



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

November 9, 2010

James R. Douet
Vice President Operations
Entergy Operations, Inc.
Grand Gulf Nuclear Station
P.O. Box 756
Port Gibson, MS 39150

Subject: GRAND GULF - NRC INTEGRATED INSPECTION REPORT 05000416/2010004

Dear Mr. Douet:

On September 27, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Grand Gulf Nuclear Station. The enclosed integrated inspection report documents the inspection findings, which were discussed on October 5, 2010, with Mr. Jeremy Browning and other members of your staff.

The inspections 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 violations and two self-revealing violations of very low safety significance (Green). All of these findings were determined to involve violations of NRC requirements. Additionally, three licensee-identified violations, which were determined to be of very low safety significance, are listed in this report. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as noncited violations, consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest the violations or the significance of the noncited violations, 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, D.C. 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 612 E. Lamar Blvd, Suite 400, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Grand Gulf Nuclear Station. In addition, if you disagree with the cross-cutting aspects assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC Resident Inspector at Grand Gulf Nuclear Station.

Entergy Operations, Inc.

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, and its enclosure, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records 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/

Vincent Gaddy, Chief
Project Branch C
Division of Reactor Projects

Docket: 50-416
License: NPF-29

Enclosure:
NRC Inspection Report 05000416/2010004
w/Attachment: Supplemental Information

cc w/Enclosure:

Senior Vice President
Entergy Nuclear Operations
P.O. Box 31995
Jackson, MS 39286-1995

Senior Vice President and COO
Entergy Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995

Thomas Palmisano
Vice President, Oversight
Entergy Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995

Entergy Operations, Inc.

- 3 -

Chief, Energy and Transportation Branch
Environmental Compliance and
Enforcement Division
Mississippi Department of
Environmental Quality
P.O. Box 2249
Jackson, MS 39225-2249

Interim County Administrator
Claiborne County
Board of Supervisors (James Johnston)
Port Gibson, MS 39150

Manager, Licensing
Sr. Site Executive
Entergy Nuclear Operations
P.O. Box 31995
Jackson, MS 39286-1995

Senior Manager, Nuclear Safety & Licensing
Licensing /Regulatory Affairs
Entergy Nuclear Operations
P.O. Box 31995
Jackson, MS 39286-1995

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

Attorney General
Department of Justice
State of Louisiana
P.O. Box 94005
Baton Rouge, LA 70804-9005

Office of the Governor
State of Mississippi
Jackson, MS 39201

Attorney General
Assistant Attorney General
State of Mississippi
P.O. Box 220
Jackson, MS 39205

Entergy Operations, Inc.

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State Health Officer
State Health Board
P.O. Box 1700
Jackson, MS 39215

Associate General Counsel
Entergy Nuclear Operations
P.O. Box 31995
Jackson, MS 39286-1995

Louisiana Dept. of Environmental Quality
Radiological Emergency Planning and
Response Division
P.O. Box 4312
Baton Rouge, LA 70821-4312

Chief, Technological Hazards
Branch
FEMA Region VI
800 North Loop 288
Federal Regional Center
Denton, TX 76209

Joseph A. Aluise
Associate General Council - Nuclear
Entergy Services, Inc.
639 Loyola Avenue
New Orleans, LA 70113

FEMA Regional Office

Chairperson, Radiological Assistance Committee
Region IV
Federal Emergency Management Agency
Department of Homeland Security
3003 Chamblee-Tucker Road
Atlanta, GA 30341

Chairperson, Radiological Assistance Committee
Region VI
Federal Emergency Management Agency
Department of Homeland Security
800 North Loop 288
Federal Regional Center
Denton, TX 76201-3698

Electronic distribution by RIV:

