



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064**

July 31, 2000

EA-00-167

William A. Eaton, Vice President
Operations - Grand Gulf Nuclear Station
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, Mississippi 39150

SUBJECT: GRAND GULF NUCLEAR STATION'S NRC INSPECTION REPORT NO.
50-416/00-06

Dear Mr. Eaton:

On July 1, 2000, the NRC completed an inspection at the Grand Gulf Nuclear Station facility. The results were discussed with Mr. J. Venable and other members of your staff. The enclosed report presents the results of this inspection.

This inspection was an examination of activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, one violation of NRC requirements was identified. This issue was evaluated under the risk significance determination process and was determined to be of very low safety significance (Green). This issue has been entered into your corrective action program and is discussed in the summary of findings and in the body of the attached inspection report. Because of its very low safety significance, the violation will not be cited. If you contest this noncited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with a copy to the Regional Administrator, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Grand Gulf facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Entergy Operations, Inc.

-2-

Sincerely,

/RA/

Joseph I. Tapia, Chief
Project Branch A
Division of Reactor Projects

Docket No.: 50-416
License No.: NPF-29

Enclosure:
NRC Inspection Report No.
50-416/00-06

cc w/enclosures:
Executive Vice President
and Chief Operating Officer
Entergy Operations, Inc.
P.O. Box 31995
Jackson, Mississippi 39286-1995

Wise, Carter, Child & Caraway
P.O. Box 651
Jackson, Mississippi 39205

Winston & Strawn
1400 L Street, N.W. - 12th Floor
Washington, DC 20005-3502

Sam Mabry, Director
Division of Solid Waste Management
Mississippi Department of Natural
Resources
P.O. Box 10385
Jackson, Mississippi 39209

President, District 1
Claiborne County Board of Supervisors
P.O. Box 339
Port Gibson, Mississippi 39150

General Manager
Grand Gulf Nuclear Station
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, Mississippi 39150

The Honorable Richard Ieyoub
Attorney General
Department of Justice
State of Louisiana
P.O. Box 94005
Baton Rouge, Louisiana 70804-9005

Office of the Governor
State of Mississippi
Jackson, Mississippi 39201

Mike Moore, Attorney General
Frank Spencer, Asst. Attorney General
State of Mississippi
P.O. Box 22947
Jackson, Mississippi 39225

Dr. F. E. Thompson, Jr.
State Health Officer
State Board of Health
P.O. Box 1700
Jackson, Mississippi 39205

Robert W. Goff, Program Director
Division of Radiological Health
Mississippi Dept. of Health
P.O. Box 1700
Jackson, Mississippi 39215-1700

Vice President
Operations Support
Entergy Operations, Inc.
P.O. Box 31995
Jackson, Mississippi 39286-1995

Director, Nuclear Safety
and Regulatory Affairs
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, Mississippi 39150

Entergy Operations, Inc.

-4-

Vice President, Operations
Grand Gulf Nuclear Station
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, Mississippi 39150

Electronic distribution from ADAMS by RIV:

Regional Administrator (**EWM**)

DRP Director (**KEB**)

DRS Director (**ATH**)

Senior Resident Inspector (**JLD**)

Branch Chief, DRP/A (**JIT**)

Senior Project Engineer, DRP/A (**DNG**)

Branch Chief, DRP/TSS (**LAY**)

RITS Coordinator (**NBH**)

G. F. Sanborn, D:ACES (**GFS**)

K. D. Smith, RC (**KDS1**)

R. W. Borchardt, OE (**RWB1**)

OE:EA File (**RidsOeMailCenter**)

Only inspection reports to the following:

D. Lange (**DJL**)

NRR Event Tracking System (**IPAS**)

GG Site Secretary (**MJS**)

Dale Thatcher (**DFT**)

G. F. Sanborn, D:ACES (**GFS**)

K. D. Smith, RC (**KDS1**)

R. W. Borchardt, OE (**RWB1**)

OE:EA File (**RidsOeMailCenter**)

DOCUMENT NAME: R:_GG\GG2000-06RP-JLD.wpd

RIV:SRI:DRP/A	RI:DRP/A	PE:DRP/A	ORA:ACES	DRS/PS	C:DRP/A
JLDixon-Herrity	PJAlter	DBAllen	GFSanborn	GMGood	JITapia
/RA/	E-DBAllen	/RA/	GMV for	E-DBAllen	/RA/
07/27/00	07/25/00	07/25/00	07/31/00	07/25/00	07/31/00

