performed Step 5.3.4 out of sequence and that lubricating oil temperature was above the 170°F limit. With assistance from the SDG System Engineer, the operators determined that there was no technical problem with performing the jacket water and lubricating oil pump checks at the time it was performed; however, there appeared to be a problem with the lubricating oil heater because it was energized when there was no need for heating.

The Shift Superintendent secured the test and restored the SDG to the standby status pending troubleshooting and repair of the lubricating oil heater circuits. The Shift Superintendent also initiated an Event Free card to enter the out-of-sequence performance of the procedure into the licensee's corrective action program. The Event Free Operation Program provided a mechanism for Operations personnel to conveniently document either good or poor performance issues for analysis. In this case, the card became a precursor to a CR, which was subsequently initiated as CR 97-0242. The inspectors questioned whether such a program might tend to circumvent the CR program. The licensee assured the inspectors that such has not been the case and that CRs were initiated where appropriate.

Administrative Procedure 01-S-02-1, "Description and Use of the GGNS Operations Manual," Revision 21, Section 5, stated that steps within procedures should be completed in the sequence specified unless otherwise allowed by the procedure. The word should was defined by this procedure as a management expectation requiring management approval to deviate, and not a regulatory requirement. Performing the pump checks out of sequence as described above did not violate the technical requirements or intent of the surveillance procedure and thus the regulatory requirements for following the test procedure were met.

Licensee management indicated that their expectations were clearly not met for operator performance. As corrective action, the individual operators were counseled, a memorandum was issued on March 12 to Operations personnel reinforcing the level of performance expected, and the shift involved was tasked to investigate the issue under the Event Free Operation Program.

On March 12, a faulty lubricating oil heater contactor was replaced; however, the root cause of the temperature being above 170°F was the overlap of the heater controller setpoint tolerance combined with the temperature indicator accuracy tolerance. This was corrected by revising the surveillance procedure to allow an indicated oil temperature of 130 to 180°F. Subsequently, the SDG operability test was performed satisfactorily. The inspectors reviewed the completed test data and noted that all acceptance criteria were met and the test was properly documented.

c. Conclusions

The operators performing the Division I SDG operability test demonstrated poor performance in that the auxiliary jacket water and lubricating oil pumps were tested out of sequence because of personnel error. Management took appropriate corrective actions to address the performance deficiency.

M2 Maintenance and Material Condition of Facilities and Equipment (62707)

During plant tours, the inspectors noted that housekeeping continued to be generally good throughout the plant; however, the following examples of poor material condition of equipment were identified by the inspectors and appropriately corrected by the licensee. No system or component operability concerns were identified.

- Approximately 16 square inches of corrosion and flaking of the coating was noted in the outside bend on the discharge piping elbow immediately downstream of standby service water Pump A. The inspectors questioned whether the licensee had recently determined wall thickness as part of their erosion/corrosion program and the response was that this pipe fitting was not in the program. CR 97-0251 was initiated and the licensee promptly performed an ultrasonic test to determine wall thickness and found it to be in the range of 0.413 to 0.455 inches, with a specified minimum wall thickness of 0.375 inches. The licensee stated that the corroded area would be cleaned and repainted. This action was considered to be satisfactory.

- High pressure core spray Division III batteries were in poor condition with copper sulfate corrosion dripping between the battery cells onto the floor, signs of corrosion on the busbars, very little antioxidation grease on the busbars, and wetness on the top of the batteries. The inspectors notified the Maintenance Manager and the batteries were subsequently cleaned.

- TS Fire Door OC-709, for the control building cable spread room, had a broken mechanism and would not latch. TS Fire Door OC-710 was not properly latched. When notified by the inspectors, the licensee promptly added the doors to the roving fire watch list and condition identification reports were written to correct the problem.

