



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-4005**

June 10, 2005

George A. Williams, Site Vice President  
Grand Gulf Nuclear Station  
Entergy Operations, Inc.  
P.O. Box 756  
Port Gibson, MS 39150

**SUBJECT: GRAND GULF NUCLEAR STATION -- NRC PROBLEM IDENTIFICATION AND  
RESOLUTION INSPECTION REPORT 05000416/2005009**

Dear Mr. Williams:

On April 28, 2005, the Nuclear Regulatory Commission (NRC) completed a team inspection at your Grand Gulf Nuclear Station. The enclosed report presents the results of this inspection. On March 25, 2005, we discussed the preliminary inspection results with Mr. W. Brian and other members of your staff. The team continued in-office document reviews and conducted a final exit meeting with Mr. M. Krupa and other members of your staff on April 28, 2005.

This inspection examined activities conducted under your license as they relate to the identification and resolution of problems, compliance with the Commission's rules and regulations and with the conditions of your license. The team reviewed approximately 150 condition reports, apparent cause and root cause analyses, as well as supporting documents. In addition, the team reviewed cross-cutting aspects of NRC and licensee-identified findings and interviewed personnel regarding the safety-conscious work environment.

On the basis of the sample selected for review, the team concluded that your processes to identify, prioritize, evaluate, and correct problems were generally effective; thresholds for identifying issues remained appropriately low and, in most cases, corrective actions were adequate to address conditions adverse to quality. The team concluded that a positive safety-conscious work environment existed at Grand Gulf.

The report documents two findings that were evaluated under the significance determination process as having very low safety significance (Green). The NRC determined that one violation was associated with these findings. The violation is being treated as a noncited violation because it was of very low safety significance and because it has been entered into your corrective action program consistent with Section VI.A of the Enforcement Policy. If you contest the violation or the significance of the noncited violation, you should provide a response within 30 days of the date of the inspection report, with the basis for your denial, to the U.S. Nuclear Regulator Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; 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 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**//RA//**

Linda Joy Smith, Chief  
Engineering Branch 2  
Division of Reactor Safety

Dockets: 50-416

Licenses: NPF-29

Enclosure:

Inspection Report 05000416/2005009  
w/Attachment: Supplemental Information

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Grand Gulf Nuclear Station

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Grand Gulf Nuclear Station

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 DRS STA (**DAP**)  
 OEDO RIV Coordinator (**JLD**)  
 GG Site Secretary (**NAS2**)

SISP Review Completed:  Yes  No ADAMS: / Yes  No Initials: ljs  
 / Publicly Available  Non-Publicly Available  Sensitive / Non-Sensitive

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DRP/A:SRI	ACES/SAC	DRS/OB:SOE	DRP/A:SRI	DRP/D:RI
GLGuerra	HAFreeman	GWJohnston	GBMiller	GFLarkin
/RA/	/RA/	via E	/RA/	via E
5/19 /05	6/10 /05	5/19 /05	5/19/05	6/8 /05
DRS/EB2:SRI	DRP/C:C	C:EB2		
GDReplogle	KMKennedy	LJSmith		
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6/ 3 /05	6/10 /05	6/10 /05		

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**ENCLOSURE**

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Dockets: 50-416  
Licenses: NPF-29  
Report No.: 05000416/2005009  
Licensee: Entergy Operations, Inc.  
Facility: Grand Gulf Nuclear Station  
Location: Waterloo Road  
Port Gibson, Mississippi 39150  
Dates: March 7 through March 25, 2005; Exit April 28, 2005  
Inspectors: G. L. Guerra, Senior Resident Inspector, South Texas Project  
G. B. Miller, Senior Resident Inspector, Grand Gulf  
G. W. Johnston, Senior Operations Engineer, Region IV  
G. F. Larkin, Resident Inspector, Waterford 3  
H. A. Freeman, Senior Allegations Coordinator, Region IV  
G. D. Replogle, Senior Reactor Inspector, Region IV  
Approved by: L. J. Smith, Chief  
Engineering Branch 2  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000416/2005009; 3/7/05 - 4/28/05; Grand Gulf Station; biennial baseline inspection of the identification and resolution of problems. A violation and one finding was identified in the area of problem identification, evaluation, and effectiveness of corrective actions.

