



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-4005**

May 8, 2006

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Entergy Operations, Inc.
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**SUBJECT: GRAND GULF NUCLEAR STATION - NRC INTEGRATED INSPECTION
REPORT 05000416/2006002**

Dear Mr. Williams:

On March 31, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Grand Gulf Nuclear Station facility. The enclosed integrated report documents the inspection findings, which were discussed on April 11, 2006, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents four NRC identified and self-revealing findings of very low safety significance (Green). Three of these findings were determined to involve violations of NRC requirements; however, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as noncited violations (NCVs) consistent with Section VI.A of the NRC Enforcement Policy. If you contest these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory 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 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at the Grand Gulf Nuclear Station 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 (if any) will be made available electronically for public inspection

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Sincerely,

/RA/

Kriss M. Kennedy, Chief
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Docket: 50-416
License: NPF-29

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Inspection Report 05000416/2006002
w/Attachment: Supplemental Information

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RIV:RI:DRP/C	SRI:DRP/C	C:SPE:DRP/C	C:DRS/EB1	C:DRS/PSB
AJBarrett	GBMiller	WCWalker	JAClark	MPShannon
E - KMKennedy	E - KMKennedy	/RA/	ATGody for	LCCarson for
5/8/06	5/8/06	5/3/06	5/5/06	5/5/06
C:DRS/OB	C:DRS/EB2	C:DRP/C		
ATGody	LJSmith	KMKennedy		
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 50-416

Licenses: NPF-29

Report No.: 05000416/2006002

Licensee: Entergy Operations, Inc.

Facility: Grand Gulf Nuclear Station

Location: Waterloo Road
Port Gibson, Mississippi 39150

Dates: January 1 through March 31, 2006

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SUMMARY OF FINDINGS

IR 05000416/2006002; 01/01/06 - 03/31/06; Grand Gulf Nuclear Station -- Integrated Resident and Regional Report; Maintenance Effectiveness, Identification and Resolution of Problems, Other Activities.

This report covered a 3-month period of inspection by resident inspectors and Regional office inspectors. The inspection identified four Green findings, three of which were noncited violations. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management's 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. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. The inspectors identified two examples of a noncited violation of 10 CFR 50.65, "Maintenance Rule," for failing to include maintenance that could increase the likelihood of an initiating event in the plant risk assessment. On February 2, 2006, and again on March 28, 2006, the licensee's risk assessment did not include maintenance activities that increased the likelihood of a reactor scram. The licensee entered this into their corrective action program as Condition Reports CR-GGN-2006-1041 and CR-GGN-2006-1277.

This finding is more than minor since the maintenance that was performed increased the likelihood of an initiating event. Using Inspection Manual Chapter 0609 Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," the finding is of very low safety significance since in both cases the change in incremental core damage probability and incremental large early release probability were less than 1E-6 and 1E-7, respectively. This finding has human performance crosscutting aspects because the inadequate risk assessments were due to personnel error (Section 1R13.1).

- Green. The inspectors reviewed a self-revealing finding for a failure to follow a procedure that resulted in a significant plant service water header leak. The licensee failed to perform an adequate review of documents to identify potential hazards as required by Procedure EN-S-112, "Trenching, Excavation and Ground Penetrating Activities," Revision 2. The licensee entered this into their corrective action program as Condition Report CR-GGN-2006-0219.

This finding is more than minor since it was associated with the human performance attribute of the initiating events cornerstone and directly affected the cornerstone objective of limiting events that challenge plant stability. Based on the results of a Significance Determination Process Phase 1 evaluation, the finding is of very low safety significance (Green) since it did not contribute to the likelihood of a loss of coolant

accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. The cause of this finding has human performance crosscutting aspects associated with a failure to follow procedures (Section 1R13.2).

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to take prompt corrective actions to address a design deficiency involving condensate storage tank level instrumentation. The licensee identified the design deficiency on April 30, 1999, and issued compensatory actions for the operators to manually transfer high pressure core spray and reactor core isolation cooling from the condensate storage tank to the suppression pool in the event of failure of the tank. The licensee corrected the design deficiency on December 8, 2005. The licensee entered this issue in their corrective action program as CR-GGN-2006-1096.

This finding is more than minor because it affected the design control attribute of the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability of systems that respond to initiating events. The finding was of very low safety significance because it was a design deficiency that did not result in a loss of operability. This finding had crosscutting aspects associated with problem identification and resolution in that station personnel did not implement corrective actions in a timely manner (Section 4OA2).

- Green. The inspectors identified a Green noncited violation for failure to have an alternative shutdown procedure to restore power following a control room evacuation with loss of offsite power that was independent of the control room. The licensee entered this into their corrective action program as CR-GGN-2005-1854.

This finding is more than minor because it affected the mitigating systems cornerstone objective for the procedure quality and protection from external factors attributes. A Region IV Senior Reactor Analyst made a visit to the site during the week of January 30, 2006. Through discussions with engineers and walkdowns in the plant, the Senior Reactor Analyst determined that there is a credible fire scenario which could simultaneously cause a control room evacuation, a loss of offsite power, and prevent automatic starting and loading of the Division 1 emergency diesel generator. This issue was categorized as a postfire safe shutdown issue associated with response procedure quality. The degradation rating was determined to be Low because operator experience and familiarity with performing the required response actions were adequate to overcome the procedure deficiency. Therefore, this issue screened as having very low safety significance in Phase 1 of Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process" (Section 4OA3.1).

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Grand Gulf Nuclear Station started the inspection period at approximately 87 percent power due to a planned control rod pattern adjustment and power suppression testing for a suspected fuel leak. The reactor returned to full power on January 2, 2006. On March 22, 2006, power was reduced to approximately 50 percent due to a reactor feed pump trip. The plant returned to full power on March 26, 2006. Over the balance of the inspection period, the plant remained at or near full power except for planned control rod pattern adjustments and control rod drive maintenance and testing.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness For Seasonal Susceptibilities

a. Inspection Scope

The inspectors completed a review of the licensee's readiness for seasonal susceptibilities involving extremely low temperatures. The inspectors: (1) reviewed plant procedures, the Updated Final Safety Analysis Report (UFSAR), and Technical Specifications (TS) to ensure that operator actions defined in adverse weather procedures maintained the readiness of essential systems; (2) walked down portions of the three systems listed to ensure that adverse weather protection features were sufficient to support operability, including the ability to perform safe shutdown functions; (3) evaluated operator staffing levels to ensure the licensee could maintain the readiness of essential systems required by plant procedures; and (4) reviewed the corrective action program (CAP) to determine if the licensee identified and corrected problems related to adverse weather conditions.

