ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-416
License No.:	NPF-29
Report No.:	50-416/99-18
Licensee:	Entergy Operations, Inc.
Facility:	Grand Gulf Nuclear Station
Location:	Waterloo Road Port Gibson, Mississippi 39150
Dates:	November 28, 1999, through January 8, 2000
Inspectors:	Jennifer Dixon-Herrity, Senior Resident Inspector Peter Alter, Resident Inspector Michael P. Shannon, Senior Radiation Specialist
Approved By:	Joseph I. Tapia, Chief, Project Branch A

ATTACHMENT: Supplemental Information

EXECUTIVE SUMMARY

Grand Gulf Nuclear Station
NRC Inspection Report No. 50-416/99-18

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

Operations

- The plant startup following Refueling Outage 10 was well controlled (Section O1.1).

- The licensee was well prepared for the Y2K rollover and the plant continued to function as designed (Section O1.2).

- The inspectors identified numerous examples of poor housekeeping in the reactor core isolation cooling pump room that were not identified by operations personnel, indicating inattention to detail. The failure to ensure the can of oil was attended while located in the 119-foot level of the reactor core isolation pump room or to have a combustible control permit to allow use of the can in the area is a violation of the Grand Gulf Nuclear Station License Condition C(41) because the oil exceeded the licensee's fire hazards analysis limit for that room. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Condition Report CR-GGN-1999-2004 (Section O2.3).

- The inspectors observed two examples where the initiation of condition reports to enter nonconformances into the corrective action program were delayed. There were no consequences as a result of these two examples (Section O4.1).

Maintenance

- The five maintenance and testing activities observed were well conducted (Section M1.1).

- Inattention to detail caused operators to unnecessarily remove Division II standby service water cooling tower Fan C from service and enter Technical Specification 3.7.1 for planned maintenance 2 weeks before the scheduled date (Section M1.2).

- The failure to maintain standby service water Valves 1P41F023A and -B in the position required in Instruction 04-1-01-P41-1, "Standby Service Water System," Revision 107, which resulted in less than required flows to some components, was a violation of Technical Specification 5.4.1.a. The licensee subsequently determined that the mispositioned valves would not have prevented the equipment from performing its safety function. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Condition Report CR-GGN-1999-1209 (Section M3.1).

Engineering

- The engineering response to the loss of the Technical Specification required drywell floor drain sump monitoring system was comprehensive and met all requirements for monitoring unidentified reactor coolant system leakage (Section E1.2).

- The engineering evaluations conducted to determine the effect of misaligned standby service water valves and potential fouling of the piping were thorough. In all cases, the systems that were found to be degraded would have been capable of performing their safety function. However, the licensee found that they were not adequately addressing known degradation of the standby service water system and the potential for fouling of safety-related components with close clearances and plan to take corrective actions to trend and address system fouling (Section E2.1).

Plant Support

- On August 11, 1999, the licensee identified a willful violation of Technical Specification 5.4.1.a. for the failure of a radiation worker to log onto a radiation work permit or wear the required dosimetry when entering a controlled access area. The NRC Office of Investigations reviewed this matter and concluded that the violation was deliberate (OI4-1999-044). The licensee estimated that the individual received an unmonitored dose of less than 1 millirem, therefore, no actual radiological safety consequences resulted from this event. This Severity Level IV violation (EA 99-320) is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Condition Report CR-GGN-1999-0849 (Section R4.1).

Report Details

Summary of Plant Status

The plant was in Mode 5 and finishing Refueling Outage 10 at the beginning of the inspection period. The plant was taken critical at 8:40 p.m. on December 7, 1999, and reached 100 percent power at 10:05 a.m. on December 20, 1999. The delay in reaching 100 percent power was because of time taken to repair steam leaks in the balance of plant and to replace the impeller in reactor feed Pump B while operating at approximately 74 percent power. Power was lowered to approximately 80 percent on December 30, 1999, as required in the Grand Gulf Y2K Integrated Contingency Plan, and returned to 100 percent on January 1, 2000. The plant operated at 100 percent power during the remainder of the inspection period.