The inspection was conducted by two senior resident inspectors, a senior operations engineer, a senior reactor inspector, a resident inspector, and a senior allegations coordinator. Two Green findings of very low safety significance were identified during this inspection; one of which was classified as a noncited violation. The findings were evaluated using the significance determination process. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### A. Identification and Resolution of Problems

- The team reviewed approximately 150 condition reports, apparent and root cause analyses, as well as other documents, to assess problem identification and resolution activities. Over the past two years (the assessment period) the team noted a few instances where problems were not properly identified, evaluated, prioritized or corrected but, overall, the licensee's processes were effective.

Based on the interviews conducted, the team concluded that a positive safety-conscience work environment existed at Grand Gulf. The team determined that employees generally felt free to raise safety concerns to their supervision, the employee concerns program and the NRC. The team received a few isolated comments regarding: 1) a reluctance to use the site employee concerns program; 2) production pressure; and 3) the impact of staff reductions on work load and the ability to identify safety issues. Nonetheless, the interviewees all believed that potential safety issues were being addressed. The team determined that licensee management was aware of the perceptions and was taking action to address them.

### B. Inspector-Identified and Self-Revealing Findings

#### Cornerstone: Mitigating Systems

- (Green) The inspectors identified a 10 CFR 50, Appendix B, Criterion XVI violation for the failure to take prompt corrective actions to address a degraded control room air conditioning unit (a condition adverse to quality). Since 1999, Grand Gulf engineers were aware that the Division I control room emergency air conditioning unit could not remove the required heat load under design basis conditions. The engineers failed to take prompt corrective measures to address the problem, because they did not have an accurate understanding of system requirements. The inspectors also identified that the licensee failed to properly address system operability on two occasions, as operability justifications were based on inaccurate or non-applicable information. This issue had cross-cutting aspects in the area of problem evaluation and prioritization.

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The failures to: 1) promptly correct a condition adverse to quality; and 2) properly evaluate equipment operability were performance deficiencies. The finding had more than minor significance because it affected the reactor safety mitigating systems objective to ensure the availability of systems that respond to initiating events. The finding was of very low risk significance because it was a design/qualification deficiency that did not result in a loss of function per Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1 (Section 4OA5).

#### Cornerstone: Emergency Preparedness

- (Green) The team documented a self-revealing finding for the licensee's failure to take prompt and effective corrective measures to address an emergency operations facility diesel generator failure. The diesel failed to start during two loss of power events to the emergency operating facility. Corrective measures following the first event were not timely. This issue had crosscutting aspects associated with problem identification and resolution.

The failure to take effective corrective measures to address an inoperable emergency operations facility diesel generator was a performance deficiency. This issue is greater than minor because it affected the emergency preparedness cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect public health and safety in the event of a radiological emergency. This issue did not meet the entry conditions for the emergency preparedness significance determination process because it did not constitute a non-compliance with emergency preparedness requirements. Per NRC Manual Chapter 0612, "Power Reactor Inspection Reports," dated January 14, 2004, NRC management performed a significance review to ensure that the issue was of very low safety significance (Section 4OA2e(2)ii).

#### C. Licensee-Identified Violations

None



## REPORT DETAILS

### 4 OTHER ACTIVITIES (OA)

#### 4OA2 Identification and Resolution of Problems

The team based the following conclusions on their independent inspection and review of issues that were identified by others, during the assessment period. The assessment period ranged from April 3, 2003 (the last biennial problem identification and resolution inspection) to the end of the onsite inspection on March 25, 2005. The examples are divided into two groups. The first group (Current Issues) includes problems that were identified during the assessment period where the performance deficiency also occurred during the same period. The second group (Historical Issues) includes issues that were identified during the assessment period but all the performance deficiencies occurred outside the period of interest.

##### a. Effectiveness of Problem Identification

###### (1) Inspection Scope

The inspectors reviewed items selected across the seven cornerstones to determine if problems were being properly identified, characterized, and entered into the corrective action program. Specifically, the team reviewed plant logs and maintenance records and verified that conditions adverse to quality, identified in these processes, were also entered into the corrective action program. In addition, the team reviewed a sample of licensee audits and self assessments, trending reports, system health reports, and various other reports and documents related to the corrective action program.

The team interviewed station personnel and evaluated corrective action documentation to determine the licensee's threshold for identifying problems. In addition, in order to assess the licensee's handling of operator experience, the team reviewed the licensee's evaluation of selected industry operating experience reports, including licensee event reports, NRC Generic Letters, Bulletins and Information Notices, and generic vendor notifications.

###### (2) Assessment

The team determined that most problems were properly identified and entered into the corrective action program. In a few instances plant personnel failed to initiate condition reports. Overall, however, the licensee maintained an effective problem identification program.