Regional Administrator (Elmo.Collins@nrc.gov)
 Deputy Regional Administrator (Chuck.Casto@nrc.gov)
 DRP Director (Kriss.Kennedy@nrc.gov)
 DRP Deputy Director (Anton.Vegel@nrc.gov)
 DRS Director (Roy.Caniano@nrc.gov)
 DRS Deputy Director (Troy.Pruett@nrc.gov)
 Senior Resident Inspector (Rich.Smith@nrc.gov)
 Resident Inspector (Andy.Barrett@nrc.gov)
 Branch Chief, DRP/C (Vincent.Gaddy@nrc.gov)
 Senior Project Engineer, DRP/C (Bob.Hagar@nrc.gov)
 GG Administrative Assistant (Alley.Farrell@nrc.gov)
 Senior Public Affairs Officer (Victor.Dricks@nrc.gov)
 Public Affairs Officer (Lara.Uselding@nrc.gov)
 Project Manager (Alan.Wang@nrc.gov)
 Branch Chief, DRS/TSB (Michael.Hay@nrc.gov)
 RITS Coordinator (Marisa.Herrera@nrc.gov)
 Regional Counsel (Karla.Fuller@nrc.gov)
 Congressional Affairs Officer (Jenny.Weil@nrc.gov)
 OEmail Resource
 ROPreports
 DRS/TSB STA (Dale.Powers@nrc.gov)
 OEDO RIV Coordinator (Geoffrey.Miller@nrc.gov)
 RSLO (Bill.Maier@nrc.gov)
 NSIR (Robert.Kahler@nrc.gov)
 NSIR/DPR/EP (Eric.Schrader@nrc.gov)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000416
License: NPF-29
Report: 05000416/2010004
Licensee: Entergy Operations, Inc.
Facility: Grand Gulf Nuclear Station
Location: 7003 Baldhill Road
Port Gibson, MS 39150
Dates: June 28, 2010 through September 27, 2010
Inspectors: R. Smith, Senior Resident Inspector
A. Barrett, Resident Inspector
C. Graves, Health Physicist
D. Stearns, Health Physicist
Approved By: Vincent Gaddy, Chief
Reactor Project Branch C
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000416/2010004; 06/28/2010 – 09/27/2010; Grand Gulf Nuclear Station, Integrated Resident and Regional Report; Fire Protection, Maintenance Risk Assessments and Emergent Work Control, Operability Evaluations, Postmaintenance Testing, Occupational Dose Assessment and Identification and Resolution of Problems.

The report covered a 3-month period of inspection by resident inspectors and announced baseline inspections by regional based inspectors. Six findings of very low safety significance were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." The cross-cutting aspect is determined using Inspection Manual Chapter 0310, "Components Within the Cross Cutting Areas." Findings for which the significance determination process 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 4, dated December 2006.

A. NRC-Identified Findings and Self-Revealing Findings

Cornerstone: Initiating Event

- Green. The inspectors identified a Green noncited violation of 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," for failure to properly assess the risk impact of maintenance on the switchyard batteries. Specifically, plant personnel evaluated the work as "light" switchyard work when it should have been evaluated as heavy equipment, which increases the likelihood of a loss of offsite power transient. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2010-06668.

The finding was more than minor because it was associated with the Protection Against External Factors attribute of the Initiating Event (IE) Cornerstone. Because the finding affects the licensee's assessment of risk associated with performing maintenance activities, IMC 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," directs significance determination via the use of IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process." In accordance with Flowchart 1 of Appendix K, the significance of this finding was determined to be of very low safety significance (Green), because the calculated Incremental Core Damage Probability Deficit ($2E-8$) was not greater than $1.0E-6$. This finding has a cross-cutting aspect in the area of human performance because the licensee failed to use a systematic decision making process using available risk assessment guidance and did not obtain interdisciplinary input on an important risk management decision [H.1(a)] (Section 1R13).

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green noncited violation of Facility Operating License Condition 2.C(41) involving the failure to ensure that fire barriers protecting safety-related areas were functional during monthly fire barrier inspections. The inspectors identified that fire door OC211, crossover door between division 1 and 2 switchgear rooms, was missing 5 screws in the divider overlap and there was a three inch crack in the door on the bottom left side. The Fire Hazards Analysis Report, Section 9A.2.4 defines fire doors as a fire barrier, and Section 9A.5.7 and 9A.5.8, "Fire Area 7" and "Fire Area 8", respectively, describe the electrical switchgear rooms as having 3-hour fire rated barriers. Operations initiated an hourly fire watch for the non-functional door per the technical requirements manual. The licensee entered this issue into their corrective action program as Condition Report CR-GGN-2010-05541.