I. Operations

O1 Conduct of Operations

O1.1 Startup Following the Refueling Outage

a. Inspection Scope (71707)

The inspectors observed the startup from Refueling Outage 10.

b. Observations and Findings

Operators started the reactor after Refueling Outage 10 on December 7, 1999. The startup and approach to criticality were well performed with strict attention to detail and careful monitoring of all reactivity control manipulations. The plant supervisor closely monitored all control manipulations, periodically briefed the crew and kept other plant organizations apprised of the progress of the startup. The control room noise level was maintained low with minimal disruptions throughout the evolution.

The inspectors observed that operators were preparing to use the wrong figure for plotting the heatup rate during startup. Due to inattention to detail, an operator copied the curve for vessel service periods between 16 and 20 effective full power years rather than the curve for vessel service periods less than 16 effective full power years. The plant was in its 13th effective full power year. The inspectors brought this to the plant supervisor's attention and the problem was corrected before plant heatup began.

c. Conclusions

The plant startup following Refueling Outage 10 was well controlled.

O1.2 Y2K Activities

a. Inspection Scope (71707)

The inspectors observed the licensee's response to Y2K concerns in the control room during the rollover of the new year.

b. Observations and Findings

The licensee augmented the control room staff and manned the technical support center in accordance with the Grand Gulf Y2K Integrated Contingency Plan. The control room staff conducted briefings in preparation for the rollover of the new year to ensure that personnel were appropriately stationed in accordance with the plan and to address equipment that could be of concern. The noise level and number of personnel in the control room were well controlled. Equipment and systems all functioned as required after the year rolled over and no concerns were identified.

c. Conclusions

The licensee was well prepared for the Y2K rollover and the plant continued to function as designed.

O2 Operational Status of Facilities and Equipment

O2.1 Engineered Safety Feature (ESF) System Walkdowns (71707)

The inspectors walked down accessible portions of ESF systems and verified system alignment and housekeeping prior to startup. The residual heat removal (RHR) Trains A, B, and C, the high and low pressure core spray, and the standby service water (SSW) systems were appropriately aligned and the rooms were maintained in good condition.

O2.2 Drywell Walkdown for Refueling Outage 10 Closeout (71707)

The inspectors observed the operations department close-out of the drywell. A shift superintendent and three nonlicensed operators carefully inspected all areas in the drywell to ensure that the drywell air coolers were clear of obstructions and debris and that all outage work materials were removed. A temporary access ladder was removed and all deck gratings were verified properly secured. Entry into a locked high radiation area was carefully monitored and controlled by radiation protection personnel.

O2.3 Plant Tours

a. Inspection Scope (71707)

The inspectors conducted tours through safety-related portions of the plant.

b. Observations and Findings

On December 22, 1999, the inspectors toured the reactor core isolation cooling (RCIC) pump room and noted an unattended oil container on a cart. The cart was normally located in the room, but was not secured in place. In this case, the inspector observed that there was no safety-related equipment that the cart would harm if it moved as a result of a seismic event. A hose had been left so that it crossed into a contamination area without being secured. The cap on Valve E51F053 was dripping regularly just

outside of a contamination area at the base of the RCIC turbine. The water ran across the floor, back into the contamination area to a drain on the other side of the pump. A foreign material exclusion pipe plug about 6 inches in diameter was on the floor next to the drain. After discussing the condition of the area with the inspector, a radiation protection technician expanded the contaminated area to encompass the leaking valve and secured the hose. The shift superintendent stated that the can, pipe plug, cart, and trash would be removed or properly secured. The superintendent stressed the need to check housekeeping throughout the plant at the next two shift briefs. Operators conducted tours and identified numerous examples where tools and trash had been left after the work was complete.