#### **Current Issues**

Example 1: The NRC identified that operators on rounds had failed to identify unplugged heat traces to fire hose stations during prolonged freezing periods (NRC Inspection Report 05000416/2002006).

Example 2: The NRC identified, during a graded emergency preparedness drill, that the licensee had failed to follow the procedure for issuing potassium iodide to emergency

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workers. The licensee should have identified this problem during their critique (NRC Inspection Report 05000416/2003003).

Example 3: The licensee failed to initiate condition reports on several occasions when the animal intrusion fence was found de-energized or the gate to the 34.5 KV switchyard was found open. Consequently, on February 11, 2005, an animal crossed the boundary and caused a switchyard fault and reactor scram (self-revealing, see Section 4OA2e(2)i of this report).

### **Historical Issues**

Example 4: The licensee identified that they failed to properly address Information Notice 91-85, "Potential Failures of Thermostatic Control Valves for Diesel Generator Jacket Cooling Water," December 26, 1991, which addressed limited service lives for certain temperature control valve temperature elements. Consequently, an element that had exceeded its service life was installed on the Division I emergency diesel generator jacket cooling water system. In addition, the same component on the Division III emergency diesel generator had exceed the recommended service life (NRC Inspection Report 05000416/2004004).

#### b. Prioritization and Evaluation of Issues

##### (1) Inspection Scope

The team reviewed condition reports and operability evaluations to assess the licensee's ability to evaluate conditions adverse to quality. The team reviewed a sample of failure mode analyses, apparent cause analyses and root cause analyses to ascertain whether the licensee identified and considered the full extent of conditions, generic implications, common causes, and previous occurrences. The team also observed management oversight of significant conditions adverse to quality, including attendance at the Pre-Condition Review Group meeting.

In addition, the team reviewed licensee evaluations of selected industry operating experience information, including NRC Information Notices and industry provided information, to assess whether issues applicable to Grand Gulf were appropriately addressed.

The team performed a historical review of condition reports covering the last 5 years regarding the standby service water system and Agastat® relay problems to determine if the licensee had appropriately addressed long-standing issues.

##### (2) Assessment

The team concluded that problems were generally prioritized and evaluated in accordance with the licensee's corrective action program guidance and NRC requirements. The team found that for the sample of root cause analyses reviewed, the licensee was self critical and thorough when addressing significant conditions adverse to quality. However, issues related to poor problem evaluation and prioritization

periodically challenged the licensee, as self-revealing and NRC identified problems continued to surface.

### **Current Issues**

Example 1: The NRC identified that the licensee failed to take prompt corrective actions to address a degraded control room air conditioning unit. The licensee had identified the nonconforming condition in 1999 but failed to correct the problem. In addition, two subsequent operability evaluations were inadequate because they were based on inaccurate or non-applicable information (See Section 4OA5 of this inspection report).

Example 2: The NRC identified that the licensee failed to properly evaluate/control the application of Agastat® general purpose relays to ensure that they did not remain in service in excess of their recommended service life. Consequently, numerous relays suffered age related failures (NRC Inspection Report 05000416/2003002).

Example 3: The NRC identified that the licensee failed to properly evaluate Agastat® relay failures, in that they did not identify the failure mechanism. Consequently, additional failures occurred (NRC Inspection Report 05000416/2003006).

Example 4: Corrective measures following a June, 2002 emergency operations facility diesel generator failure were not timely. Consequently, during a partial loss of offsite power event in August, 2003, the diesel again failed to start (self-revealing, see Section 4OA2e(2)ii of this report).

### **Historical Issues**

Example 5: The NRC identified that the licensee failed to promptly correct areas of known localized corrosion in the standby service water system piping. Consequently, leaks developed in the piping. (NRC Inspection Report 05000416/2004002).

Example 6: The licensee identified that they had failed to promptly correct corroded standby service water system pipe hangers. Subsequently, the hangers suffered from severe corrosion before they were repaired (NRC Inspection Report 05000416/2004004).

#### c. Effectiveness of Corrective Actions

##### (1) Inspection Scope

The team reviewed condition reports to verify that corrective actions were identified and implemented in a timely manner commensurate with safety, including corrective actions to address root cause or generic concerns. The team reviewed corrective actions planned and implemented by the licensee and sampled specific technical issues to determine whether adequate decisions related to structure, system, and component operability were made.