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 50-416
License No.: NPF-29
Report No.: 50-416/00-06
Licensee: Entergy Operations, Inc.
Facility: Grand Gulf Nuclear Station
Location: Waterloo Road
Port Gibson, Mississippi 39150
Dates: May 14 through July 1, 2000
Inspectors: Jennifer Dixon-Herrity, Senior Resident Inspector
Donald Allen, Project Engineer
Peter Alter, Resident Inspector
W. A. Maier, Senior Emergency Preparedness Inspector
Approved By: Joseph I. Tapia, Chief, Project Branch A

ATTACHMENTS:

Attachment 1: Supplemental Information
Attachment 2: NRC's Revised Reactor Oversight Process

SUMMARY OF FINDINGS

Grand Gulf Nuclear Station NRC Inspection Report No. 50-416/00-06

The report covers a 7-week period of resident inspection and an announced inspection by a regional emergency preparedness inspector. The significance of issues is indicated by their color (green, white, yellow, or red) and was determined by the significance determination process in Inspection Manual Chapter 0609.

Cornerstone: Initiating Events

- Green. The inspectors identified 33 absorbent pads collecting leaking oil under and around the instrument and service air compressors. No automatic fire detection or suppression equipment was located in the area and only routine inspection of the area was performed by equipment operators once per shift. The absorbent pads were soaked with oil and had the potential to ignite. This increased fire loading without automatic fire detection or suppression capability increased the risk of a loss of instrument air and subsequent reactor scram.

Although this issue could be viewed as a precursor to an event, it was determined to have very low risk significance because it did not affect any systems required for safe shutdown of the plant (Section 1R05).

Cornerstone: Mitigating Systems

- Green. The inspectors identified numerous control room air conditioning and safeguards switchgear and battery room ventilation system equipment failures that were not adequately evaluated. The licensee did not perform an adequate evaluation of a failure in one train if the other train was available. As a result, the licensee did not determine whether each of the failures resulted from common mode failure causes and was unable to ensure that the systems remained capable of performing their intended function after each failure. By not adequately evaluating the equipment failures, and based on their number, the licensee could not demonstrate that the performance or condition of the systems were being effectively controlled through the performance of appropriate preventive maintenance, as required by the maintenance rule. This was a violation of 10 CFR 50.65(a)(2). This violation (EA-00-167) is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. This item was entered into the licensee's corrective action program as Condition Report CR-GGN-2000-0809.

This issue was determined to have very low risk significance. Both systems are of low risk significance and no Technical Specification limits were exceeded. During the time that each failure occurred, the other train was operable and no actual loss of safety function of safety-related equipment occurred (Section 1R12).

Cross-cutting Issues: Problem Identification and Resolution

- No color. The licensee's written documentation of the siren testing data

supporting reported performance indicator data was incomplete. The local offsite agencies tested the sirens monthly by conducting a complete cycle of all 43 offsite sirens and orally reported the results to the licensee. The licensee obtained computer-generated results of monthly siren tests; however, it did not maintain written documentation of alternate methods used by the offsite agencies to determine siren operability, such as local resident verification or growl testing. The licensee entered the issue of incomplete siren test data recording into its corrective action system as Condition Report CR-GGN-2000-0922 (Section 4OA1.3).

This issue was evaluated using the screening process of NRC Inspection Manual Chapter 0609, "Significance Determination Process." By applying the Groups 1, 2, and 3 screening criteria, the inspector determined that the issue did not meet the criteria for entry into the significance determination process because it was not a failure to meet an emergency preparedness planning standard or other regulatory requirement. However, the issue related to the collecting or reporting of performance indicator data. Specifically, the inspector could not verify the performance indicator value from documented test results and determine if a threshold could be exceeded. The inspector concluded that the issue provided substantive information regarding the licensee's ability to conduct an adequate problem identification and resolution of siren failures and that the issue had generic implications for other sites that relied on data provided by offsite organizations. By not documenting siren failures in detail, the licensee could not trend failure mechanisms, recurring failures, or the adequacy of corrective actions for previous failures. Therefore, the issue was determined to be a finding of no color.