The finding was more than minor since it was associated with the protection against external factors attribute of the reactor safety Mitigating Systems (MS) Cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," the inspectors determined that the finding impacted the fire confinement category. The inspectors assigned a low degradation rating because the cracks did not create an actual hole through the door. The inspectors concluded that the finding was of very low safety significance (Green) because the degraded barrier was expected to maintain nearly the same level of effectiveness and reliability had the degradation not been present, and there were no fire ignition sources or combustible materials in the area that would subject the barrier to direct flame impingement. The cause of this finding has a crosscutting aspect in the area of human performance associated with resources, because plant personnel failed to adequately evaluate and provide proper maintenance for degrading fire doors [H.2(d)] (Section 1R05).

- Green. The inspectors identified a Green noncited violation of 10 CFR 50 Appendix B, Criterion XVI, for the failure to remove foreign material from the control room air conditioning oil and Freon subsystems. The pencil strainer on the compressor was found to be 90 percent clogged by foreign material. Plant personnel cleaned the pencil strainer, but placed the CRAC B system back in service without cleaning the oil and Freon subsystems which resulted in the CRAC B system becoming inoperable two weeks later. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2010-04839.

The finding was more than minor because it was associated with the equipment performance attribute of the reactor safety Mitigating Systems (MS) Cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609, "Significance

Determination Process,” Phase 1 Worksheet (Initial Screening and Characterization of Findings), the finding was determined to be of very low safety significance since it did not result in a loss of system safety function. The cause of this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee failed to appropriately address the foreign material in the control room air conditioning subsystems [P.1(d)] (Section 1R15).

- Green. The inspectors identified a Green noncited violation of 10 CFR 50 Appendix B Criterion V for failure to perform required inspections of safety-related plant structures. Specifically, the inspectors found inspections that had been only partially performed and some areas that had not been documented as inspected. Subsequent walkdowns identified several deficiencies including concrete cracks and spalling, deficient coatings, rusted tanks and exposed rebar. The licensee entered this issue into the corrective action program as Condition Report CR-GGN-2010-06871.

The finding is greater than minor because it is associated with the Mitigating Systems (MS) Cornerstone attribute of protection against external events and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using Inspection Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet (Initial Screening and Characterization of Findings), the finding is determined to have very low safety significance since it did not represent a loss of system safety function, an actual loss of safety function of a single train for greater than its Technical Specifications allowed outage time, or screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of human performance, associated with the resources component, in that the licensee failed to accurately document and manage the structural inspections [H.2(c)] (Section 40A2).

Cornerstone: Occupational Radiation Safety

- Green. The inspectors reviewed a self-revealing Green noncited violation of Technical Specification 5.4.1.a for a procedure violation. Radiation Work Permit 20101704 covered work on Valve 1G33F253 in the reactor water cleanup room. Work on this valve was conducted over a 6-day period, May 6 through 11, 2010, and in that time, three personnel contaminations occurred. Appropriate protective clothing was not assigned by the job coverage technician and contributed to the three personnel contaminations and radioactive intake by one of the workers of 62 mrem.

The failure to assign appropriate protective clothing during radiological work is a performance deficiency. The finding is greater than minor because it was associated with the Public Radiation Safety Cornerstone attribute of program and process (exposure control), and affected the cornerstone objective, in that it

resulted in an individual receiving unplanned dose. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined the finding to have very low safety significance because: (1) it was not associated with ALARA planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work practices, because the radiation protection technician covering the job did not use risk insights or take the job site condition into consideration when assigning protective clothing for radiological work [H.3(a)] (2RSO4).

Cornerstone: Emergency Preparedness

- Green. A self-revealing non-cited violation of 10 CFR 50.47(b)(8), was identified when the Grand Gulf Nuclear Station Primary Meteorological Tower was rendered inoperable without compensatory actions from July 6 through July 27, 2010. The primary meteorological tower was declared inoperable by operations for maintenance to perform surveillance and preventative maintenance activities. The technicians did not finish the surveillance due to problems with data points exceeding allowable tolerance limits, and left the tower with the 10 and 50 meter instruments lowered to the ground. Inaccurate meteorological data continued to be displayed in the plant computer system. During the subsequent night shift, the control room supervisor inadvertently closed out the limiting condition of operations for the primary meteorological tower being out of service prior to the tower being returned to an operable condition. The licensee entered this issue into their corrective action program as Condition Report CR-GGN-2010-05748.