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In addition, the team reviewed a sample of those condition reports written to address NRC inspection findings to ensure that the corrective actions adequately addressed the issues as described in the inspection reports. The team also reviewed a sample of corrective actions closed to other condition reports and programs, such as work requests, to ensure that the corrective actions were still adequate and timely.

(2) Assessment

The licensee's corrective actions were generally effective at addressing the conditions adverse to quality. The licensee had identified that in some instances condition reports were closed to work orders and the work orders were inappropriately closed without action. The inspectors found no examples of a continuing problem during this inspection.

**Current Issues**

Example 1: The NRC identified, during a graded emergency preparedness drill, that the licensee had not taken adequate measures to address recurring performance problems involving weak command and control in one emergency response facility and the untimely manning of another emergency response facility (NRC Inspection Report 05000416/2003003).

Example 2: Corrective actions to address a wild animal induced switchyard fault and reactor scram were inadequate. Following one such event on June 22, 2002, the licensee installed an electrified animal intrusion fence. However, plant personnel failed to re-energize the fence and/or close the gate on numerous occasions. Consequently, on February 11, 2005, an animal crossed the boundary and caused a switchyard fault and reactor scram (self-revealing, see Section 4OA2e(2)i of this inspection report).

**Historical Issues**

None.

d. Assessment of Safety-Conscience Work Environment

(1) Inspection Scope

The team interviewed 20 individuals selected randomly from a variety of organizations within the licensee's workforce including both supervisory and non-supervisory individuals. These organizations included maintenance, work planning, engineering, quality organizations and operations as well as others. The purpose of the interviews was to determine whether the licensee had established a safety-conscious work environment where workers felt free to raise safety concerns and pursue resolution without fear of retribution. In addition, the team reviewed a nuclear safety culture survey, conducted by an outside contractor for the licensee, and a safety culture assessment performed by the licensee's corporate office.

(2) Assessment

The team concluded that a safety-conscious work environment existed at the Grand Gulf Nuclear Station. All individuals indicated that they felt comfortable raising and pursuing safety concerns. Individuals did not feel intimidated nor were they discouraged from writing condition reports. Individuals also indicated that they were willing to pursue resolution of their concerns to higher levels (even to the Site Vice President and/or the NRC if necessary). The team noted the following observations:

- While all individuals were aware of the Employee Concerns Program, few individuals mentioned the Employee Concerns Program as a viable option for pursuing safety concerns. In addition, some individuals perceived a lack of independence from management by the Employee Concerns Program.
- While all individuals believed that the plant was operated safely, many of the individuals stated that they felt a lot of pressure from management (whether stated or implied) to restore the unit online during an outage and some individuals felt that their ability to identify concerns had been impacted by increased workloads due to reductions in staff.

The team determined that licensee management was aware of the perceptions and was taking action to address them.

e. Specific Issues Identified During This Inspection

(1) Inspection Scope

During the reviews described in sections 4OA2 a.(1), 4OA2 b.(1), 4OA2 c.(1), and 4OA2 d.(1) the team independently identified the following findings.

(2) Findings and Observations

i Unresolved Item 05000416/2005009-01: Corrective actions to prevent repetitive switchyard ground fault induced scrams

Introduction. The team documented an unresolved item for inadequate corrective actions to address wild animal induced switchyard faults and reactor scrams. Following one such event on June 22, 2002, the licensee installed an electrified animal intrusion fence. However, on several occasions plant personnel failed to re-energize the fence and/or close the gate. Consequently, on February 11, 2005, an animal crossed the boundary and caused a switchyard fault and reactor scram. In addition, the licensee identified that plant personnel had found the fence de-energized and/or the gate open on several occasions but plant personnel failed to initiate condition reports to address the problems. The finding had cross-cutting aspects associated with problem identification and effectiveness of corrective actions.

Description. The team reviewed an automatic reactor trip on February 11, 2005, caused by the loss of Bus 11R in the 34.5 kV switchyard. Bus 11R was lost when a raccoon

caused a ground fault on the power feed downstream of Transformer ST11. The licensee concluded that no damage was caused to plant equipment. The team noted on June 22, 2002, a raccoon also caused a line to ground fault that resulted in a reactor scram due to loss of equipment powered by transformer ST21.