On December 23, 1999, the inspectors noted that condition reports (CR) had not been initiated to document the identified conditions. The inspectors discussed the actions taken and whether a CR was needed with the shift superintendent. The superintendent indicated that although he intended to write CRs, he had not gotten around to it. The inspectors toured the room again on December 23, 1999 and noted that the oil can had not been removed. The shift superintendent had the oil can removed and initiated CR-GGN-1999-2004. The condition description in the report noted that the different concerns identified were products of poor work practices.

The mechanical maintenance superintendent indicated that the oil can had probably been left in the room the last time that oil was added to the RCIC turbine. Through their investigation, maintenance personnel found that the other discrepancies identified were due to poor communication between the different disciplines involved in work in the reactor water cleanup system the previous weekend. The inspectors noted that even though the can had been in the room for a period of time and the other conditions had existed at least 4 days, no action was taken by operators. The inspectors discussed the inattention to detail by operators responsible for touring the room, the lack of action after the room conditions were brought to the attention of the shift, and the length of time it took to enter the concern into the corrective action program with the operations superintendent. The superintendent stated that it was the licensee's expectation that discrepancies be addressed immediately and that a CR be initiated when a problem was found. A second example of a delay in initiating a CR is discussed in Section O4.1.

Grand Gulf Nuclear Station License Condition C(41) requires that the licensee implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Updated Final Safety Analysis Report. Updated Final Safety Analysis Report, Appendix 9B, "Fire Protection Program," Section 9B.6.a, requires that administrative controls be established to govern the handling of and limiting the use of combustible liquids in safety-related areas. Section 9B.2.1.9.c states that the shift superintendent (shift fire chief) is responsible for ensuring that prompt and effective corrective actions are taken to correct conditions adverse to the fire protection program. Procedure 10-S-03-4, "Fire Protection: Control of Combustible Material," Revision 10, states that combustible material should remain in permanent storerooms and not be left unattended in safety-related areas. Paragraph 6.2.1 requires that a combustible control permit be completed to control temporary storage and use of combustible materials within the power block. Attachment VI, "Guidelines for Control of Transient Fire Loads," requires continuous personnel attendance for combustible liquids left in rooms.

Contrary to these requirements, the oil can was unattended and did not have a combustible control permit. The fire hazards analysis for the 119 foot elevation of the RCIC room did not allow for any combustible liquids.

c. Conclusions

The inspectors identified numerous examples of poor housekeeping in the RCIC room that were not identified by operations personnel, indicating inattention to detail. The failure to properly control a can of oil located in the RCIC room was a violation of Grand Gulf Nuclear Station License Condition C(41) because the oil exceeded the licensee's fire hazards analysis limits for that room. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy (50-416/9918-01). This violation is in the licensee's corrective action program as CR-GGN-1999-2004.

O4 Operator Knowledge and Performance

O4.1 Unexpected Noise During Division I Standby Diesel Generator Surveillance

a. Inspection Scope (71707)

The inspector reviewed the actions taken by operators after unexpected noises were heard while the diesel coasted down following a surveillance run.

b. Observations and Findings

On December 14, 1999, operators ran the Division I diesel generator for a scheduled surveillance run. During the coastdown after the run, operators heard a squealing noise in the generator as the diesel slowed to a stop. Operators noted that the sound was similar to what had been identified as normal brush related noise in the past. The shift superintendent determined that the diesel would perform its function because of the previous experience, but identified the noise as an issue that needed to be dealt with at the 7 a.m. maintenance planning meeting. The diesel as subsequently run again and engineers determined that there was no problem.

The inspectors noted that no CR was initiated to document the issue as of 10 a.m. the same day. The shift superintendent explained that the system engineer was doing research to determine whether there was a preexisting CR on the same concern. The superintendent immediately initiated CR-GGN–1999-1969. The inspectors discussed the delay in initiating the CR with the operations superintendent. The superintendent explained that it was expected that CRs would be promptly initiated to document problems. The inspectors noted that issues were sometimes left to the next shift or delayed a whole day, as discussed in Section O2.3, before being captured in the corrective action program.

c. Conclusions

The inspectors observed two examples where CRs were not promptly initiated and entered into the corrective action program. Although this did not meet management expectations, there were no consequences as a result of these two examples.