The finding was more than minor because it was associated with the Facilities and Equipment attribute of the Emergency Preparedness (EP) Cornerstone and adversely affected the cornerstone objective of ensuring the capability to implement adequate measures to protect public health and safety in the event of a radiological emergency. Specifically, from July 6 through July 27, 2010, key emergency response members could not have accurately performed their assigned emergency notification and dose assessment functions, with an absence of compensatory measures. In accordance with NRC Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 1 and the examples contained in section 4.8 of the same document, the inspectors determined the finding to be of very low safety significance (Green) because the performance deficiency was a failure to comply with NRC regulations, the deficiency was associated with a non-risk significant planning standard as defined in MC0609 Appendix B, and it did not represent a functional failure of the planning standard. The cause of this finding has a crosscutting aspect in the area of human performance associated with work control, because the maintenance and operations department failed to appropriately communicate and coordinate work activities on the primary meteorological tower [H.3(b)] (Section 1R19).

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and condition report numbers are listed in Section 4OA7.

REPORT DETAILS

Summary of Plant Status

Grand Gulf Nuclear Station began the inspection period at full rated thermal power. On July 1, 2010, power was reduced to 67 percent to repair a steam leak on the first stage turbine pressure sensing line. The plant was returned to 100 percent power on July 2, 2010. On July 23, 2010, operators reduced power to 90 percent for monthly control rod testing. The plant was returned to 100 percent power on July 24, 2010. On August 20, 2010, operators reduced reactor power to 68 percent for a planned control rod sequence exchange and planned turbine control valve surveillances. The plant returned to 100 percent power on August 23, 2010. On September 17, 2010, operators reduced power to 90 percent for monthly control rod testing and returned power to 100 percent on the same day. The plant remained at full rated thermal power for the remainder of the inspection period.

1. REACTOR SAFETY

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

1R04 Equipment Alignments (71111.04)

.1 Partial Walkdown

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- Standby liquid control B during the train A maintenance outage
- Diesel driven fire pump A following system maintenance
- Division II standby diesel generator following system maintenance

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could affect the function of the system, and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, the Updated Final Safety Analysis Report, technical specification requirements, administrative technical specifications, outstanding work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also inspected accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the

corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of three partial system walkdown samples as defined in Inspection Procedure 71111.04-05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Fire Inspection Tours

a. Inspection Scope

The inspectors conducted fire protection walkdowns that were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- Division 1 switchgear area and battery room (OC202 and OC207)
- Division 2 switchgear area and battery room (OC211 and OC215)
- Division 3 switchgear area and battery room (OC213 and OC204)
- Division 2 switchgear room (1A207)
- Auxiliary building walkdown following fire computer communication problems with the main control room fire computer

The inspectors reviewed areas to assess if licensee personnel had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant; effectively maintained fire detection and suppression capability; maintained passive fire protection features in good material condition; and had implemented adequate compensatory measures for out of service, degraded or inoperable fire protection equipment, systems, or features, in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to affect equipment that could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed in the attachment, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's corrective action program. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five quarterly fire-protection inspection samples as defined in Inspection Procedure 71111.05-05.

b. Findings

Introduction. The inspectors identified a Green noncited violation of Facility Operating License Condition 2.C(41) involving the failure to ensure that fire barriers protecting safety-related areas were functional.

Description. On July 22, 2010, the inspectors performed a quarterly fire protection inspection of several areas of the control building. The inspectors focused on areas surrounding the safeguards switchgear rooms and associated stairwells. The inspection identified fire door OC211, crossover door between division 1 and 2 switchgear rooms, was missing five screws in the divider overlap and there was a three inch crack in the door on the bottom left side. The Fire Hazards Analysis Report, Section 9A.2.4 defines fire doors as a fire barrier, and Section 9A.5.7 and 9A.5.8, "Fire Area 7" and "Fire Area 8", respectively, describe the electrical switchgear rooms as having three-hour fire rated barriers. After the discovery, the inspectors notified the control room, and plant operators and engineers inspected the door and determined there was an additional three inch crack on the other active door. Operations initiated an hourly fire watch for the non-functional door per the technical requirements manual. The two cracks did not extend past the frame of the door and did not create an actual hole through the door but did degrade the door as a rated fire barrier. This condition did significantly affect the fire containment capability assumed in the fire hazards analysis.