- C January 6, 2006, plant service water system
- C January 9, 2006, emergency diesel generators (EDGs)
- C January 12, 2006, standby service water system

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed three samples.

b. Findings

Introduction. An unresolved item was identified for inadequate design control of freeze protection equipment in the diesel generator building corridor.

Description. Prior to the onset of freezing conditions, the licensee installs temporary heaters in the diesel generator breezeway, an enclosed space between the diesel

building and the auxiliary building with open grating at each end. Fire protection piping and safety-related standby service water piping in the breezeway are also provided with heat tracing for cold weather protection.

During a walkdown of the breezeway on January 11, 2006, the inspectors questioned whether the temporary heaters installed were of sufficient size to protect piping in the breezeway from freezing. The licensee could not produce any calculations or testing documentation to justify the sizing of the heaters, stating instead that the heaters were not needed to protect safety-related equipment, so the size was selected based on engineering judgement.

The inspectors found that a corrective action to Condition Report CR-GGN-2002-2250 identified reliability issues with the heat tracing installed on safety-related piping and concluded that the best means for ensuring freeze protection for all piping in the breezeway was through the use of area heating via space heaters. The inspectors concluded that the corrective actions of condition report CR-GGN-2002-2250 effectively abandoned the heat tracing in place and instead credited the space heaters as supplying freeze protection for the safety-related piping in the breezeway.

The licensee initiated Condition Report CR-GGN-2006-1518 to evaluate the current condition of the heat tracing in the diesel generator building breezeway and to assess the sizing of the area heaters.

Analysis. The failure to verify the adequacy of the design of the area heaters installed to replace the heat trace on safety-related piping is a performance deficiency. This finding is associated with the design control attribute of the Mitigating Systems cornerstone and is more than minor since it affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. This issue remains unresolved pending review of the licensee's evaluation associated with Condition Report CR-GGN-2006-1518.

Enforcement. This finding is unresolved pending further review of the licensee's evaluation associated with condition report CR-GGN-2006-1518. URI 05000416/2006002-01, Inadequate Design Control for Freeze Protection in the Diesel Building Breezeway.

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors: (1) walked down portions of the three listed risk important systems and reviewed plant procedures and documents to verify that critical portions of the selected systems were correctly aligned; and (2) compared deficiencies identified during the walkdown to the licensee's UFSAR and CAP to ensure problems were being identified and corrected.

- C January 12, 2006, the inspectors walked down Train A of the control room air conditioning system while Train B was out of service for planned maintenance.
- C February 15, 2006, the inspectors walked down Train B of the standby gas treatment system while Train A was out of service for planned maintenance.
- C March 9, 2006, the inspectors walked down the Division I EDG while the Division II EDG was out of service for planned maintenance.

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed three samples of risk significant systems.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown

a. Inspection Scope

The inspectors: (1) reviewed plant procedures, drawings, the UFSAR, TSs, and vendor manuals to determine the correct alignment of the high pressure core spray system; (2) reviewed outstanding design issues, operator workarounds, and UFSAR documents to determine if open issues affected the functionality of the high pressure core spray system; and (3) verified that the licensee was identifying and resolving equipment alignment problems. Documents reviewed by the inspectors included:

- C M-1086, P&I Diagram High Pressure Core Spray Unit 1, Revision 30
- C 04-1-01-E22-1, High Pressure Core Spray System, Revision 108

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (711111.05)

a. Inspection Scope

Quarterly Inspection

The inspectors walked down the six listed plant areas to assess the material condition of active and passive fire protection features and their operational lineup and readiness. The inspectors: (1) verified that transient combustibles and hot work activities were controlled in accordance with plant procedures; (2) observed the condition of fire detection devices to verify they remained functional; (3) observed fire suppression systems to verify they remained functional and that access to manual actuators was

unobstructed; (4) verified that fire extinguishers and hose stations were provided at their designated locations and that they were in a satisfactory condition; (5) verified that passive fire protection features (electrical raceway barriers, fire doors, fire dampers, steel fire proofing, penetration seals, and oil collection systems) were in a satisfactory material condition; (6) verified that adequate compensatory measures were established for degraded or inoperable fire protection features and that the compensatory measures were commensurate with the significance of the deficiency; and (7) reviewed the UFSAR to determine if the licensee identified and corrected fire protection problems.

- C Division I EDG room (Room 1D302)
- C Division II EDG room (Room 1D303)
- C Division III EDG room (Room 1D304)
- C EDG building fresh air corridor (Room 1D301)
- C Control room air conditioning and fresh air system Train A room (Room OC302)
- C Control room air conditioning and fresh air system Train B room (Room OC303)

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed six samples.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

.1 Semiannual Internal Flooding

a. Inspection Scope

The inspectors: (1) reviewed the UFSAR, the flooding analysis, and plant procedures to assess seasonal susceptibilities involving internal flooding; (2) reviewed the UFSAR and CAP to determine if the licensee identified and corrected flooding problems; (3) verified that operator actions for coping with flooding can reasonably achieve the desired outcomes; and (4) walked down the two below listed areas to verify the adequacy of: (a) equipment seals located below the floodline, (b) floor and wall penetration seals, (c) watertight door seals, (d) common drain lines and sumps, (e) sump pumps, level alarms, and control circuits, and (f) temporary or removable flood barriers.