II. Maintenance

M1 Conduct of Maintenance

M1.1 Maintenance and Surveillance Observations

a. Inspection Scope (61726, 62707)

The inspectors observed all or portions of the maintenance, surveillance, and test activities listed below. Maintenance work was reviewed to ensure that adequate work instructions were provided, that the work performed was within the scope of authorized work, and that the work performed was adequately documented. In all cases, the impact to equipment operability and applicability of TS actions were independently verified. The following are the maintenance action items and surveillance tasks observed:

Maintenance:

- 265777 Megger RHR Pump B motor
- 270362 Investigate drywell cooler leak
- 268870 Troubleshoot hydraulic control Unit 20-41
- 269929 Install temporary recorder to monitor drywell floor drain sump

Surveillance:

- 06-OP-1000-D-001 Daily Operating Logs (Leakage Detection Surveillance)

b. Observations and Findings

The inspectors observed that the work performed during these activities was well conducted.

c. Conclusions

The five maintenance and testing activities observed were well conducted.

M1.2 Unnecessary Entry into TS Action Statement

a. Inspection Scope (62707)

On December 23, 1999, operators removed SSW cooling tower Fan C from service and entered TS 3.7.1 unnecessarily for more than 10 hours. The inspectors interviewed the operators involved and reviewed the equipment tagging order and planned maintenance schedule for that day.

b. Observations and Findings

SSW cooling tower Fan C was removed from service and TS 3.7.1 was entered at 12:30 a.m. on December 23, 1999. At 10 a.m., the inspectors questioned the shift superintendent to determine what work was to be done on the fan. The shift superintendent found that no fan maintenance was scheduled and had the tagging order cleared. The inspectors found that the tagging order desired date was January 4, 2000. However, the tagging order was turned over to the plant supervisor for hanging during the evening of December 22, 1999. The shift superintendent wrote CR-GGN-1999-2005 to document the situation. The corrective action review group designated the CR as significant and required a human performance evaluation of the event.

c. Conclusions

Inattention to detail caused operators to unnecessarily remove SSW cooling tower Fan C from service and enter TS 3.7.1 for planned maintenance 2 weeks before the scheduled date.

M3 Maintenance Procedures and Documentation

M3.1 Control of Throttled Valves

a. Inspection Scope (62707)

The inspectors observed the licensee conduct a flow balance of both trains of SSW in response to questions on whether the SSW flows identified were adequate to meet worst case accident conditions.

b. Observations and Findings

In response to concerns that the SSW flow to the drywell purge compressors may not have been adequate to meet worst case accident conditions, a full flow balance was performed on SSW Train A on October 7, 1999. The licensee found that the flows to main control room air Conditioner A (9.1 gpm low), the low pressure core spray room cooler (9 gpm low), and the drywell purge Compressor A oil and aftercoolers (3 and 2 gpm low) were lower than the required minimum flows and that the flow to the Division I standby diesel generator was approximately 630 gpm higher than the minimum flow limit. Operations personnel found that the SSW valve to the diesel had been throttled at approximately 11.2 turns rather than the procedurally required 8 turns. Operations

personnel initiated CR-GGN-1999-1209 to document the mispositioned valve. The CR documented that there was no written guidance for setting throttled valves to the desired position.

On October 15, 1999, operators found a similar concern with the Division II standby diesel generator SSW valve. The valve was throttled at 12 turns rather than the required 11 turns. The flow to the diesel was approximately 500 gpm greater than the as-left flow from the 1998 flow balance. The SSW flows to the aftercooler for drywell purge Compressor B and the room cooler for RHR Train C were 8.5 and 16.5 gpm low, respectively. The licensee found that the last documented time the valve positions were changed was during the last flow balance, in 1996 for Train A and in 1998 for Train B. Operations personnel interviewed nonlicensed operators and found that operators were positioning this type of throttle valve in two different ways. Some nonlicensed operators started counting turns from the full closed position, while others started counting turns when they heard flow noise. This difference was identified as one root cause for the lack of flow to parts of the system.