Further inspection by the inspectors found that the defective doors are inspected by operations during monthly surveillance procedure. This procedure details the inspection criteria of missing screws/fasteners, holes in the door, tears, etc. The plant operators failed to perform this surveillance properly in that they did not identify the problems with the fire doors.

The licensee documented this violation in Condition Report CR-GGN-2010-05541. Its short term corrective actions included implementing an hourly fire watch as required by the technical requirements manual.

Analysis. The performance deficiency involved the failure to ensure that fire barriers were properly maintained to protect safety-related areas and maintain the three-hour fire rating design. The finding was more than minor since it was associated with the protection against external factors attribute of the reactor safety Mitigating Systems Cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," the inspectors determined that the finding impacted the fire confinement category. The inspectors assigned a low degradation rating because the cracks did not create an actual hole through the door. The inspectors concluded that the finding was of very low safety significance (Green) because the degraded barrier was expected to maintain nearly the same level of effectiveness and

reliability as it would had the degradation not been present and there were no fire ignition sources or combustible materials in the immediate area that would subject the barrier to direct flame impingement. The cause of this finding has a crosscutting aspect in the area of human performance associated with resources, because plant personnel failed to adequately evaluate and provide proper maintenance for degrading fire doors [H.2(d)].

Enforcement. Grand Gulf Nuclear Station Facility Operating License Condition 2.C.(41) states, in part, that the plant “shall implement and maintain in effect all provisions of the Fire Protection Program” as described in the Updated Final Safety Analysis Report. Updated Final Safety Analysis Report sections 9A.5.7 and 9A.5.8, describe the fire protection features for the electrical switchgear rooms, stating that the walls, including fire doors, have a three-hour fire barrier rating. The fire protection program requires fire barriers to meet the required fire rating or have a suitable engineering justification for a degraded fire barrier. Contrary to this, on July 22, 2010, the inspectors identified that the fire barrier (Door OC211) was degraded and compensatory measures had not been implemented as required by the technical requirements manual. The licensee could not determine when the door became degraded and how long it was in that condition. Because the finding was of very low safety significance and was documented in the licensee’s corrective action program as CR-GGN-2010-05541, this finding is being treated as a noncited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000416/2010004-01 “Degraded Fire Door Barrier Protecting the Safeguards Switchgear Rooms”.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On July 18, 2010, the inspectors observed a fire brigade activation simulating a fire in motor control center 12B22 on the 139 feet elevation in the auxiliary building. The observation evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that the licensee staff identified deficiencies, openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were (1) proper wearing of turnout gear and self-contained breathing apparatus; (2) proper use and layout of fire hoses; (3) employment of appropriate fire fighting techniques; (4) sufficient firefighting equipment brought to the scene; (5) effectiveness of fire brigade leader communications, command, and control; (6) search for victims and propagation of the fire into other plant areas; (7) smoke removal operations; (8) utilization of preplanned strategies; (9) adherence to the preplanned drill scenario; and (10) drill objectives.

These activities constitute completion of one annual fire-protection inspection sample as defined in Inspection Procedure 71111.05-05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

.1 Annual Review of Cables Located in Underground Bunkers/Manholes

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, the flooding analysis, and plant procedures to assess seasonal susceptibilities involving internal flooding; reviewed the Updated Final Safety Analysis Report and corrective action program to determine if licensee personnel identified and corrected flooding problems; inspected underground bunkers/manholes to verify the adequacy of sump pumps, level alarm circuits, cable splices subject to submergence, and drainage for bunkers/manholes; subject to flooding that contain cables whose failure could disable risk-significant equipment. The inspectors walked down the two areas listed below. Specific documents reviewed during this inspection are listed in the attachment.