- C March 14, 2006, Reactor heat removal Train C pump room (1A118) and piping room (1A116)

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

The inspectors observed testing and training of senior reactor operators and reactor operators to assess training, operator performance, and the evaluator's critique. The training scenario, GSMS-LOR-HIT04, Revision 0, involved an anticipated transient without scram (ATWS) with inadvertent high pressure core spray initiation, diesel trip, scram discharge volume leak and subsequent containment pressure increase, and initiation of containment spray.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the following two maintenance activities in order to: (1) verify the appropriate handling of structure, system, and component (SSC) performance or condition problems; (2) verify the appropriate handling of degraded SSC functional performance; (3) evaluate the role of work practices and common cause problems; and (4) evaluate the handling of SSC issues reviewed under the requirements of the maintenance rule, 10 CFR Part 50, Appendix B, and the TS's.

- Low pressure core spray (E21)
- Standby service water pump house ventilation (Y47)

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed two samples.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

.1 Risk Assessment and Management of Risk

a. Inspection Scope

The inspectors reviewed the seven listed assessment activities to verify: (1) performance of risk assessments when required by 10 CFR 50.65 (a)(4) and licensee procedures prior to changes in plant configuration for maintenance activities

and plant operations; (2) the accuracy, adequacy, and completeness of the information considered in the risk assessment; (3) that the licensee recognized, and/or entered as applicable, the appropriate licensee-established risk category according to the risk assessment results and licensee procedures; and (4) that the licensee-identified and corrected problems related to maintenance risk assessments.

- WO 77656, Low pressure core spray planned system outage
- WO 77940, Installation of temporary power at Radial Well #3
- WO 51014535, Division II switchgear room cooler acid flush and cleaning
- WO 51026143, Alternate rod insertion quarterly functional test
- WO 63263, Division II EDG planned system outage
- WO 51015046, Balance of plant Transformer 12B planned outage
- WO 83216, Reactor vessel pressure high annunciator troubleshooting

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed seven samples.

b. Findings

Introduction. The inspectors identified two examples of a noncited violation of 10 CFR 50.65, "Maintenance Rule," for failing to include maintenance that could increase the likelihood of an initiating event in the plant risk assessment.

Description. The inspectors identified two instances where the licensee did not perform an adequate risk assessment for plant conditions. Specifically:

- On February 2, 2006, maintenance technicians conducted quarterly surveillance Procedure 06-IC-1B21-Q-1012, "ATWS - Reactor Vessel Level / Reactor Pressure Functional Test," Revision 102, that resulted in the expected actuation of one half of the alternate rod insertion circuitry. A full actuation of the alternate rod insertion would result in a reactor scram. The inspectors noted that the work activity had not been identified as a risk activity and was not included in the licensee's assessment of plant risk. The inspectors concluded that the licensee's risk assessment was inadequate since it did not consider the increased likelihood of a reactor shutdown from the loss of redundancy in the alternate rod insertion circuitry resulting from the surveillance activity.
- On March 28, 2006, maintenance technicians from the station's "fix-it-now" team performed emergent maintenance on a reactor vessel pressure switch which inserted in a scram signal in one division of the reactor protection system. Actuation of both divisions of the reactor protection system would result in a reactor shutdown through a reactor scram. The inspectors determined that,

although the control room operators were aware of the maintenance and expected the half scram, no risk assessment had been performed for the maintenance activity.

Analysis. The failure to include maintenance activities as part of an assessment of plant risk is a performance deficiency that affected the Initiating Events cornerstone. Per Appendix B of Inspection Manual Chapter 0612, the finding is greater than minor since the maintenance that was performed increased the likelihood of an initiating event. Using Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," the finding is of very low safety significance (Green) since in both cases the change in incremental core damage probability and incremental large early release probability were less than 1E-6 and 1E-7, respectively. This finding has human performance crosscutting aspects because the inadequate risk assessments were due to personnel error.

Enforcement. 10 CFR 50.65(a)(4) states, in part, that before performing maintenance activities, the licensee shall assess and manage the risk that may result from the proposed maintenance activities. Contrary to the above, on February 2, 2006, and again on March 28, 2006, the licensee failed to adequately assess the risk associated with maintenance activities on alternate rod insertion and the reactor protection system, respectively. Because this finding is of very low safety significance and has been entered in the licensee's CAP as CR-GGN-2006-1041 and CR-GGN-2006-1277, this violation is being treated as a noncited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000416/2006002-02, Failure to Perform an Adequate Risk Assessment.

.2 Emergent Work Control

a. Inspection Scope

For the work activity listed below, the inspectors: (1) verified that the licensee performed actions to minimize the probability of initiating events and maintained the functional capability of mitigating systems and barrier integrity systems; (2) verified that emergent work-related activities such as troubleshooting, work planning/scheduling, establishing plant conditions, aligning equipment, tagging, temporary modifications, and equipment restoration did not place the plant in an unacceptable configuration; and (3) reviewed the UFSAR to determine if the licensee identified and corrected risk assessment and emergent work control problems.

- January 18, 2006, plant service water leak at radial Well 3 during excavation activities (CR-GGN-2006-00219)

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed one sample.

b. Findings

Introduction. The inspectors reviewed a Green self-revealing finding for a failure to follow procedure that resulted in a significant plant service water header leak.

Description. The plant service water (PSW) system at (GGNS) supplies cooling water for various nonessential heat loads throughout the plant. The system is supplied with well water from four wells containing two pumps each. Though none of the components in the PSW system are safety-related, a loss of service water would result in a reactor scram.

On January 18, 2006, a contractor was digging a trench to install temporary power cables in the vicinity of Radial Well #3 when he severed a 3/4-inch test connection attached to the PSW header. Lacking a means to contact the control room, the contractor entered the resident inspector office and asked the inspectors if they could turn off the service water system. The inspectors notified the control room operators who began monitoring service water header pressure and dispatched operators to assess the condition. Service water header pressure fell approximately 2 pounds per square inch before stabilizing.

The presence of the test connection on the service water header was not indicated on the excavation permit. The licensee determined that Drawing C1745D, "Plant Service Water System Supply and Discharge Line Plan and Profile," Revision 20, which showed the presence of the test connection, was not reviewed during preparation of the excavation permit. A pre-excavation survey of the area with radio-detection equipment also failed to identify the presence of the connection.