Report Details

Summary of Plant Status: During this inspection period, the plant operated at 100 percent power, with the exception of minor power reductions for control valve testing and control rod pattern adjustments.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R04 Equipment Alignment

a. Inspection Scope

The inspectors performed a partial walkdown of residual heat removal Train A while Train B was out of service for a scheduled maintenance outage and a complete walkdown of the safety-related portions of the engineered safety features 125 vdc electrical distribution systems. The inspectors reviewed Instruction 04-1-01-E12-1, "Residual Heat Removal System," Revision 114, and 04-1-01-L11-1, "Plant DC Systems," Revision 111, P&IDs M-1085B, "Residual Heat Removal System," Revision 53 and E-1023, "One Line Meter and Relay Diagram, 125V DC Busses 11DA, 11DB, 11DC," Revision 33, and open maintenance action items in the work management system.

b. Findings

No findings were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors performed walkdowns to assess the material condition of fire protection equipment and control of transient combustibles. Specific risk significant areas covered included: the Division I and II standby diesel generator rooms, the residual heat removal Train C pump room, and the service and instrument air compressor area of the water treatment building. The inspectors reviewed P&IDs M-0035B and D, "Fire Protection System Unit 1," Revisions 43 and 24, and E-0965, "Waste Treatment Building Fire and Smoke Detection System," Revision 7, Grand Gulf Nuclear Station Fire Pre-Plans DG-01 through 04, Revision 1 and A-11, Revision 0, and Procedure 10-S-03-4, "Fire Prevention: Control of Combustible Materials," Revision 11.

b. Findings

On June 29, 2000, the inspectors identified 33 absorbent pads collecting leaking oil under and around the service and instrument air compressors. The absorbent pads were soaked with oil and had the potential to ignite. The inspectors asked the shift superintendent if these pads were accounted for in the transient combustible fire loading for that area. The shift superintendent contacted the plant fire chief and wrote Condition

Report CR-GGN-2000-0930. The plant fire chief stated that there was no fire loading calculation because the area was not safety-related and the equipment was not required for a safe shutdown. After further inspection of the area and review of Drawing E-0965, the inspectors found that there were no automatic fire detection or suppression systems in the area. An auxiliary operator routinely conducted rounds in the area once every 12 hours. The inspectors determined that the increased fire loading in the area, which was not protected by automatic fire detection or suppression systems, increased the risk of a loss of instrument air due to a fire.

The inspectors evaluated this finding using the significance determination process for the initiating event cornerstone. Although there was an increased risk of a loss of instrument air and subsequent reactor scram, this situation did not affect any safety systems required for the safe shutdown of the plant. The inspectors concluded that the safety significance of this issue was very low (Green).

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed four safety-related systems with performance problems to assess the effectiveness of the implementation of the maintenance rule. Specifically, the inspectors evaluated a trip of the control room air conditioning Train A compressor, the failure of individual hydrogen igniters, belt failures on safeguards switchgear and battery room Fan 2Z77B001B, and degraded flow problems with room Cooler 1T46-B003B.

b. Findings

Control Room Air Conditioning

Although the Train A Control Room Air Conditioning Unit Z51B002A tripped on March 18, 2000, the licensee did not consider the failure to be a functional failure under the Maintenance Rule because Train B of the control room air conditioning system was available and capable of providing all system functions. Because the system was of low safety significance, the licensee tracked performance at the system, not train level. No further evaluation was conducted under the Maintenance Rule as a result of this approach to preventive maintenance.

The inspectors reviewed the failure history for the system and found that ten additional failures had been evaluated and found not to be functional failures using the same justification. These included:

- On March 11, 1996, temperature Switch N042A failed and prevented control room air conditioner Unit A from starting.
- On December 8, 1996, control room air conditioner Unit B was required to be taken out of service in response to low oil pressure alarms (a bad shaft seal).