TS 5.4.1.a. requires that procedures recommended in Appendix A of Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operations)," Revision 2, shall be established and implemented. Procedures for operation of the service water system are covered by Appendix A. The failure to maintain SSW Valves 1P41F023A and -B in the position required in Instruction 04-1-01-P41-1, "Standby Service Water System," Revision 107, was a violation of TS 5.4.1.a.

The engineering evaluation and the root cause for the mispositioned valve are discussed in Section E2.1.

c. Conclusion

The failure to maintain SSW Valves 1P41F023A and -B in the position required in Instruction 04-1-01-P41-1, "Standby Service Water System," Revision 107, which resulted in less than required flows to some components was a violation of TS 5.4.1.a. The licensee subsequently determined that the mispositioned valves would not have prevented the equipment from performing its safety function. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy (50-416/9918-02). This violation is in the licensee's corrective action program as CR-GGN-1999-1209.

M.8 Miscellaneous Maintenance Issues (92902)

M8.1 (Closed) Licensee Event Report 50-416/99-007: ESF actuation - invalid Level 1 signal. The event report documented an invalid Level 1 ESF actuation signal which caused the Division I drywell purge compressor to start and the load shedding and sequencing for Division I to actuate. The Division I diesel generator started. Train A RHR and SSW pumps were shed and reloaded and the RHR Train A injection valve opened. The plant was in a refueling outage, so the remaining systems required to start upon receipt of this signal were out of service. The licensee could not identify a single cause that would explain the initiation. The control rod drive was being vented at the time. The control

rod drive system was connected to the level transmitters through isolation Valve B21F149A via the sensing line keep fill system and a condensing pot. A radio frequency source of unknown origin or a false level signal in the reference level sensing line caused by a purge system isolation valve anomaly were identified as possible causes.

The event caused the only source of shutdown cooling, RHR Train A, to be shut down and restarted. The pump stopped and restarted and the system realigned to the low pressure injection mode. Operators immediately realigned the system to shut down cooling. The time for temperature to increase and cause an unplanned mode change at that point was approximately 12.3 hours. Since shutdown cooling was out of service only momentarily, the effect on the plant was minimal.

The licensee initiated CR-GGN-1999-1730 to address the possible causes. The licensee planned to conduct a comprehensive evaluation of radio frequency effects on safety-related equipment prior to the next refueling outage. The licensee planned to prohibit portable radio transmissions on the 119-, 135-, and 161-foot levels of containment and base station or telemetry device radio transmission on the 119-foot level unless specifically reverified and approved for use or to install a shielding system to allow radio transmissions in those areas. The procedure for filling and venting the control rod drive system was revised to verify that isolation Valves B21F149A, B, C, and D were closed prior to fill and vent activities. These planned corrective actions are expected to preclude repetition of this event and are adequate to close this item.

III. Engineering

E1 Conduct of Engineering

E1.1 Resolution of Temporary Solutions

The inspectors reviewed the CRs referenced by CR-GGN-1998-1329 as temporary solutions requiring permanent resolution during Refueling Outage 10. The inspectors concluded that the licensee effectively managed the corrective actions required to permanently resolve the identified issues during the outage.

E1.2 Drywell Floor Drain Sump Leakage Detection System

a. Inspection Scope (37551)

On December 10, 1999, control room drywell floor drain sump level and flow rate Recorder E31-LR-R618 failed. As a result of not being able to repair the recorder on line, the licensee developed an alternate means of calculating unidentified leakage to continue to meet TS Surveillance 3.4.5.1. The inspectors reviewed the engineering response to this issue.

b. Observations and Findings

TS 3.4.5 required that the unidentified reactor coolant system leakage into the drywell be monitored. Recorder E31-LR-R618 was the only recording device in the drywell floor drain sump monitoring system available to meet the surveillance monitoring requirement. System engineers responded to the failure of Recorder E31-LR-R618 by determining the relationship between drywell floor drain sump pumpdowns and sump inleakage. A hand calculation method was developed to satisfy the 12-hour surveillance requirement of TS 3.4.5.1. Design engineers used this principle to modify the plant process computer to calculate floor drain sump inleakage each time the sump was automatically pumped down. A computer point alarm also warned operators as the TS limit for unidentified leakage was approached.

c. Conclusions

The engineering response to the loss of the TS required drywell floor drain sump monitoring system was comprehensive and met all requirements for monitoring unidentified reactor coolant system leakage.