- June 28, 2010, division 1 and 2 standby service water system manholes
- July 2, 2010, division 1, 2, and 3 safety related system manholes

These activities constitute completion of one annual review of cables located in underground bunkers/manholes inspection sample as defined by Inspection Procedure 71111.06-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On August 9, 2010, the inspectors observed a crew of licensed operators in the plant's simulator to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- Licensed operator performance
- Crew's clarity and formality of communications
- Crew's ability to take timely actions in the conservative direction
- Crew's prioritization, interpretation, and verification of annunciator alarms
- Crew's correct use and implementation of abnormal and emergency procedures
- Control board manipulations

- Oversight and direction from supervisors
- Crew's ability to identify and implement appropriate technical specification actions and emergency plan actions and notifications

The inspectors compared the crew's performance in these areas to pre-established operator action expectations and successful critical task completion requirements. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one quarterly licensed-operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk significant systems:

- Residual heat removal system
- Reactor core isolation cooling system

The inspectors reviewed events such as where ineffective equipment maintenance has resulted in valid or invalid automatic actuations of engineered safeguards systems and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- Implementing appropriate work practices
- Identifying and addressing common cause failures
- Scoping of systems in accordance with 10 CFR 50.65(b)
- Characterizing system reliability issues for performance
- Charging unavailability for performance
- Trending key parameters for condition monitoring
- Ensuring proper classification in accordance with 10 CFR 50.65(a)(1) or -(a)(2)
- Verifying appropriate performance criteria for structures, systems, and components classified as having an adequate demonstration of performance

through preventive maintenance, as described in 10 CFR 50.65(a)(2), or as requiring the establishment of appropriate and adequate goals and corrective actions for systems classified as not having adequate performance, as described in 10 CFR 50.65(a)(1)

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of two quarterly maintenance effectiveness samples as defined in Inspection Procedure 71111.12-05.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed licensee personnel's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- Week of July 12, 2010, during the low pressure core spray outage and division 1 containment hydrogen analyzer maintenance requiring the plant to enter yellow risk condition
- Week of August 2, 2010, during emergent severe weather requiring the site to enter their off normal severe weather procedure and to enter yellow risk condition
- August 16, 2010, emergent work due to a reactor protection system relay failure
- Week of August 23, 2010, during the reactor heat removal C system outage
- September 8, 2010, emergent switchyard battery replacement

The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that licensee personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When licensee personnel performed emergent work, the inspectors verified that the licensee personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk

analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed the technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five maintenance risk assessments and emergent work control inspection samples as defined in Inspection Procedure 71111.13-05.

b. Findings

Introduction. The inspectors identified a Green noncited violation of 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," for failure to properly assess the risk impact of maintenance on the switchyard batteries.

Description. On September 7, 2010, plant personnel began emergent work activities to replace the D and E switchyard battery banks. Operations and work control personnel designated the risk impact as "Light" switchyard work which provided a "Green" plant risk status for the day. The inspectors reviewed the risk classification and found that the risk model used a loss of offsite power transient risk multiplier for each of the four types of switchyard work. The user manual for the risk modeling software classified the work as,

- Circuit Breaker Work - when work is being performed on circuit breakers in the switchyard
- Light/Other Work - when light work involving light hand tools or other work such as relay calibration or replacement is being performed
- Heavy Equipment - when there is work involving the use of heavy equipment, boom or bucket trucks in the vicinity of equipment in the switchyard
- Battery Work - when there is work on switchyard batteries which could result in the batteries becoming unavailable

The inspectors observed the switchyard maintenance and found that a backup power source was installed for the de-energized battery bank; however, the maintenance required more than light hand tools. The work involved disconnecting the battery banks and moving the used and new batteries on palettes with hand trucks and a large forklift. Based on the user manual definitions, the inspectors concluded that plant personnel failed to correctly classify the switchyard maintenance as heavy equipment. In addition, the inspectors also found that the operations and work planning staff had not utilized the risk model user guide and had not consulted with the Entergy corporate probabilistic risk analysis staff prior to making the designation. Had the correct work designation been used, the risk classification and model would have placed the plant into a "Yellow" risk

condition. The licensee issued condition report CR-GGN-2010-06668 to address the inspectors concerns.