- On December 24, 1996, the belts on the Train B supply fan failed. The cause was identified as "old age/fatigue." The suggestion to create a quarterly preventive maintenance to replace the belts was documented in the evaluation.
- On January 4, 1997, the licensee found that all of the freon had leaked out of the system as a result of a vibration induced crack on a weld on the muffler.
- On January 5, 1998, control room air conditioner Unit B tripped a number of times during an engineered safety features room cooler flow test. The licensee found that it was due to low freon in the system.
- On January 18, 1998, control room air conditioner Unit B fan belts broke. The cause was identified as normal wear.
- On July 21, 1998, the control room air conditioner Unit B breaker tripped while the unit was running. The licensee was not able to identify a cause during troubleshooting and returned the system to service.
- On July 29, 1998, the control room air conditioner Unit B breaker tripped again. The licensee found that the breaker contactor brackets failed.
- On February 22, 1999, control room air conditioner Unit B tripped on high pressure. This was documented in the evaluation as a problem that could be caused by a high pressure spike with the cooling water valve nearly closed.
- On February 1, 2000, control room air conditioner Unit B tripped due to a high freon alarm due to a failed freon detector.

The inspectors evaluated the available information on the failures and determined that the failures were all functional failures of one train of control room air conditioning. Given the information available, the failures on January 18, 1998, July 29, 1998, February 22, 1999, and March 18, 2000, should have been evaluated as maintenance preventable functional failures (MPFFs).

A trip of the Unit A control room air conditioner due to low pressure on November 9, 1998, was the most recent MPFF documented. This was identified as a functional failure because the Unit B control room air conditioner was out of service for maintenance at the time. Along with this MPFF, a total of three MPFFs occurred in 1998. Given the documented performance criteria chosen by the licensee (less than or equal to two MPFFs), the control room air conditioning system should have been evaluated to determine if it required monitoring in accordance with 10 CFR Part 50.65(a)(1).

Safeguards Switchgear and Battery Room Ventilation System

The Safeguards Switchgear and Battery Room Ventilation System Fan 2ZZB001B motor sheave failed on August 24, 1998. The licensee determined that this was not a functional failure under the Maintenance Rule because the other train was available to

perform the system functions. The system was considered a normally running, low safety significant system and was therefore being tracked at the system level.

The inspectors reviewed the failure history for the system and found that six additional failures had been evaluated and found not to be functional failures using the same justification. These included:

- On January 5, 1996, the heater coil unit for Fan Z77B001B failed to heat when required. This was due to a heater disconnect switch that had burnt beyond repair.
- On March 17, 1998, the licensee found that the adjustable sheaves found on Air Handling Unit Z77B001B were not correct. The sheaves did not have sufficient pitch adjustment to achieve design flows.
- On March 20, 1998, the train could not achieve design flows through Damper 1Z77F036A as a result of a locked closed manual damper. The licensee found that the system operating instruction required the damper to be closed and locked.
- On August 17, 1998, Damper Z77F035A failed to open a second time. The licensee found that the cause was a failed relay. The first failure was identified as an MPFF as a result of other maintenance occurring at the time and is discussed further in the next paragraph.
- On August 19, 1998, the licensee found the motor sheaves and four belts on Unit Z77B001B broken when they went to perform maintenance. New, modified sheaves had been installed in April 1998.
- On August 24, 1998, the licensee found the motor sheaves and four belts on Unit Z77B001B broken a second time.

The inspectors evaluated the available information on the failures and determined that the failures were all functional failures of one train of the safeguards switchgear and battery room ventilation system. Given the available information, the failures on March 20, 1998, and August 17, 19, and 24, 1998, should have been evaluated as MPFFs.

The most recent MPFF documented was the failure of Damper Z77F035A to open when the train was started from the control room while the emergency diesel generator for the other division was out of service for planned maintenance. As noted above, this failure was not adequately addressed because the damper failed a second time. After the second failure, the licensee identified the root cause as a failed relay and replaced it. Along with this MPFF, there were four MPFFs in 1998. Given the documented performance criteria chosen by the licensee (less than or equal to two MPFFs), the safeguards switchgear and battery room ventilation system should have been evaluated to determine if it required monitoring in accordance with 10 CFR 50.65(a)(1).

Compliance with the Maintenance Rule

In both of the issues discussed above, effective evaluations to determine whether the system should be monitored under 10 CFR 50.65(a)(1) did not occur because the licensee elected to only evaluate problems which could affect an entire system rather than an individual train or component. The inspectors found that evaluation of problems at the system level prevented the licensee from demonstrating effective maintenance on the structure, system, or component (SSC) and failed to address the potential that the problem could affect the other train or other components.