III. Engineering

E1 Conduct of Engineering

E1.1 Residual Heat Removal (RHR) A and B Test Return Piping Submergence Issue

a. Inspection Scope (37551)

The inspectors reviewed the licensee's actions in response to CR 97-0201, in which Design Engineering identified design basis accident conditions where the test return piping from the RHR A and B systems may not be submerged in the suppression pool. Consequently, the medium used for 10 CFR Part 50, Appendix J, containment isolation valve testing for the associated penetrations may have been water, when it should have been air.

b. Observations and Findings

On March 3, 1997, while reviewing containment penetration piping that communicated with the suppression pool, the licensee's design engineer reported in CR 97-0201 that the test return piping from the RHR A and B systems could become uncovered and open to the containment atmosphere if the suppression pool level reached the minimum drawdown level of 107 feet, 6 inches elevation following a loss-of-coolant accident. The design elevation of the horizontally run section of 12-inch piping was 107 feet, 4-1/2 inches at the centerline, leaving 1 1/2 inches of the piping open to the containment atmosphere. The associated containment isolation valves were leak tested using water instead of air because it was assumed that the piping was always submerged below the surface of the suppression pool.

Material Nonconformance Report MNCR-0012-91 identified a similar condition in 1991 with two RHR relief valve outlet pipes that terminated at elevation 108 feet, 8 inches and 108 feet, 1/2 inch, which was higher than the RHR test return pipes. The engineer was aware of the resolution of the concern with the RHR piping, and as a result, recommended that the operators consider the RHR test return valves operable pending further evaluation. The 1991 report contained an evaluation showing that there was sufficient margin in the design and operating assumptions such that the relief valve piping would not become uncovered; therefore, using water for the leak test was appropriate. The operators accepted the engineer's recommendation and did not enter a TS limiting conditions for operation.

On March 11, the inspectors became aware of this issue when the licensee provided the CR and the final operability evaluation, which demonstrated that with all emergency core cooling system (ECCS) pumps running, suppression pool level would only drop to approximately 108 feet, 11 inches elevation in 10 minutes after the event, after which the operators would be controlling reactor pressure vessel level at or below Level 8. Also, with all ECCS pumps running, the RHR A and B

systems would be pressurized, precluding containment leakage into the system via the test return valves. The inspectors reviewed the evaluation and found it to have a credible basis; however, the inspectors were concerned about the adequacy of corrective actions taken in response to the 1991 issue. The inspectors reviewed the 1991 report and questioned licensee personnel as to the sequence of events on this issue.

On February 11, 1991, in response to a problem that occurred at another plant, the licensee was reviewing containment penetrations and found the problem discussed above with the outlet pipes on two RHR relief valves. As corrective action, the licensee decided to test the penetrations with air, which was proper for piping that would not be submerged at minimum suppression pool drawdown level. The inspectors did not find any indication in the 1991 documentation that the licensee intended to determine if there were any other penetrations similarly designed with the inappropriate test medium specified. The licensee explained that a review was completed, but it was not documented. In addition, the licensee suggested that the review might have overlooked the fact that the RHR test return pipes were run horizontally and, therefore, the open end of the pipes were exposed to the containment atmosphere earlier than the specified centerline elevation might have implied.

On October 20, 1993, the licensee issued the final disposition for the 1991 report, which confirmed that the test medium was air, thereby resolving the relief valve discharge piping issue. In addition, the disposition document required plant staff to review the configuration of all other penetrations communicating with the suppression pool to ensure proper testing was being performed.

On July 31, 1995, Report MNCR-0012-91 was closed without having completed the penetration review. Closure documentation, dated July 21, 1995, stated that the review did not need to be performed because Nuclear Plant Engineering initiated an independent review of all containment penetrations for other reasons. However, that review did not address the original problem of ensuring that all penetrations were being properly tested.

In February 1997, during an independent design basis review, the design engineer became aware of questions regarding closure of Report MNCR-0012-91, as it related to the accomplishment of the above review. The design engineer commenced the intended review.

On February 28, 1997, the design engineer discovered the problem with the RHR A and B test return lines. With his supervisor's concurrence, the design engineer did not initiate a CR until March 3, because there was a long weekend pending and he stated he had confidence that there was no operability problem based on his knowledge of the operability evaluation completed for the 1991 relief valve discharge piping issue. This was contrary to Procedure 01-S-03-10, "GGNS Condition Report (CR)," Revision 0, Paragraph 6.1.1, which required a condition

report be initiated whenever a nonconformance is discovered. The significance of this was that the licensed operators were not informed of the potential inoperability of the containment penetrations such that an evaluation could be performed to verify compliance with the plant operating license. Furthermore, Design Engineering did not have the authority to make the operability determination. Failure to initiate a CR upon discovering that the RHR A and B test return containment penetrations may have not been tested properly is a violation of TS 5.4.1 for the failure to follow Procedure 01-S-03-10 (50-416/97003-01).