The licensee determined that the root cause of the June 22, 2002, event was inadequate barriers to prevent animals from intruding into the 34.5 kV switchyard. As a corrective measure, the licensee installed an electrified fence around the 34.5 kV switchyard to prevent future animal intrusion. The inspectors noted on June 20, 2003, and February 17, 2004 (CR-GGN-2003-1888 and 2004-0529) that personnel found the 34.5 kV switchyard electrical fence de-energized. As an additional corrective measure, the licensee notified operations and electrical maintenance personnel to reinforce expectations to keep the gate closed and the fence energized. The licensee also identified that, at other times, the gate was found open or the fence was de-energized but condition reports were not written to document the problems. Procedure EN-LI-102, "Corrective Action Process," Revision 1, required that condition reports be written to address the adverse conditions.

Following the reactor scram, on February 12, 2005, the animal intrusion fence was again found turned off, and on February 14, 2005, the gate was again found open.

Analysis. The failures to: 1) maintain the integrity of the animal intrusion fence to prevent initiating events; and 2) initiate condition reports when the animal intrusion fence was found de-energized (or the gate was found open) were performance deficiencies. The finding was greater than minor because it affected the initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. The team had not completed the significance determination at the close of the inspection. This issue is unresolved pending completion of inspection necessary to support a significance determination.

Enforcement. The inspectors had not completed the enforcement review at the close of the inspection. This issue is unresolved for compliance pending completion of that review. (URI 05000416/2005009-01).

ii Finding 05000416/2005009-02: Inadequate corrective actions to address multiple emergency operations facility diesel generator failures

Introduction. The team documented a Green self-revealing finding for the failure to prevent repetitive failures of the emergency operations facility diesel generator. The finding had crosscutting aspects in the area of problem prioritization.

Description. On June 22, 2002, the emergency operations facility diesel generator failed to start in response to a loss of power to the facility. On August 28, 2003, the emergency operations facility suffered a similar loss of power and the diesel generator again failed to start. The diesel failed in both instances because the starting battery had an insufficient charge. The licensee determined that recommended corrective measures for the first failure, that included preventive maintenance tasks for the battery charger, were not implemented and could have prevented the second failure. The

licensee determined that the diesel could have been restored to an operating status in approximately 2.0 hours. Nonetheless, the diesel failure would have complicated the licensee's emergency response to events involving a loss of offsite power.

Analysis. The failure to take effective corrective measures to address an inoperable emergency operations facility diesel generator was a performance deficiency. This issue is greater than minor because it affects the emergency preparedness cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect public health and safety in the event of a radiological emergency. This issue did not meet the entry conditions for the emergency preparedness significance determination process because it did not constitute a non-compliance with emergency preparedness requirements. Per NRC Manual Chapter 0612, "Power Reactor Inspection Reports," dated January 14, 2004, NRC management performed a significance review to ensure that the issue was of very low safety significance.

Enforcement. No violation of regulatory requirements occurred. The finding did not represent a noncompliance because it occurred on nonsafety-related equipment and no emergency preparedness requirements were violated. This finding was entered into the licensee's corrective action program as CR-GGN-2003-2527 (FIN 05000416/2005009-02).

40A5 Review of Open Items (71111.07)

(Closed) URI 05000416/2004005-02: Inadequate Corrective Actions to Address Degraded Control Room Air Conditioning Unit.

Introduction. The inspectors identified a 10 CFR 50, Appendix B, Criterion XVI violation for the failure to take prompt corrective actions to address a degraded control room air conditioning unit. Since 1999, Grand Gulf engineers were aware that the Division I control room emergency air conditioning could not remove the required heat load under design basis conditions but failed to take prompt corrective measures to address the problem. The inspectors also identified that the licensee failed to properly address system operability on two occasions, as operability justifications were based on inaccurate or non-applicable information. This issue had cross-cutting aspects in the area of problem identification and resolution.

Discussion. In 1999, as documented in CR-GGN-1999-0742, the licensee identified that the Division I control room air conditioning unit could not remove the required heat load under design basis conditions - the unit could not maintain the control room at less than or equal to 90 EF assuming a post-accident heat load. More recent surveillances, conducted on March 19, 2001; August 5, 2002; and February 5, 2004 identified the same problem. The calculations indicated that the control room temperatures would peak at approximately 95 EF and stay above 90 EF for about a week. The Updated Safety Analysis Report, Section 9.4.1.1.2, the Technical Requirements Manual, Section 6.7.3 "Temperature Monitoring," and the Technical Specifications 3.7.4 Bases, Section 3.7.4.C.1 and C.2, identified 90 EF as the maximum unconditionally approved temperature for the control room equipment. In addition, Calculation MC-QSZ51-01001, "Determination of Control Room Heat Load at 90 EF," Revision 0, and numerous control

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room equipment design documents identified 90 EF as the maximum control room temperature.