10 CFR 50.65 (a)(2) states that monitoring as specified in 10 CFR 50.65(a)(1) is not required where it has been demonstrated that the performance or condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, such that the SSC remains capable of performing its intended function. The licensee failed to demonstrate that the control room air conditioning system or the safeguards switchgear and battery room ventilation system conditions were effectively controlled through the performance of appropriate preventive maintenance. Numerous equipment or train failures were not effectively evaluated to determine whether additional maintenance was required to verify that the problem was not common mode nor to ensure that the system remained capable of performing its function. This was a violation of 10 CFR 50.65(a)(2). This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. This violation (EA-00-167) was entered into the licensee's corrective action program as Condition Report CR-GGN-2000-0947(50-416/0006-01).

The inspectors evaluated the violation using the significance determination process. Both systems are of low risk significance and during the time that each problem existed, the other train was operable. Since no actual loss of safety function of safety-related equipment occurred and since no Technical Specification limits were exceeded the safety significance of this issue was very low (Green).

1R13 Maintenance Risk Assessment and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the risk evaluations and overall plant configuration controls for work scheduled on engineered safety feature electrical switchgear room coolers, which extended Technical Specification out of service time for the standby service water system and the planning for and operator monitoring of required Technical Specification surveillances performed on drywell atmospheric particulate and atmospheric gaseous monitoring system with the drywell air cooler condensate flow rate monitoring system inoperable.

b. Findings

No findings were identified.

1R14 Nonroutine Plant Evolutions

a. Inspection Scope

The inspectors observed as operators swapped operating steam jet air ejectors, an infrequently performed evolution which could cause a plant transient. The inspectors reviewed Procedure 04-1-01-N62-1, "Condenser Air Removal," Revision 48.

b. Findings

No findings were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following operability evaluations for technical adequacy, applicable compensatory measures, and impact on continued plant operation:

- Division III diesel generator high stator temperature operability evaluation
- Condition Report CR-GGN-2000-0783, multiple air leaks on Division I standby diesel generator air intake headers
- Condition Report CR-GGN-2000-0863, evaluation of the number of hydrogen igniters out of service following completion of surveillance testing

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors observed or evaluated the postmaintenance tests of the following systems or equipment to determine whether the tests confirmed equipment operability:

- Control Rods 40-17 and 40-49
- Division I standby diesel generator
- Control Room Standby Fresh Air Train B Recirculation Valve SZ51F016

b. Findings

No findings were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed or reviewed the following surveillance tests:

- 06-OP-1E51-Q-0002, "RCIC [Reactor Core Isolation Cooling] System Valve Operability Test," Revision 104
- 06-RE-1C11-V-402, "Control Rod Scram Testing," Revision 107
- 06-OP-1P75-M-0001, "Standby Diesel Generator 11 Functional Test," Revision 110

b. Findings

No findings were identified.

1EP2 Alert and Notification System Testing (71114.02)

a. Inspection Scope

The inspector reviewed the following items to determine if the licensee's offsite siren testing program was adequately implemented:

- Design of the offsite siren system
- Licensee commitments and license requirements for the offsite siren system
- Maintenance records for the siren system
- Procedures for siren testing
- Offsite siren system problem identification and resolution documentation

b. Findings

No findings were identified.

1EP3 Emergency Response Organization Augmentation (71114.03)

a. Inspection Scope

The inspector reviewed the following items to evaluate the adequacy of the licensee's system for notification and augmentation of the onsite emergency response organization:

- Design of the emergency response organization augmentation system
- Commitments and license requirements for the augmentation system
- A demonstration test of the system
- Results of augmentation system drills conducted in the last 18 months
- Staffing levels of the emergency response organization duty roster

- Training records for a sample of the emergency response organization
- Interview of personnel responsible for operating the augmentation system
- Augmentation system problem identification and resolution documentation

b. Findings

No findings were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector reviewed Revision 41 to the Grand Gulf Nuclear Station Emergency Plan, which was transmitted via an April 19, 2000, letter to the NRC. The inspector performed this review to determine if the revised plan met NRC requirements. This review was performed in the NRC Regional office on June 16, 2000, prior to the onsite inspection.