The licensee designated CR 97-0201 as a significant CR requiring a Corrective Action Review Board. Licensee management indicated that the root cause determinations and associated corrective actions would be expected to address both the technical and administrative aspects of the above issues.

c. Conclusions

Engineering demonstrated poor performance throughout the 6 years taken to resolve the issue of whether or not all containment isolation boundaries communicating with the containment atmosphere or the suppression pool were being properly tested. When engineering finally commenced the review, another problem was identified, but the CR was delayed for nearly 4 days to allow for a long weekend. A violation was identified for failure to comply with the administrative procedure for timely condition reporting.

E1.2 Painting Effects on Standby Gas Treatment System (SGTS) and Control Room Fresh Air (CRFA) System Charcoal Filters

a. Inspection Scope (37551)

During this inspection period, the inspectors reviewed CR 1996-0500, which documented that the SGTS A ran for 49 minutes while painting was in progress in the auxiliary building. The inspectors also reviewed the applicable TS surveillance requirements associated with the required testing of the engineered safety feature (ESF) filtration units following painting.

b. Observations and Findings

During the review of CR 1996-0500, the inspectors noted that operations personnel had requested engineering to evaluate what effect the painting in the auxiliary building and running the SGTS A had on the system's charcoal filter. Engineering Request (ER) 96-0959 was written to address this concern. The inspectors noted that engineering's reply to ER 96-0959 determined that the conservative total amounts of volatile organic compounds that were released constituted approximately 0.82 percent by weight of the total amount of charcoal in the SGTS A filter train charcoal bed. ER 96-0959 also indicated that, based on testing performed on carbon filters at two other nuclear power stations, the charcoal could

absorb at least 10 percent by weight of volatile organic compounds and meet removal efficiency requirements. ER 96-0959 concluded that the testing requirements specified by TS 5.5.7 and Regulatory Guide 1.52 could be waived for SGTS A. The inspectors also reviewed ER 96-0946, which documented that the SGTS B was started before the required wait time of 16 hours following painting that communicated with the ventilation zones. ER 96-0946 concluded that the testing requirements specified by TS 5.5.7 and Regulatory Guide 1.52 could be waived for SGTS B.

The inspectors noted that TS 5.5.7 stated that a program shall be established to implement the following required testing of ESF filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2.

a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 0.05 percent when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI N510-1975 at the system flowrate specified below ±10 percent.

b. Demonstrate for each of the ESF systems that an inplace test of the charcoal absorber show a penetration and system bypass < 0.05 percent when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI N510-1975 at the system flowrate specified below ±10 percent.

c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal absorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, Regulatory Position C.6.a, and greater than or equal to the relative humidity (RH) specified below:

ESF Ventilation System	Penetration	RH
SGTS	0.175%	70%
CRFA	0.175%	70%

The inspectors noted that the specified frequencies stated in Regulatory Guide 1.52, Revision 2, for the above testing requirements were: (1) after any structural maintenance on the HEPA filters; (2) following painting, fire, or chemical release in any ventilation zone communicating with the subsystem; or (3) after each complete or partial replacement of a HEPA filter bank. The inspectors also noted that the Technical Requirements Manual, Section 7.6.3.4, also stated these same frequencies.

The inspectors questioned the licensee concerning conformance with the applicable testing frequencies specified in Regulatory Guide 1.52 in that it was specifically stated that the testing requirements were to be performed following painting in any

ventilation zone communicating with the system. The inspectors questioned the licensee concerning the fact that there was no specific wording in Regulatory Guide 1.52 that allowed the licensee to waiver those requirements based on evaluation of how much volatile organic compounds entered the charcoal beds following painting activities. The licensee determined that their policy conformed with the current industry standard methods for complying with Regulatory Guide 1.52 and TS requirements for testing the ESF filtration systems following painting activities in any ventilation zone.