Section 5 of Procedure EN-IS-112, "Trenching, Excavation and Ground Penetrating Activities," Revision 2, required the responsible engineer to review documents to identify potential hazards posed by underground lines in the vicinity of the excavation. This requirement was not met since the responsible engineer did not identify the presence of the test connection shown on Drawing C1745D. Additionally, the Responsibilities section of Procedure EN-IS-112 assigned the Maintenance Department responsibility for controlling contract personnel and the Operations Department responsibility for maintaining a continuing knowledge of the status of excavation activities. The inspectors concluded that these requirements had not been met, since the contractor involved had neither the means nor the knowledge of how to contact the control room after striking the test connection.

Analysis. The performance deficiency associated with this finding was a failure to follow the requirements of Procedure EN-IS-112, "Trenching, Excavation, and Ground Penetrating Activities," Revision 2, resulting in the severing of a service water test connection. This finding was more than minor since it was associated with the human performance attribute of the Initiating Events cornerstone and directly affected the cornerstone objective of limiting events that challenge plant stability. Based on the magnitude of the pressure reduction resulting from the line break, the inspectors determined that the mitigation functions of the plant service water system would not have been affected. The finding was of very low safety significance (Green) since it did

not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. This finding had human performance crosscutting aspects associated with a failure to follow procedure.

Enforcement. No violation of regulatory requirements occurred. The finding did not represent a noncompliance since it occurred on nonsafety-related equipment. This finding was entered into the licensee's corrective action program as CR-GGN-2006-0219 and is identified as FIN 05000416/2006002-03, Plant Service Water Leak During Excavation.

1R14 Personnel Performance During Nonroutine Plant Evolutions (71111.14)

a. Inspection Scope

The inspectors reviewed operator response to one nonroutine event during the inspection period. In addition to direct observation of operator performance, the inspectors reviewed procedural requirements, operator logs, and plant computer data to determine whether the response was in accordance with plant procedures and training. The following event was reviewed:

- On March 23, 2006, the inspectors reviewed control room personnel response to a feedwater pump trip.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected six operability evaluations performed by the licensee during the report period involving risk-significant SSCs. The inspectors: (1) reviewed plants status documents such as operator shift logs, emergent work documentation, deferred modifications, and standing orders to determine if an operability evaluation was warranted for degraded components; (2) referred to the UFSAR and design basis documents to review the technical adequacy of licensee operability evaluations; (3) evaluated compensatory measures associated with operability evaluations; (4) determined degraded component impact on any TS; (5) used the Significance Determination Process to evaluate the risk significance of degraded or inoperable equipment; and (6) verified that the licensee had identified and implemented appropriate corrective actions associated with degraded components.

- CR-GGN-2006-00007, Division I EDG load sequencing system toggle switch not in the "normal" position

- CR-GGN-2006-00079, high pressure core spray pump lower motor bearing high water content in oil sample results
- CR-GGN-2006-00328, Division II EDG governor hydraulic fluid leak
- CR-GGN-2006-00467, Inadequate testing frequency for two standby gas treatment system containment isolation valves
- CR-GGN-2006-00587, Standby gas treatment system failed to maintain the required negative pressure in the auxiliary building
- CR-GGN-2006-00867, Condensate and refueling water storage and transfer system containment isolation valve did not meet closing stroke time requirements

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed six samples.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors selected the six listed postmaintenance test activities of risk significant systems or components. For each item, the inspectors: (1) reviewed the applicable licensing basis and/or design-basis documents to determine the safety functions; (2) evaluated the safety functions that may have been affected by the maintenance activity; and (3) reviewed the test procedure to ensure it adequately tested the safety function that may have been affected. The inspectors either witnessed or reviewed test data to verify that acceptance criteria were met, plant impacts were evaluated, test equipment was calibrated, procedures were followed, jumpers were properly controlled, test data results were complete and accurate, test equipment was removed, the system was properly realigned, and deficiencies during testing were documented. The inspectors also reviewed the UFSAR to determine if the licensee identified and corrected problems related to postmaintenance testing.

- WO 63535 - Repair and retest of Division II hydrogen igniter
- WO 70065 - Standby service water inlet to the EDG jacket water cooler valve seat leakage
- WO 51019608 - Upper containment airlock door inspection, hydraulic fluid change, and maintenance retest

- WO 81083 - Performance of Standby Gas Treatment A vacuum testing
- WO 80889 - Division II EDG governor leakage postmaintenance test
- WO 68713 - Reactor core isolation cooling overspeed trip test

The inspectors completed six samples.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the UFSAR, procedure requirements, and TSs to ensure that the six listed surveillance activities demonstrated that the SSCs tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the following significant surveillance test attributes were adequate: (1) preconditioning; (2) evaluation of testing impact on the plant; (3) acceptance criteria; (4) test equipment; (5) procedures; (6) jumper/lifted lead controls; (7) test data; (8) testing frequency and method demonstrated TS operability; (9) test equipment removal; (10) restoration of plant systems; (11) fulfillment of ASME Code requirements; (12) updating of performance indicator (PI) data; (13) engineering evaluations, root causes, and bases for returning tested SSCs not meeting the test acceptance criteria were correct; (14) reference setting data; and (15) annunciator and alarm setpoints. The inspectors also verified that the licensee identified and implemented any needed corrective actions associated with the surveillance testing.