b. Findings

No findings were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspector reviewed the following items to evaluate the licensee's ability to identify and resolve emergency preparedness related problems:

- Licensee corrective action program procedures
- Corrective actions tracked for actual events and emergency preparedness drills and exercises
- A sample of completed corrective actions in risk significant emergency preparedness areas
- The two most recent emergency preparedness program reviews
- Other emergency preparedness internal and external assessments

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Drill and Exercise Performance

a. Inspection Scope

The inspector verified a sample of the licensee's reported results of the drill and exercise performance indicator by reviewing records for the 1999 NRC-evaluated exercise and licensee drills and simulator training scenarios conducted during the first calendar quarter of 2000.

b. Findings

No findings were identified.

.2 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspector verified the licensee's reported results for the emergency response organization drill participation performance indicator by reviewing drill participation records for a sample of 12 emergency responders to determine if these responders had participated in a drill or exercise within the previous 8 calendar quarters.

b. Findings

No findings were identified.

.3 Alert and Notification System Reliability

a. Inspection Scope

The inspector verified the licensee's reported results for the alert and notification system reliability performance indicator by reviewing offsite siren test results performed in calendar year 2000.

b. Findings

The licensee's written documentation of the siren testing data supporting reported performance indicator data was incomplete. The local offsite agencies tested the sirens monthly by conducting a complete cycle of all 43 offsite sirens and orally reported the results to the licensee. The licensee obtained written computer-generated results of monthly siren tests; however, it did not maintain written documentation of alternate methods used by the offsite agencies to determine siren operability, such as local resident verification or growl testing. The licensee entered the issue of incomplete siren test data recording into its corrective action system as Condition Report CR-GGN-2000-0922.

Siren work orders generated as a result of test failures were not detailed. In many cases, the work orders stated that the siren's local power supply breaker was found

tripped and was reset with no further investigation. As a result, siren tests conducted during the current calendar year (2000) contained recurrent failures and a degrading performance indicator, prompting the licensee to initiate an intensive siren inspection and maintenance program for all of the offsite sirens. However, the performance indicator did not degrade below the licensee control band. The licensee had self-identified the degrading performance indicator trend before the inspection.

This issue was evaluated using the screening process of NRC Inspection Manual Chapter 0609, "Significance Determination Process." By applying the Groups 1, 2, and 3 screening criteria, the inspector determined that the issue did not meet the criteria for entry into the significance determination process because it was not a failure to meet an emergency preparedness planning standard or other regulatory requirement. However, the issue related to the collecting or reporting of performance indicator data such that the inspector could not verify the performance indicator value from documented test results and determine if a threshold could be exceeded. The inspector concluded that the issue provided substantive information regarding the licensee's ability to conduct an adequate problem identification and resolution of siren failures. By not documenting siren failures in detail, the licensee could not trend failure mechanisms, recurring failures or the adequacy of corrective actions for previous failures. Consequently, the licensee needed to perform a major corrective action program for siren system performance degradation. Therefore, the issue was determined to be a finding of no color.

4OA5 Temporary Instruction 2515/144, (Performance Indicator Data Collecting and Reporting Process Review)

a. Inspection Scope

The inspector performed a portion of the above mentioned temporary instruction for the emergency response organization drill participation performance indicator to determine if the licensee was appropriately implementing NRC and industry guidance for collecting and reporting data. The inspector reviewed the indicator definitions, data reporting elements, and calculation methods for consistency with Nuclear Energy Institute Guidance Document NEI-99-02, "Regulatory Assessment Performance Indicator Guideline."

b. Findings

No findings were identified.