E2 Engineering Support of Facilities and Equipment

E2.1 Engineering Evaluation of SSW Flow Balance

a. Inspection Scope (37551)

The inspectors reviewed the engineering evaluation and corrective actions taken in response to concerns that the flows to systems supported by SSW were lower than the flows required in the design basis.

b. Observations and Findings

The engineering evaluation of the effect of low flow in portions of both trains of SSW documented that the operability of the equipment was not affected. The licensee used an engineering model to determine what the room temperatures would be during a loss of coolant accident. The only component that challenged the design basis room temperatures was the RHR Train C room cooler. This cooler had 3.59 gpm of SSW flow as opposed to the design minimum required flow of 20 gpm. Using the model, engineers found that the room temperature in the RHR Train C pump room could reach 178°F. Engineers found that the equipment in the room was environmentally qualified to 160 to 170°F, with margin to 180°F. The equipment would have served its safety function, but operation at the high temperatures would potentially shorten the equipment service life.

For the drywell purge compressors, engineers conducted a more detailed evaluation. The flow to the aftercooler was degraded, but the aftercooler was operable. The flow to the drywell purge compressor oil cooler was degraded but the cooler was operable.

The licensee identified a number of apparent causes for the degraded flow to both trains of SSW. The apparent causes included: (1) mispositioned SSW throttle valves, (2) leakage of boundary valves or valve seats, (3) fouling of SSW piping, and (4) improper pump performance. The diesel SSW throttle valves were identified as being three turns out of alignment in Train A and one turn out of alignment in Train B. As discussed in Section M3.1, operations personnel found that operators were positioning this type of throttle valve two different ways. While troubleshooting the low flow in the RHR Train C room cooler, the system engineer observed that the flow increased quickly after the throttle valve was opened a small amount, indicating blockage of the line at the throttle valve. The engineering disposition developed by the system engineer indicated that the SSW system was susceptible to fouling and plugging problems due to the poor water quality associated with the system used for make-up. The flow balance on SSW was performed once every 3 years.

The licensee conducted complete flow balances of both trains of SSW and planned to modify the procedure for positioning throttle valves and to provide training to the operators. SSW flow balancing was performed with the fuel pool cooling heat exchangers cooled by SSW. The fuel pool cooling heat exchangers were normally cooled by component cooling water, so the licensee had to completely realign the system to perform the SSW flow balance. The licensee developed a new SSW flow balance with the fuel pool cooling heat exchangers valved out of the lineup to allow a flow balance to be more easily conducted during normal operations. The licensee planned to trend the system flow rates to identify system degradation and fouling. In addition, the licensee planned to periodically acid flush and clean the essential cooling water system room coolers.

c. Conclusions

The engineering evaluations conducted to determine the effect of misaligned SSW valves and the potential fouling of the piping were thorough. In all cases, the systems that were found to be degraded would have been capable of performing their safety function. The licensee found that degradation of the SSW system and the potential for fouling of safety-related components with close clearances were matters that required further attention and planned to take corrective actions to trend and address system fouling.

E8 Miscellaneous Engineering Issues (92903)

E8.1 (Closed) Licensee Event Report 50-416/99-005: Containment isolation Valve P41F169B failed repeatedly. The licensee identified the apparent causes of the failures to be orientation of the valve, binding between the stem and the plug or plug and barrel, and water quality. The failure of the valve was addressed in NRC Inspection Report 50-416/99-12 and noncited Violation 50-416/9912-01 was initiated for the failure to promptly address the problem after the apparent causes were identified. The licensee replaced the valve with a valve of a different design and planned to perform more frequent inspections of the valve.