The inspectors further questioned the licensee as to what basis was provided for the wait time following painting of 16 hours for the SGTS and 1.5 hours for the CRFA units, as specified in Procedure 01-S-7-37, "Control of Work for Penetrations, Painting, Snubbers and Insulation," Revision 101. At the end of this inspection period, the licensee had not provided an engineering basis for the length of time value. The inspectors questioned the licensee concerning what administrative controls were in place that would ensure that, upon an initiation of an ESF filtration system, the charcoal filters would not be degraded below their required efficiency due to ongoing painting activities in the ventilation zones. The licensee responded that no administrative controls were in place and no limit had been established to control the amount of paint or volatile organic compounds that could be taken in areas or used in areas that communicated with the ESF filtration ventilation zones.

At the end of this inspection period, the licensee was in the process of developing a formal request for submission to the NRC's Office of Nuclear Reactor Regulation for an interpretation of the wording in Regulatory Guide 1.52. In addition, the licensee initiated CR 1997-0195 and was evaluating and developing administrative controls for painting activities that communicated with the ESF filtration ventilation zones. The licensee suspended all painting activities in safety-related ventilation zones until the procedural guidance could be developed.

Further evaluation of the licensee's conformance with TS 5.5.7 and the lack of administrative controls for painting in areas that communicate with ventilation zones of the ESF filtration systems is considered an unresolved item pending a review of the licensee's interpretation request of the wording of Regulatory Guide 1.52 (50-416/97003-02).

c. Conclusions

Further evaluation of the licensee's conformance with TS 5.5.7 and the lack of administrative controls for painting in areas that communicate with ventilation zones of the ESF filtration systems is considered an unresolved item.

E2 Engineering Support of Facilities and Equipment

E2.1 Review of Facility and Equipment Conformance to Updated Finial Safety Analysis Report (UFSAR) Description (71707, 37551)

While performing the inspections discussed in this report, the inspectors reviewed the applicable portions of the UFSAR that related to the areas inspected. The inspectors verified that the UFSAR wording was consistent with the observed plant practices, procedures, and parameters. No anomalies between the UFSAR and operation of the facility were identified.

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 General Comments (71750)

a. Inspection Scope

Using Inspection Procedure 71750 as guidance, the inspectors made frequent tours of the radiologically controlled area and observed radiological postings and worker adherence to protective clothing requirements.

b. Observations and Findings

During a routine tour conducted on March 4, the inspectors noted a packing leak on the Reactor Core Isolation Cooling Steam Supply Bypass Isolation Valve E51-F094 and notified the Shift Superintendent. This valve had previous problems with packing leaks and the inspectors were concerned that the steam leak could cause increased airborne contamination levels in the room. Shortly after the notification, the inspectors interviewed the Shift Superintendent concerning the valve and were informed that operations personnel had inspected the valve, concluded that there was a packing leak, and initiated Condition Identification 62784. Later in the day, upon entry into the radiologically controlled area, the inspectors notified health physics personnel of the possible packing leak on Valve E51-F094 so an evaluation of the possible radiological changes could be made, since the valve was leaking reactor main steam. Health physics personnel indicated that an investigation of the valve would be performed. The inspectors were subsequently informed that health physics technicians had visually inspected the valve on March 5 and determined that no significant radiological problems existed due to the steam leak.

The inspectors were informed later that a contamination survey was performed on February 27 or 28 and no noticeable contamination was noted; however, the survey was not documented on an approved health physics form as required by Procedure 08-S-02-50, "Radiological Surveys and Surveillances," Revision 101. The failure to

document the contamination survey performed on February 27 or 28 is the first example of a violation of TS 5.4.1 (50-416/97003-03).

During a subsequent tour of reactor core isolation cooling room on March 10, the inspectors noted the packing leak had gotten worse and that there was approximately a 6-inch steam plume from the valve. The inspectors also noted that no contamination area sign was posted and no catch basin had been installed to preclude the potentially contaminated fluid from spreading to other areas. The inspectors immediately notified health physics technicians. The health physics technician promptly responded and surveyed the valve for contamination and noted that the highest contamination level on the valve was 4000 dpm/100 cm^2. The health physics technician installed a catch basin to contain the fluid; however, no contamination area sign was posted on the valve. Procedure 01-S-08-2, "Exposure and Contamination Control," Revision 103, required an area, where removable surface contamination is greater than or equal to 1000 dpm/100 cm^2, be posted with signs stating CAUTION, CONTAMINATION AREA (or similar). The inspectors questioned radiation protection management personnel concerning the posting requirements for contamination areas. The licensee responded that Procedure 08-S-02-20, "Establishing and Posting Controlled Areas," Revision 15, stated that yellow catch basins are used for contaminated system leaks and, by virtue of their color, should be considered contaminated and that all proper radiological controls apply; therefore, installation of a yellow catch basin was considered to be equivalent to the posting specified in Procedure 01-S-08-2.