- January 25, 2006, Division II EDG 18-month surveillance test per Procedure 06-OP-1P75-R-0004, "Standby Diesel Generator Functional Test," Revision 111
- February 6, 2006, Reactor Heat Removal 'C' valve inservice test per Procedure 06-OP-1E12-Q-0007, "LPCI/RHR Subsystem C MOV Functional Test," Revision 102
- February 8, 2006, Daily calculation of identified and unidentified drywell leakage per Procedure 06-OP-1000-D-0001, "Daily Operating Logs," Revision 119
- February 17, 2006, Secondary containment drawdown test per Procedure 06-OP-1T48-R-0002, "Standby Gas Treatment A Logic and Vacuum Test," Revision 108
- February 28, 2006, Division I EDG monthly surveillance test per Procedure 06-OP-1P75-M-0001, "Standby Diesel Generator Functional Test," Revision 126

- March 7, 2006, Containment ventilation and cooling system containment isolation Valve M41F034 local leak rate testing per Procedure 06-ME-1M61-V-0001, "Local Leak Rate Test Low Flow Air," Revision 108

The inspectors completed six samples.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the UFSAR, plant drawings, procedure requirements, and TSs to ensure that the two below listed temporary modifications were properly implemented. The inspectors: (1) verified that the modifications did not have an affect on system operability/availability; (2) verified that the installation was consistent with modification documents; (3) ensured that the postinstallation test results were satisfactory and that the impact of the temporary modifications on permanently installed SSCs were supported by the test; (4) verified that the modifications were identified on control room drawings and that appropriate identification tags were placed on the affected drawings; and (5) verified that appropriate safety evaluations were completed. The inspectors verified that the licensee identified and implemented any needed corrective actions associated with temporary modifications.

- February 10, 2006, Leading edge flow meter software modification per Temporary Alteration 2006-01
- March 2, 2006, Secondary containment isolation Valve B21F114 was removed from the inputs to the Division I auxilliary building valves operable annunciator per Temporary Alteration 2006-02

The inspectors completed two samples.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

For the below listed drill contributing to Drill/Exercise Performance and emergency response organization PIs, the inspectors: (1) observed the training evolution to assess classification, notification, and Protective Action Requirement development activities;

(2) compared identified weaknesses and deficiencies against licensee identified findings to determine whether the licensee is properly identifying failures; and (3) determined whether licensee performance is in accordance with the guidance of the Nuclear Energy Institute (NEI) 99-02, "Voluntary Submission of Performance Indicator Data," acceptance criteria.

- January 25, 2006, the inspectors observed the licensee's emergency response organization in the simulator, the Emergency Operation Facility, and the Technical Support Center respond to a simulated anticipated transient without scram event that led to fuel damage and a release to the atmosphere

Documents reviewed by the inspectors included:

- GGNS 2006 1st Quarter Emergency Preparedness Drill Evaluator's notebook
- Drill Emergency Notification Forms

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety [OS]

2OS1 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope

This area was inspected to assess the licensee's performance in implementing physical and administrative controls for airborne radioactivity areas, radiation areas, high radiation areas (HRAs), and worker adherence to these controls. The inspector used the requirements in 10 CFR Part 20, the TSs, and the licensee's procedures required by TS as criteria for determining compliance. During the inspection, the inspector interviewed the radiation protection manager, radiation protection supervisors, and radiation workers. The inspector performed independent radiation dose rate measurements and reviewed the following items:

- PI events and associated documentation packages reported by the licensee in the Occupational Radiation Safety Cornerstone
- Controls (surveys, posting, and barricades) of radiation, HRA, or airborne radioactivity areas
- Conformity of electronic personal dosimeter alarm setpoints with survey indications and plant policy; workers' knowledge of required actions when their electronic personnel dosimeter noticeably malfunctions or alarms

- Physical and programmatic controls for highly activated or contaminated materials (nonfuel) stored within spent fuel and other storage pools
- Self-assessments, audits, licensee event reports, and special reports related to the access control program since the last inspection
- Corrective action documents related to access controls
- Licensee actions in cases of repetitive deficiencies or significant individual deficiencies
- Controls for special areas that have the potential to become very high radiation areas during certain plant operations
- Posting and locking of entrances to all accessible high dose rate - HRAs and very HRAs.

The inspector completed 12 of the required 21 samples.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02)

a. Inspection Scope

The inspector assessed licensee performance with respect to maintaining individual and collective radiation exposures as low as is reasonably achievable (ALARA). The inspector used the requirements in 10 CFR Part 20 and the licensee's procedures required by TS as criteria for determining compliance. The inspector interviewed licensee personnel and reviewed:

- Current 3-year rolling average collective exposure
- Five work activities from previous work history data which resulted in the highest personnel collective exposures
- Site-specific trends in collective exposures, plant historical data, and source-term measurements
- ALARA work activity evaluations, exposure estimates, and exposure mitigation requirements
- Intended versus actual work activity doses and the reasons for any inconsistencies

- Records detailing the historical trends and current status of tracked plant source terms and contingency plans for expected changes in the source term due to changes in plant fuel performance issues or changes in plant primary chemistry
- Source-term control strategy or justifications for not pursuing such exposure reduction initiatives
- Specific sources identified by the licensee for exposure reduction actions and priorities established for these actions, and results achieved against since the last refueling cycle
- Self-assessments, audits, and special reports related to the ALARA program since the last inspection

The inspector completed 7 of the required 15 samples and 2 of the optional samples.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

Initiating Events Cornerstone

- C Unplanned Scrams Per 7,000 Critical Hours
- C Unplanned Scrams With Loss Of Normal Heat Removal
- C Unplanned Power Changes Per 7,000 Critical Hours

Barrier Integrity Cornerstone

- C Reactor Coolant System Leakage

The inspectors sampled licensee submittals for the four PIs listed above for the period from January 2004 through December 2005. The definitions and guidance of NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 3, were used to verify the licensee's basis for reporting each data element in order to verify the accuracy of PI data reported during the assessment period. The inspectors reviewed operator log entries, daily shift manager reports, plant computer data, condition reports, work orders, maintenance rule data, and PI data sheets to determine whether the licensee adequately reported the PIs listed above. Also, the inspectors interviewed the licensee personnel that were accountable for collecting and evaluating the PI data.

Occupational Radiation Safety Cornerstone

- Occupational Exposure Control Effectiveness

The health physics inspector reviewed licensee documents from April 1, 2005, through March 30, 2006. The review included corrective action documentation that identified occurrences in locked HRAs (as defined in the licensee's TS), very HRAs (as defined in 10 CFR 20.1003), and unplanned personnel exposures (as defined in NEI 99-02). Additional records reviewed included ALARA records and whole body counts of selected individual exposures. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the PI data. In addition, the inspector toured plant areas to verify that HRA, locked HRA, and very HRAs were properly controlled. PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 3, were used to verify the basis in reporting for each data element.