The team also identified that the existing operability determination was inadequate, because it was based on incomplete information. As documented in a Justification for Continued Operations, dated February 5, 2004, engineers stated that the operability limit for control room equipment was 120 EF based on Technical Requirements Manual statements (similar justification was contained in CR-GGN-1999-0742, dated July 20, 1999). The Technical Requirements Manual, Section 6.7.3, required that the equipment be declared inoperable at 120 EF. The team identified that engineers failed to properly consider another Technical Requirements Manual statement, in the same section, that required an operability assessment if the control room temperature exceeded 90 EF. No such operability assessment was performed to address temperatures between 90 EF and 120 EF.

In response to the team's concerns, the licensee performed an additional operability assessment, documented in CR-GGN-2004-4443. The inspectors determined that the second assessment was inadequate, as it was based on inapplicable information. The licensee based operability on a passage from the original NRC Safety Evaluation Report, Supplement 6. The passage stated: "...The NRC staff commented that surveillance requirements should include a requirement to verify that the **control room air temperature is  $\leq$  120 EF** every 12 hours." The licensee inferred from the passage that control room equipment remained operable at ambient temperatures up to 120 EF. The inspectors identified that the passage did not apply to general control room equipment qualification or to the control room emergency air conditioning system itself. The passage concerned the control room emergency filtration system, a different system.

In response to the inspectors continued concerns, the licensee performed a third operability evaluation. This evaluation was based on temperature studies performed by the Electric Power Research Institute. The studies demonstrated that electrical equipment, in general, should not be adversely impacted at the temperatures of concern. The inspectors found this operability assessment acceptable.

Analysis. The failures to: 1) promptly correct a condition adverse to quality (degraded control room air conditioning unit); and 2) properly evaluate equipment operability were performance concerns. The finding had more than minor significance because it affected the reactor safety mitigating systems objective to ensure the availability of systems that respond to initiating events. The finding was of very low risk significance because it was a design/qualification deficiency that did not result in a loss of function per Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1.

Enforcement. The team identified a 10 CFR 50 Appendix B, Criterion XVI (Corrective Actions) violation for the failure to promptly correct the degraded control room air conditioning unit (a nonconformance). 10 CFR 50, Appendix B, Criterion XVI (Corrective Action) requires that conditions adverse to quality, including nonconformances, be promptly corrected. Because the violation was of very low safety

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significance, and was entered into the licensee's corrective action program (CR-GGN-2004-04443), this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy (NCV 05000416/2005009-03).

4OA6 Exit Meeting

On March 25, 2005, the team discussed the preliminary findings with Mr. W. Brian, General Manager, Plant Operations and other members of the licensee's staff. On April 28, 2005, the team conducted a final telephonic exit meeting with Mr. M. Krupa, Director, Nuclear Safety Assurance, as well as other members of the licensee's staff. The team reviewed some proprietary information during the inspection but that information was returned to the licensee prior to the exit.

4OA7 Licensee Identified Violations

NONE

## ATTACHMENT

### PARTIAL LIST OF PERSONS CONTACTED

#### Licensee

R. Brian, General Manager, Plant Operations  
R. Collins, Manager, Operations  
E. Harris, Manager, Corrective Action and Assessment  
C. Hayes, Corporate Emergency Preparedness Project Manager  
M. Krupa, Director, Nuclear Safety Assurance  
J. Robertson, Manager, Quality Assurance  
T. Thornton, Manager, Design Engineering  
D. Wiles, Director, Engineering  
M. Withrow, Manager, Nuclear Engineering  
H. Yeldell, Manager, Maintenance

#### NRC personnel

R. Lantz, Senior Emergency Preparedness Inspector, DRS  
A. Barrett, Resident Inspector

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

#### Opened

05000416/2005009-01	URI	Corrective actions for repetitive reactor scrams caused by animal intrusion to the switchyard (Section 40A2e(2)i).
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#### Opened and Closed

05000416/2005009-02	FIN	Inadequate corrective actions to preclude repetitive emergency operations facility diesel failures (Section 40A2e(2)ii).
05000416/2005009-03	NCV	Inadequate Corrective Actions to Address Degraded Control Room Air Conditioning Unit (Section 40A5).

#### Closed

05000416/2004005-02	URI	Inadequate Corrective Actions to Address Degraded Control Room Air Conditioning Unit (Section 40A5).
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#### Discussed

None.