During a subsequent tour, the inspectors noted that the packing leak had again increased and was approximately a 1-foot steam plume. The inspectors also noted that a contamination posting was subsequently placed on the valve along with the previously installed yellow catch basin. However, the inspectors noted that the area radiological survey map, dated March 14, was not updated to include the contamination identified on March 10. The inspectors notified health physics and the survey map was updated. The inspectors were subsequently informed that the area survey map had also not been updated on March 10, after the initial identification of the contamination on the valve.

The inspectors previously identified and documented, in NRC Inspection Report 50-416/96-20, that several area radiation survey maps was not properly updated following radiological surveys that were performed. The licensee issued CR 1996-0594 to address the issue and promptly updated the respective survey maps. The inspectors reviewed the corrective actions for CR 1996-0594 and noted that the individual involved in not updating the map was verbally counseled on the importance of updating wallmaps to provide the workers with current area radiological conditions, and training was held for all health physics technicians on the need to update wallmaps. CR 1996-0594 was closed and the corrective actions were completed.

Procedure 01-S-08-2 required all radiation workers to be aware of the radiological conditions (radiation, contamination, and airborne levels) in any posted area before entry. Section 6.7.2 stated that all radiation workers are required to review appropriate radiological survey information before entering a posted area.

Failure to update the radiological area survey map that provided information to the radiological worker to include the existence of contamination and contamination levels on Valve E22-F094 is the second example of a violation of TS 5.4.1 (50-416/97003-03).

c. Conclusions

A violation for failure to document a contamination survey and to update the area radiological survey map was identified.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on March 27, 1997. The licensee acknowledged the findings presented.

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

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

C. Abbott, Quality Programs Supervisor, Quality Programs
D. Bost, Director, Design Engineering
C. Bottemiller, Superintendent, Plant Licensing
C. Brooks, Licensing Specialist, Plant Licensing
J. Burton, Mechanical/Civil Engineering Manager, Nuclear Plant Engineering
L. Calvery, Root Cause Analyst, Performance and System Engineering
D. Cotton, Health Physics Supervisor, Radiation Protection
L. Daughtery, Technical Coordinator, Plant Licensing
W. Deck, Superintendent, Security
B. Eaton, General Manager, Plant Operations
C. Ellsaesser, Manager, Performance and System Engineering
M. Guynn, Radiation Control Supervisor, Health Physics
C. Holifield, Licensing Engineer, Plant Licensing
W. Huey, Director, Plant Licensing
M. Larson, Senior Licensing Specialist, Plant Licensing
M. McDowell, Operations Superintendent, Plant Operations
A. Morgan, Manager, Emergency Preparedness
S. Saunders, Electrical Engineering Manager, Nuclear Plant Engineering
W. Shelly, Technical Coordinator, Training
T. Tankersley, Senior Oversight Specialist, Corporate Assessments
J. Venable, Operations Manager, Plant Operations
G. Vining, Manager, Plant Material and Control

NRC

J. Donahew, Project Manager, Office of Nuclear Reactor Regulation

INSPECTION PROCEDURES USED

37551	Onsite Engineering
61726	Surveillance Observations
62707	Maintenance Observation
71707	Plant Operations
71750	Plant Support Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-416/97003-01	VIO	Failure to initiate a CR upon discovery of a deficient condition (Section E1.1)
50-416/97003-02	URI	Evaluation of licensee's conformance with Regulatory Guide 1.52 on painting (Section E1.2)
50-416/97003-03	VIO	Two examples of the failure to follow radiological protection procedures (Section R1.1)

LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
CR	Condition Report
ECCS	emergency core cooling system
ESF	engineered safety feature
ER	Engineering Request
HEPA	high energy particulate air
MNCR	Material Nonconformance Report
RCIC	reactor core isolation cooling
RHR	residual heat removal
CRFA	control room fresh air system
SGTS	standby gas treatment system
SDG	standby diesel generator
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	unresolved item
VIO	violation
WO	work order