The inspector completed the required sample (one) in this cornerstone.

Public Radiation Safety Cornerstone

- Radiological Effluent Technical Specification/Offsite Dose Calculation Manual
Radiological Effluent Occurrences

The inspector reviewed licensee documents from April 1, 2005, through March 30, 2006. Licensee records reviewed included corrective action documentation that identified occurrences for liquid or gaseous effluent releases that exceeded PI thresholds and those reported to the NRC. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the PI data. PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 3, were used to verify the basis in reporting for each data element.

The inspector completed the required sample (one) in this cornerstone.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a daily screening of items entered into the licensee's CAP. This assessment was accomplished by reviewing work orders and condition reports and attending corrective action review and work control meetings. The inspectors: (1) verified that equipment, human performance, and program issues were being identified

by the licensee at an appropriate threshold and that the issues were entered into the CAP; (2) verified that corrective actions were commensurate with the significance of the issue; and (3) identified conditions that might warrant additional follow-up through other baseline inspection procedures.

b. Findings and Observations

No findings of significance were identified.

.2 Selected Issue Follow-up Inspection

a. Inspection Scope

In addition to the routine review, the inspectors selected the two listed issues for a more in-depth review. The inspectors considered the following during the review of the licensee's actions: (1) complete and accurate identification of the problem in a timely manner; (2) evaluation and disposition of operability/reportability issues; (3) consideration of extent of condition, generic implications, common cause, and previous occurrences; (4) classification and prioritization of the resolution of the problem; (5) identification of root and contributing causes of the problem; (6) identification of corrective actions; and (7) completion of corrective actions in a timely manner.

C January 3, 2006, Inaccurate condensate storage tank level instrumentation

C January 23, 2006, Klockner-Moeller valve control contact failure

b. Findings and Observations

Introduction. The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to take prompt corrective actions to address a design deficiency involving condensate storage tank level instrumentation.

Description. While reviewing a TS amendment request, the inspectors identified a nonconforming condition due to improper design of the condensate storage tank level instrumentation. In addition to this, the inspectors determined that the licensee substituted a manual operator action for an automatic function in which reactor core isolation cooling and high pressure core spray transfer suction to the suppression pool on low condensate storage tank level. This manual action had been in place for more than 6 years.

On April 30, 1999, Condition Report CR-GGN-1999-00481 stated that, in the event of failure of the nonsafety-related portions of the condensate storage tank piping, the condensate storage tank level transmitters would indicate an inaccurate level in the nonconservative direction; i.e., higher than actual. Section 5.4.1 of the Grand Gulf Safety Evaluation Report states, "Since the condensate storage tank is not a seismic Category 1 structure, an automatic safety-grade suction switchover to the suppression pool has been provided to ensure a water supply in the event of a safe shutdown earthquake and concomitant failure of the condensate storage tank." In addition to this, the Grand Gulf

Safety Analysis Report states the following in Section 6.3.2.2.1, "When the system senses a low water level in the condensate storage tank, the HPCS pump suction automatically transfers from this tank to the suppression pool." The condensate storage tank level inaccuracy would have prevented the automatic suction transfer function from occurring in a timely manner, which could damage both the reactor core isolation cooling and high pressure core spray pumps due to air entrainment.

The licensee issued a standing order and subsequently proceduralized requirements for the control room operators to manually transfer the suction of the high pressure core spray and reactor core isolation cooling to the suppression pool in the event of condensate storage tank failure. The inspectors concluded that the licensee's action was a manual compensatory action. The deficiency should therefore have been corrected at the earliest opportunity not to exceed the next refueling outage per the guidance at the time of Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," and currently reflected in the Part 9900 Technical Guidance, "Operability Determinations and Functionality Assessments for Resolution of Degraded or Non-Conforming Conditions Adverse to Quality or Safety." Contrary to this guidance, the licensee did not correct the deficiency through replacement and recalibration of the level transmitters until December 8, 2005.

Analysis. The failure to promptly correct the condensate storage tank level instrumentation was a performance deficiency. The finding had more than minor significance because it affected the design control attribute of the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability of systems that respond to initiating events. The finding was of very low safety significance (Green) because it was a design deficiency that did not result in a loss of operability. This finding had crosscutting aspects associated with problem identification and resolution in that station personnel did not implement corrective actions in a timely manner.

Enforcement. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that conditions adverse to quality be promptly corrected. Contrary to the above, the licensee failed to promptly correct the deficient condensate storage tank level instrumentation. Because this violation was of very low safety significance and has been entered into the licensee's corrective action program as CR-GGN-2006-1096, this violation is being treated as an NCV consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000416/2006002-04, Untimely Corrective Actions Associated with Condensate Storage Tank Level instrumentation.

.3 Occupational Radiation Safety

a. Inspection Scope

The inspector evaluated the effectiveness of the licensee's problem identification and resolution process with respect to the following inspection areas:

- Access Control to Radiologically Significant Areas (Section 2OS1)
- ALARA Planning and Controls (Section 2OS2)

b. Findings and Observations

No findings of significance were identified.

4OA5 Other Activities

.1 (Closed) Unresolved Item 05000416/2005008-02: EDG Local Start Procedure

a. Inspection Scope

The inspectors completed a followup inspection of an unresolved item regarding an inadequate alternative shutdown procedure for locally starting and loading an EDG during a control room evacuation due to fire with loss of offsite power. This issue had remained unresolved to determine whether one or more credible fire scenarios existed which could cause a control room evacuation or a loss of offsite power and prevent automatic starting and loading of the Division 1 EDG.

b. Findings

Introduction. A Green noncited violation was identified for failure to have an alternative shutdown procedure to restore power following a control room evacuation with loss of offsite power that was independent of the control room. It was determined that a credible fire scenario existed which could require this procedure to be used in this manner, and that the issue had very low safety significance because operator experience and familiarity with performing the required response actions were adequate to overcome the procedure deficiency.