## LIST OF DOCUMENTS REVIEWED

### PLANT PROCEDURES

<u>Procedure</u>	<u>Title</u>
01-S-06-2	Conduct of Operations, Revision 118
01-S-06-5	Reportable Events or Conditions, Revision 105
01-S-06-44	Operability Assessment, Revision 106
ENLI-102	Corrective Action Process, Revision 1
ENLI-118	Root Cause Analysis Process, Revision 0
ENLI-119	Apparent Cause Evaluation (ACE) Process, Revision 1
15-S-01-101	"Conduct of Modification Activities," Revision 5
ENS-DC-112	"Engineering Request and Project Initiation Process," Revision 3
ENN	"Operating Plant Changes and Modification," Revision 1
02-S-01-38	"Protective Tagging," Revision 1
04-1-01-B33-1	"Reactor Recirculation System," Revision 121
07-S-01-205	"Conduct of Maintenance Activities," Revision 108
07-S-04-104	"Guidelines for Diving Operations," Revision 3
ENS-DC-121	"Maintenance Rule," Revision 2
ME-02	"Protective Tagging," Revision 6
ME-09	"Pre and Post Job Briefs," Revision 9
ME-19	"Pre-Job Walkdowns," Revision 6
ME-25	"Control and Monitoring of Maintenance Backlog," Revision 0

### Condition reports (CR) :

CR-GGN-2005-00615	CR-GGN-2003-0096	CR-GGN-2004-1755
CR-GGN-2005-00840	CR-GGN-2003-0151	CR-GGN-2004-2011
CR-GGN-2005-00552	CR-GGN-2003-0504	CR-GGN-2004-2069
CR-GGN-2004-00529	CR-GGN-2003-0517	CR-GGN-2004-3339
CR-GGN-2002-01110	CR-GGN-2003-0822	CR-GGN-2004-3388
CR-GGN-2005-00544	CR-GGN-2003-1026	CR-GGN-2004-3390
CR-GGN-2003-3164	CR-GGN-2003-2055	CR-GGN-2004-3766
CR-GGN-2004-0192	CR-GGN-2003-2504	CR-GGN-2004-3986

CR-GGN-2004-0331  
CR-GGN-2004-1644  
CR-GGN-2003-01888  
CR-GGN-2004-3353

CR-GGN-2003-2520  
CR-GGN-2003-2987  
CR-GGN-2003-0535

ER-2002-0426  
ER 2004-0169

Effectiveness Reviews/Self Assessments

LO-GLO-2003-0012  
LO-GLO-2003-0080  
LO-GLO-2003-0122  
LO-GLO-2003-0146  
LO-GLO-2004-0125  
LO-GLO-2004-0126  
LO-GLO-2004-0184  
LO-GLO-2004-0187  
LO-GLO-2004-0191

MAIs / Work Orders

327942  
327943  
328020  
41983  
50297524  
50316362  
50321402

**Information Request 1 - January 2005**  
**Grand Gulf PI&R Inspection (IP 71152; Inspection Report 50-416/05-09)**

The inspection will cover the period of March 1, 2003 to March 1, 2005. All requested information should be limited to this period unless otherwise specified. The information may be provided in either electronic or paper media or a combination of these. Information provided in electronic media may be in the form of e-mail attachment(s), CDs, or 3 ½ inch floppy disks. The agency's text editing software is Corel WordPerfect 8, Presentations, and Quattro Pro; however, we have document viewing capability for MS Word, Excel, Power Point, and Adobe Acrobat (.pdf) text files.

Please provide the following information by January 21, 2005, to:

U.S. Nuclear Regulatory Commission  
Resident Inspector's Office - Attn. Gilbert Guerra  
South Texas Project Nuclear Operating Company  
FM-521  
8 Miles West of Wadsworth, Tx. 77483

Note: On summary lists please include a description of problem, status, initiating date, and owner organization

3. Summary list and a copy of all condition reports of significant conditions adverse to quality opened or closed during the period
4. Summary list of all condition reports of conditions adverse to quality opened or closed during the period
5. Summary list of all condition reports which were down-graded or up-graded during the period
6. Summary list of operator work arounds, engineering review requests and/or operability evaluations, temporary modifications, and control room and safety system deficiencies
7. A list of all corrective action documents that subsume or "roll-up" one or more smaller issues for the period
8. List of all root cause analyses completed during the period
9. List of root cause analyses planned, but not complete at end of the period
10. List of plant safety issues raised or addressed by the employee concerns program during the period
11. List of action items generated or addressed by the plant safety review committees during the period
12. All quality assurance audits and surveillances of corrective action activities completed during the period