IV. Plant Support

R4 Staff Knowledge and Performance

R4.1 Unauthorized Entry into a Controlled Access Area (EA 99-320)

a. Inspection Scope (71750)

The inspectors reviewed the licensee's actions in response to an individual entering a controlled access area without authorization.

b. Observations and Findings

On August 11, 1999, the licensee identified that a radiation worker entered and exited a controlled access area several times without logging onto a radiation work permit or wearing the required dosimetry, despite being informed by a security guard that dosimetry was needed. The licensee initiated CR-GGN-1999-0849, conducted an investigation, and concluded that the employee deliberately violated licensee radiation control procedures. The licensee estimated that the individual received an unmonitored dose of less than 1 millirem, therefore, no actual radiological safety consequences resulted from this event. However, entering a controlled access area without the proper radiological controls could result in an unplanned exposure or contamination.

TS 5.4.1 a. states that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, Section 7.e.1, recommends procedures for access control to radiation areas, including a radiation work permit system. Sections 6.6.1.c and -d of Procedure 01-S-08-2, "Exposure and Contamination Control," Revision 108, stated, respectively, to enter the controlled access area an individual must have a radiation work permit and wear proper dosimetry devices as indicated by the area posting.

The NRC Office of Investigations reviewed this matter and determined that the individual deliberately violated a TS requirement. Nonetheless, (1) the licensee identified the issue and reported it to the NRC; (2) the individual was not a licensee official; (3) the violation appears to be the isolated action of the employee without management involvement, and (4) significant remedial action commensurate with the circumstances was taken by the licensee such that it demonstrated the seriousness of the violation to other employees.

Conclusions

On August 11, 1999, the licensee identified a willful violation of TS 5.4.1.a for the failure of a radiation worker to log onto a radiation work permit or wear the required dosimetry when entering a controlled access area. The licensee estimated that the individual received an unmonitored dose of less than 1 millirem, therefore, no actual radiological safety consequences resulted from this event. This Severity Level IV violation (EA 99-

320) is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy (50-416/9918-03). This violation is in the licensee's corrective action program as CR-GGN-1999-0849.

S1 Conduct of Security and Safeguards Activities

On a daily basis, the inspectors observed security personnel practices and the condition of security equipment. Protected and vital area barriers were in good condition. The isolation zones were free of obstructions and the fence and vehicle barrier system was maintained in good condition. The inspectors concluded that the daily security activities were well conducted.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on January 13, 2000. 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. Bottemiller, Manager, Plant Licensing
R. Carroll, Superintendent, Operations
C. Ellsaesser, Manager, Corrective Action and Assessment
C. Stafford, Manager, Plant Operations
R. Moomaw, Manager, Plant Maintenance and Modifications
J. Venable, General Manager, Plant Operations

INSPECTION PROCEDURES USED

37551	Onsite Engineering
61726	Surveillance Observations
62707	Maintenance Observation
71707	Plant Operations
71750	Plant Support Activities
92902	Followup - Maintenance
92903	Followup - Engineering

ITEMS OPENED AND CLOSED

Opened

50-416/9918-01	NCV	Failure to ensure the can of oil was attended in the RCIC room (Section O2.3)
50-416/9918-02	NCV	Failure to maintain SSW Valves 1P41F023A and -B in the required position (Section M3.1)
50-416/9918-03	NCV	Failure of a radiation worker to log onto a radiation work permit (Section R4.1)

Closed

50-416/9918-01	NCV	Failure to ensure the can of oil was attended in the RCIC room (Section O2.3)
50-416/9918-02	NCV	Failure to maintain SSW Valves 1P41F023A and -B in the required position (Section M3.1)
50-416/9918-03	NCV	Failure of a radiation worker to log onto a radiation work permit (Section R4.1)

50-416/99-007	LER	Engineered safety features (ESF) actuation - invalid Level 1 signal (Section M8.1)
50-416/99-005	LER	Containment isolation Valve P41F169B failed repeatedly (Section E8.1)