Description. On April 12, 2005, during a walkthrough of a control room evacuation, the triennial fire protection inspection team identified that the procedure steps in System Operating Instruction 04-1-01-P75-1, "Standby Diesel Generator System," Revision 67, called for manipulation of controls in the control room in order to manually start the Division 1 EDG. The team noted that this procedure section was not specifically written for a control room evacuation, but was referenced for use following a control room fire. This issue was unresolved for both significance and enforcement because additional technical information was needed to assess the issue. The procedure was promptly corrected to direct operators on local starting and loading of an EDG.

Procedure 05-1-02-II-1, "Shutdown from the Remote Shutdown Panel," Revision 30, required operators to use System Operating Instruction 04-1-01-P75-1 to locally start the Division 1 EDG in the event that offsite power was not available. However, this procedure did not provide instructions that could successfully start and load the EDG from outside the control room. Steps to close the output breaker and load the EDG were written to be performed from inside the control room, which would not be possible once the control room was evacuated.

Using electrical schematics, the licensee was able to demonstrate that two simple methods were available to start and load an EDG locally. The team determined through interviews that it was likely that operators would be able to complete this action, even though it was not specifically contained in the procedure.

Analysis. Failure to have an alternative shutdown procedure to restore power following a control room evacuation with loss of offsite power that was independent of the control room was a performance deficiency. This issue was more than minor because it affected the mitigating systems cornerstone objective for the procedure quality and protection from external factors attributes. A Region IV Senior Reactor Analyst made a visit to the site during the week of January 30, 2006. Through discussions with engineers and walkdowns in the plant, the Senior Reactor Analyst determined that there is a credible fire scenario which could simultaneously cause a control room evacuation and a loss of offsite power and prevent automatic starting and loading of the Division 1 EDG. This issue was categorized as a postfire safe shutdown issue associated with response procedure quality. The degradation rating was determined to be Low because operator experience and familiarity with performing the required response actions were adequate to overcome the procedure deficiency. Therefore, this issue screened as having very low safety significance (Green) in Phase 1 of the Fire Protection Significance Determination Process (Manual Chapter 0609, Appendix F).

Enforcement. Grand Gulf License Condition 2.C(41) requires that the licensee shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in Revision 5 to the UFSAR, and as approved in the Safety Evaluation dated August 23, 1991. As part of the approved Fire Protection Program, the licensee committed by letter dated August 27, 1981, to implement the requirements of Section III.G of Appendix R to 10 CFR Part 50. Section III.G.3 of this appendix covers requirements for alternative shutdown areas, such as the control room at Grand Gulf. Section III.L provides requirements for the performance capability of alternative shutdown capability necessary to comply with Section III.G.3; Section III.L.3 requires that "the alternative shutdown capability shall be independent of the specific fire area(s) and shall accommodate post-fire conditions where offsite power is available and where offsite power is not available for 72 hours. Procedures shall be in effect to implement this capability." Contrary to this, inspectors determined on April 12, 2005, that Procedure 05-1-02-II-1, "Shutdown from the Remote Shutdown Panel," Revision 30, and System Operating Instruction 04-1-01-P75-1, "Standby Diesel Generator System," Revision 67, were inadequate to implement this requirement. Specifically, these procedures provided operating instructions for locally starting and loading the Division 1 EDG in the event that offsite power was not available which was not independent of equipment in the specific fire area (control room). Because this violation was of very low safety significance and has been entered in the licensee's corrective action program as CR-GGN-2005-1854, this issue is being treated as an NCV in accordance with Section VI.A of the NRC Enforcement Policy: NCV 05000416/2006002-05, Inadequate Alternative Shutdown Procedure for Locally Starting and Loading an EDG.

4OA6 Meetings, Including Exit

On February 27, 2006, the inspector presented the results of the review of unresolved item (URI) 05000416/2005008-02 to Mr. C. Bottemiller, Manager, Plant Licensing via telephone. The inspector confirmed that proprietary information was neither provided nor examined during the inspection.

On March 30, 2006, the health physics inspector presented the inspection results to Mr. W. Brian, General Manager, Plant Operations, and other members of the staff who acknowledged the findings. The inspector confirmed that proprietary information provided or examined during the inspection was not retained.

On April 11, 2006, the resident inspectors presented the inspection results to Mr. G. Williams and others who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

C. Abbott, Supervisor, Quality Assurance
C. Bottemiller, Manager, Plant Licensing
R. Bryan, General Manager, Plant Operations
B. Bryant, Superintendent, Chemistry
M. Causey, Senior Lead Technical Specialist
R. Collins, Manager, Operations
D. Coulter, Licensing Specialist, Plant Licensing
T. Curtin, Supervisor, ALARA
L. Eaton, Senior Lead Engineer
C. Ellsaesser, Manager, Planning and Scheduling
M. Guynn, Manager, Emergency Preparedness
E. Harris, Manager, Corrective Action and Audits
M. Krupa, Director, Nuclear Safety Assurance
M. Larson, Senior Licensing Engineer
N. Mascarella, Engineer
C. Mason, Quality Assurance Auditor
J. Miller, Manager, Training
J. Owens, Senior Licensing Specialist
J. Robertson, Manager, Quality Assurance
M. Rohrer, Manager, System Engineering
F. Rosser, Supervisor, Radiation Protection
R. Sumrall, Emergency Planner
R. Tolbert, Senior Health Physicist/Chemistry Specialist, Chemistry
G. Williams, Vice President, Operations
D. Wiles, Director, Engineering
D. Wilson, Supervisor, Design Engineering
R. Wilson, Superintendent, Radiation Protection
P. Worthington, Supervisor, Engineering
H. Yeldell, Manager, Maintenance

NRC personnel

W. Walker, Senior Project Engineer, Reactor Project Branch C
R. Bywater, Senior Reactor Analyst, Region IV

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000416/2006002-01	URI	Inadequate Design Control for Freeze Protection in the Diesel Generator Building Breezeway.
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Opened and Closed