13. A list of all quality assurance audits and surveillances scheduled for completion during the period, but which were not completed
14. All corrective action activity reports, functional area self-assessments, and non-NRC third party assessments completed during the period
15. Corrective action performance trending/tracking information generated during the period and broken down by functional organization
16. Current revision of the following procedures: LI-102, 01-S-03-9, 01-S-06-5, 01-S-06-44, 01-S-06-2, 01-S-06-5
17. Any additional governing procedures/policies/guidelines for:
  - a. Condition Reporting
  - b. Corrective Action Program
  - c. Root Cause Evaluation/Determination
  - d. Deficiency Reporting and Resolution
18. A listing of all external events and operating experience evaluated for applicability at Grand Gulf during the period
19. Condition Reports or other actions generated for each of the items below:
  1. Part 21 Reports
  2. NRC Information Notices and Bulletins
  3. All LERs issued by Grand Gulf during the period
  4. NCVs and Violations issued to Grand Gulf during the period
20. Radiation protection event logs
21. Current system health reports or similar information
22. Current predictive performance summary reports or similar information
23. Corrective action effectiveness review reports generated during the period

## Information Request 2

<p><u>Gilbert Guerra</u>  2004-3800,  NCV2004-05-03  2004-1354,  NCV2004-03-01  2003-61,  LIV2002-06  2003-2913,  LIV2003-04  2003-544,  NCV2002-06-02  2003-504  2003-1429  2003-2029  2003-2388  2003-2527  2003-2987  2004-495  2004-506  2004-502  2004-331  2004-1014  2004-1013  2004-1122  2004-2892  2003-3089  2004-210  2004-603  2004-3351  GLO2003-0053  GLO2004-0016  GLO2004-0104</p>	<p><u>Geoff Miller</u>  2003-2853,  NCV2004-03-02  2003-3353,  NCV2004-02-04  2004-31,  NCV2004-02-01  2004-2620/3352,  LIV2004-04  2003-1729,  LIV2003-02  2003-109  2003-168  2003-2589  2004-2977  2004-4302  2003-1429  2004-4062  GLO2003-0080  GLO2003-0096  GLO2003-0110  GLO2004-0074</p>	<p><u>Jim Drake</u>  2003-37,  1999-419,  2000-1263,  2002-620/2573,  NCV2004-02-03  2003-227,  NCV2002-06-01  2002-2426,  NCV2003-02-01  2003-873,  NCV2003-06-02  2002-3085,  LIV2004-04  2003-300,  NCV2003-03,  LER2003-01  2004-1990  ER2003-261  2003-352  2003-350  2003-1340  2003-1345  2003-2378  2003-3589  2004-580  2004-2575  2003-1395  2003-1609  2003-2636  2003-3577  2004-942  2004-1013  2004-2048  2004-2977  GLO2003-0154  GLO2004-0175</p>	<p><u>Grant Larkin</u>  2004-3899/3922,  NCV2004-05-01  2004-1644,  NCV2004-03-04,  LER2004-02  2004-651,  NCV2004-02-02  2004-1477,  NCV2004-03-03  2003-1347,  NCV2003-07-01  2004-2002  2004-1459  ER2004-138  ECH2003-2  2003-884  2003-1270  2003-2520  2004-192  2004-213  2004-651  2004-767  2004-1435  2004-1557  2004-2593  2003-853  2003-1974  2003-2388  2004-555  2004-647  2004-1477  2004-1703  GLO2003-0094  GLO2003-0194  GLO2004-0122</p>
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### Additional Information Request 3

<u>Gilbert Guerra</u> 2003-2388 2004-569 2004-1579 GLO2003-144 GLO2004-30 2004-442 2003-2750 ER2004-236 GLO2003-146 2004-640 ECH2004-428 2003-1732 2003-1753 2003-1953 2003-2386 2003-2444 2003-3363 2003-3640 2004-772 2004-1016 2004-1443 2004-1671 2004-1754 2004-2336 2004-2350 2004-2867 2004-3077 2004-3439 2004-3893 2004-4049 2004-4298 2004-4416 ECH2003-151 LO-ELO2003-143	<u>Geoff Miller</u> 2004-2166 2004-4074	<u>Gary Johnston</u> 2004-1937	<u>Grant Larkin</u>
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