Analysis. The failure to perform an adequate risk assessment is a performance deficiency. The finding was more than minor because it was associated with the Protection Against External Factors attribute of the Initiating Event (IE) Cornerstone. Because the finding affects the licensee's assessment of risk associated with performing maintenance activities, IMC 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," directs significance determination via the use of IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process." In accordance with Flowchart 1 of Appendix K, the significance of this finding was determined to be of very low safety significance (Green), because the calculated Incremental Core Damage Probability Deficit (2E-8) was not greater than 1.0E-6. This finding has a cross-cutting aspect in the area of human performance because the licensee failed to use a systematic decision making process using available risk assessment guidance and did not obtain interdisciplinary input on an important risk management decision. [H.1(a)]

Enforcement. Title 10 CFR 50.65(a)(4), states in part, that before performing maintenance activities (including but not limited to surveillance, postmaintenance testing, and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. Contrary to the above, between September 7 and September 10, 2010, operations and work control personnel failed to adequately assess the increase in risk associated with maintenance activities in the switchyard. Because the finding was of very low safety significance and has been entered into the corrective action program as Condition Report CR-GGN-2010-06668, this violation is being treated as a NCV, consistent with section VI.A of the NRC Enforcement Policy. NCV 05000416/2010004-02 "Inadequate Risk Assessment for Switchyard Battery Replacement."

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- Channel bowing on fuel channels in control cell 16-21, CR-GGN-2010-02657
- Fuel oil leak from pressure switch in division II diesel generator control cabinet, CR-GGN-2010-05571
- Foreign material in the control room air conditioning system, CR-GGN-2010-04930
- Improper maintenance on plant air compressor C, CR-GGN-2010-05119

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical

adequacy of the evaluations to ensure that technical specification operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the technical specifications and the Updated Final Safety Analysis Report to the licensee personnel's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of four operability evaluations inspection samples as defined in Inspection Procedure 71111.15-04

b. Findings

Introduction. The inspectors identified a Green noncited violation of 10 CFR 50 Appendix B, Criterion XVI, for the failure to remove foreign material from the control room air conditioning oil and Freon subsystems.

Description. On February 3, 2010, plant personnel replaced the control room air conditioning (CRAC) compressor B with a rebuilt compressor to complete a preventive maintenance task requirement. On March 27, 2010, the rebuilt CRAC compressor B tripped on low oil pressure. Plant personnel inspected the internals of the compressor and found contaminants on the oil sump strainer and pencil strainer. The investigation and oil sample analysis concluded that the remanufacturing vendor introduced the abrasives, dirt, and dust into the compressor during the rebuild and storage of the compressor. Plant personnel installed another rebuilt compressor and considered cleaning the contaminated oil and Freon subsystems. Station management concluded that a monthly check of the strainers would be acceptable to maintain system operability. The strainers were scheduled to be inspected on April 22, 2010, however due to inadequate resources from plant operations, the inspection was delayed. On May 19, 2010, operations initiated a condition report documenting a failure of the CRAC B system to maintain the control room temperature. The investigation determined that the pencil strainer was 90 percent clogged by foreign material. The strainers were cleaned and the CRAC B system was again returned to service without cleaning the oil and Freon subsystems. Consequently, on June 5, 2010, operations again declared the CRAC 'B' system inoperable and initiated another condition report documenting that the CRAC B system was not properly cooling the control room. On June 17, 2010, plant personnel took action to clean the CRAC B oil and Freon subsystems. The licensee issued condition report CR-GGN-2010-04839 to address the inspectors concerns regarding the cleanliness of the oil and Freon subsystems..

Analysis. The inspectors determined that the failure to promptly identify and correct the foreign material contamination in the control room air conditioning oil and Freon

subsystems was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the reactor safety mitigating systems cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet (Initial Screening and Characterization of Findings), the finding was determined to be of very low safety significance since it did not result in a loss of system safety function. The cause of this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee failed to appropriately address the foreign material in the control room air conditioning subsystems. [P.1(d)]

Enforcement. 10 CFR Part 50, Appendix B, Criterion XVI requires that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. Contrary to the above, from May 19, 2010 to June 17, 2010, plant personnel failed to promptly identify and correct foreign material contamination in the control room air conditioning B system. Because the finding was of very low safety significance and has been entered into the corrective action program as Condition Report CR-GGN-2010-04839, this violation is being treated as a NCV, consistent with section VI.A of the NRC Enforcement Policy. NCV 05000416/2010004-03 "Failure to Remove Foreign Material from the Control Room Air Conditioning System".