4OA6 Meetings

.1 Exit Meeting Summary

On June 29 and July 5, 2000, the inspectors conducted meetings with Mr. Joseph Venable, General Manager, and other members of plant management and presented the inspection results. Plant management acknowledged the findings presented and informed the inspectors that no proprietary material was examined during the inspection.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

C. Bottemiller, Manager, Plant Licensing
W. Eaton, Vice President, Operations
B. Edwards, Manager, Maintenance
C. Ellsaesser, Manager, Corrective Action and Assessment
E. Harris, Manager, Systems Engineer
C. Lambert, Director, Engineering
R. Moomaw, Manager, Outage
W. Shelly, Manager, Training
G. Sparks, Manager, Operations
J. Venable, General Manager, Plant Operations
R. Wilson, Superintendent, Radiation Protection
M. Wright, Manager, Planning and Scheduling

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-416/0006-01	NCV	Failure to demonstrate that the control room air conditioning system or the safeguards switchgear and battery room ventilation system conditions were effectively controlled through the performance of appropriate preventive maintenance.
----------------	-----	---

Closed

50-416/0006-01	NCV	Failure to demonstrate that the control room air conditioning system or the safeguards switchgear and battery room ventilation system conditions were effectively controlled through the performance of appropriate preventive maintenance.
----------------	-----	---

LIST OF DOCUMENTS REVIEWED

Procedures:

04-S-03-C11-5, "Control Rod Stroke Time Testing," Revision 104
06-EL-1E61-SA-0002, "Hydrogen Igniter System A Semi-Annual Test," Revision 101
05-1-02-V-9, "Loss of Instrument Air," Revision 28
LI-102, "Corrective Action Process," Revision 0
01-S-17-38, "Root Cause Evaluation Process," Revision 0
01-S-03-9, "Grand Gulf Nuclear Station Corrective Action Review Board," Revision 1
01-S-03-13, "Event Review Process," Revision 0
01-S-10-4, "Emergency Preparedness Drills and Exercises," Revision 7
10-S-04-4, "Performance Indicators," Revision 0
10-S-10-3, "Emergency Preparedness Department Responsibilities," Revision 6

Condition Reports:

CR-GGN-2000-0895	CR-GGN-1998-1311
CR-GGN-2000-0863	CR-GGN-1998-1340
CR-GGN-2000-0809	CR-GGN-1998-1367
CR-GGN-2000-0713	CR-GGN-1998-1205
CR-GGN-2000-0371	CR-GGN-1998-0893
CR-GGN-2000-0141	CR-GGN-1998-0255
CR-GGN-1999-1054	CR-GGN-1998-0221
CR-GGN-1999-0862	MNCR 0177-94
CR-GGN-1999-0743	CR-GGN-2000-149
CR-GGN-1999-0332	CR-GGN-2000-185
CR-GGN-1999-0221	CR-GGN-2000-805
CR-GGN-1999-0127	CR-GGN-2000-907

Audit Reports:

QPA 06.01-98, GIN-98/01800
QPA 07.01-99, GIN-99/00406
QPA 06.01-99, GIN-99/02121
QPA 07.01-00, GIN-2000/00216

Miscellaneous:

Condition Reporting System Database
MAI No. 278832, Division III diesel generator stator high temperature
MAI No. 279698, Division I standby diesel generator jacket water leak
Maintenance Rule Database
Shift Superintendent's Control Room Log
Reactor Operator Control Room Log
Work Management System Database
Grand Gulf Nuclear Station Final Safety Analysis Report, Section 13.3, (Grand Gulf Nuclear Station Emergency Plan), Revision 41
Simulator Scenario Packages for first calendar quarter, 2000
Emergency Preparedness Drill Reports for January 19 and March 1, 2000
Drill Attendance Sheets for calendar years 1999, 2000
Grand Gulf Nuclear Station Site-Specific Offsite Radiological Emergency Preparedness Prompt Alert and Notification System Evaluation Report dated June 9, 1987
Public Alert and Notification System Offsite Agency Training, Revision of January 2000
Alert and Notification System Test Printouts for January 10, February 7, and March 6, 2000
Grand Gulf Nuclear Station Alert and Notification System Assessment dated February 18, 2000
Emergency Response Organization Augmentation Tests conducted November 1998 - May 2000
Claiborne County Siren Report for first calendar quarter, 2000
Tensas Parish Siren Report for first calendar quarter, 2000

ATTACHMENT 2

NRC'S REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
<ul style="list-style-type: none">•Initiating Events•Mitigating Systems•Barrier Integrity•Emergency Preparedness	<ul style="list-style-type: none">•Occupational•Public	<ul style="list-style-type: none">•Physical Protection

To monitor these seven cornerstones of safety, the NRC used two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the significance determination process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, or RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.