05000416/2006002-02	NCV	Failure to Perform an Adequate Risk Assessment (Section 1R13)
05000416/2006002-03	FIN	PSW Leak During Excavation (Section 1R13)
05000416/2006002-04	NCV	Untimely Corrective Actions Associated with Condensate Storage Tank Level instrumentation (Section 4OA2)
05000416/2006002-05	NCV	Inadequate Alternative Shutdown Procedure for Locally Starting and Loading an EDG (Section 4OA5)

Closed

05000416/2005008-02	URI	EDG Local Start Procedure (Section 4OA5)
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Discussed

None

LIST OF DOCUMENTS REVIEWED

In addition to the documents noted in the inspection report, the following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Section 1R01: Adverse Weather Protection

Procedure 04-1-03-A30-1, "Cold Weather Protection," Revision 17

Modification Package ER-GG-2003-0121, Revision 0

Drawing E-0118-014, "Heat Tracing, Diesel Generator Building Sprinklers," Revision 4

CR-GGN-2003-00227 CR-GGN-2006-00022 CR-GGN-2002-2250
CR-GGN-2004-0032

Work Orders: 50298987-01, 50298970-01

Section 1R04: Equipment Alignment

Procedure 04-S-01-Z51-1, "Control Room HVAC System," Revision 41

System Performance Indicator - Control Room HVAC System

Piping and Instrument Diagram M-0049, "Control Room Heating, Ventilation, and Air Conditioning System," Revision 39

CR-GGN-2006-00342

Section 1R05: Fire Protection

Procedure 10-S-03-4, "Fire Protection: Control of Combustible Material," Revision 13

Procedure 07-S-14-12, "Fire Extinguisher Maintenance Check," Revision 30

Grand Guld Nuclear Station Fire Pre-Plans, Revision 15

Work Orders 50990896-01 and 51014895-01

CR-GGN-2006-00352

Calculation MC-Q1X77-96023, "Evaluate Diesel Generator Building Breezeway Airflows," Revision 0

Calculation MC-Q1X77-96023, Supplement 1, "Determine Maximum Allowable Outside Air Temperature With the Diesel Generator Building Outside Air Fans on High Speed and the Breezeway Banners in Place," Revision 0

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedure ENS-MP-106, "Contract Management," Revision 6

Procedure EN-IS-112, "Trenching, Excavation and Ground Penetrating Activities," Revision 2

Procedure 01-S-18-6, "Risk Assessment of Maintenance Activities," Revision 3

Procedure 06-IC-1B21-Q-1012, "ATWS-Reactor Vessel Level / Reactor Pressure Functional Test," Revision 102

Work Order 77940

CR-GGN-2006-1041, CR-GGN-2006-1277, CR-GGN-2005-2232, and CR-GGN-2006-0219

Modification Package ER-GG-2002-0343, Revision 0

Section 1R15: Operability Evaluations

Procedure 06-EL-1R21-M-0001, "4.16 kV Degraded Voltage Functional Test and Calibration," Revision 103

Procedure 01-S-07-27, "GGNS Lubricating Oil Sample Program," Revision 13

Logic Diagram E-1039, "Load Shedding & Sequencing Panel 1H22-P331," Revision 8

Work Request 67923

Section 2OS2: ALARA Planning and Controls, Access Controls to Radiologically Significant Areas

CR-GGN-2005-03429, CR-GGN-2005-03564, CR-GGN-2005-03586, CR-GGN-2005-03594, CR-GGN-2005-04020, CR-GGN-2005-04108, CR-GGN-2005-04202, CR-GGN-2005-04748, CR-GGN-2005-04951, CR-GGN-2005-05109, CR-GGN-2005-05162, CR-GGN-2005-05419, CR-GGN-2005-05451, CR-GGN-2006-00010, CR-GGN-2006-00548, CR-GGN-2006-01189 and CR-GGN-2006-01290

Audits and Self-Assessments

02C-GGN-2005-0022

02C-GGN-2005-0237

02C-GGN-2005-0251

Radiation Work Permits

05-1001, 05-1002, 05-1012, 06-1001, 06-1002, 06-1012

Procedure 01-S-02-701, "Fuel Failure Detection and Evaluation," Revision 4

Procedure EDC-DC-141, "Design Inputs" Revision 0

Procedure EN-LI-102, "Corrective Action Process," Revision 1

Procedure RP-110, ALARA Program, Revision 2

Procedure RP-105, Radiation Work Permits, Revision 7

LBDC 2005-074, dated November 7, 2005

Section 4OA2: Identification and Resolution of Problems

Yard Piping Drawing M-1400, "Condensate Storage Tank and Refueling Water Storage Tank Area - Unit 1," Revision 16

System Piping Isometric Drawing M-13368, "Condensate Transfer System: Condensate Supply to RCIC & HPCS Pumps," Revision 19

Level settings Diagram J-1660B, "Condensate Storage Tank A002," Revision 4

Procedure 04-1-01-E22-1, "High Pressure Core spray System," Revision 105

Alarm Response Instruction 04-1-02-1H13-P870, "Panel No: 1H13-P870," Revision 116

Off-Normal Event Procedure 05-1-02-VI-2, "Hurricanes, Tornadoes, and Severe Weather," Revision 104

Off-Normal Event Procedure 05-S-02-VI-3, "Earthquake," Revision 101

Engineering Request ER-GG-1999-0217, "Condensate Storage Tank Level Transmitter Replacement," Revision 0

Standing Order 99-0018

LBDC 2005-067, dated December 5, 2005

Piping and Instrument Diagram M-1065, "Condensate &refueling Water Storage & Transfer System," Revision 38

AECM-86/0049, dated February 15, 1986

LIST OF ACRONYMS

ALARA	as low as is reasonably achievable
ATWS	anticipated transient without scram
CAP	corrective action program
CFR	<i>Code of Federal Regulations</i>
EDG	emergency diesel generator
FIN	finding
GGNS	Grand Gulf Nuclear Station
HRA	high radiation area
NCV	noncited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
PI	performance indicator
PSW	plant service water
SSC	structure, system, and component
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	unresolved item