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the following postmaintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- For division 2 diesel generator outside air fan following temperature switch replacement
- For the low pressure core spray system following maintenance outage
- For primary meteorological tower wind speed/direction, air temperature/delta temperature and relative humidity following corrective maintenance
- For standby gas treatment system B following maintenance outage
- For reactor heat removal C system following a maintenance outage

The inspectors selected these activities based upon the structure, system, or component's ability to affect risk. The inspectors evaluated these activities for the following:

- The effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed
- Acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate

The inspectors evaluated the activities against the technical specifications, the Updated Final Safety Analysis Report, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with postmaintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program and that the problems were being corrected commensurate with their importance to safety. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five postmaintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

Introduction. A self-revealing non-cited violation of 10 CFR 50.47(b)(8), was identified when the Grand Gulf Nuclear Station primary meteorological tower was rendered inoperable without compensatory actions from July 6 through July 27, 2010.

Description. On July 6, 2010, the primary meteorological tower was declared inoperable by Operations for surveillance activities and routine preventative maintenance. The technicians did not finish the surveillance due to problems with data points exceeding allowable tolerance limits. During the subsequent night shift, the Control Room Supervisor inadvertently closed out the limiting condition of operations for the primary meteorological tower being out of service. As a result, meteorological data displayed on plant computer systems was not accurate, due to the instruments being lowered from the normal elevation of 10 and 50 meters to the ground from July 6 through July 27, 2010. This inaccurate information would have been relied upon to make emergency notifications and perform dose assessment because plant operators and emergency response organization members were unaware of the configuration of the meteorological tower. Grand Gulf primary meteorological tower was rendered inoperable and unavailable without compensatory actions in place. The site discovered the problem on July 27, 2010, and implemented compensatory actions to obtain meteorological data from the backup tower. They restored the primary meteorological tower to operable status on August 5, 2010.

No identification credit is given because the finding was not discovered through a licensee program or process. Discovery was made when maintenance personnel come to operations with a late date surveillance sheet for the primary meteorological tower surveillance since maintenance knew that the surveillance had not been completed. Operations stated there wasn't an open limiting condition for operation since the issue

had been closed earlier by the control room supervisor. Maintenance informed operations that the tower instruments had been lowered on July 6, and since that time the tower could not perform its function. Operations investigated and found that the instruments were lowered. Although the instruments were lowered and operations had conducted rounds of the meteorological tower on July 11, 18, and 25th, operators had not been trained on the meteorological tower and did not understand the significance of the instruments being lowered.

The licensee documented this violation in Condition Report CR-GGN-2010-05748. The short term corrective actions included implementing compensatory measures to obtain required meteorological data from the backup tower until the primary tower was restored to operable status.

Analysis. The inspectors determined that returning the meteorological tower to operable status when it was actually inoperable was a performance deficiency within the licensee's ability to foresee and correct, resulting in Grand Gulf not maintaining an adequate meteorological assessment capability for emergency response. The finding was more than minor because it was associated with the Facilities and Equipment attribute of the Emergency Preparedness (EP) cornerstone and adversely affected the cornerstone objective of ensuring the capability to implement adequate measures to protect public health and safety in the event of a radiological emergency. Specifically, from July 6 through July 27, 2010, key emergency response members could not have accurately performed their assigned emergency notification and dose assessment functions, due to an absence of compensatory measures. In accordance with NRC Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 1 and the examples contained in section 4.8 of the same document, the inspectors determined the finding to be of very low safety significance (Green) because the performance deficiency was a failure to comply with NRC regulations, the deficiency was associated with a non-risk significant planning standard as defined in MC0609 Appendix B, and it did not represent a functional failure of the planning standard. The cause of this finding has a crosscutting aspect in the area of human performance associated with work control, because the maintenance and operations department failed to appropriately communicate and coordinate work activities on the primary meteorological tower. [H.3(b)]

Enforcement. Title 10 of the Code of Federal Regulations, Section 50.54(q) requires, in part, that a licensee authorized to operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b). Title 10 of the Code of Federal Regulations, Section 50.47(b)(8) requires, in part, that adequate emergency equipment to support emergency response are provided and maintained such that effective meteorological data can be used in radiological assessment during an emergency. Contrary to the above, from July 6, through July 27, 2010, Grand Gulf Nuclear Station did not maintain equipment to support emergency response. Specifically, the primary meteorological tower instruments were lowered to the ground and did not provide accurate information. The inaccurate information would have been relied upon by key emergency response personnel from July 6, through July 27, 2010, to perform emergency notification and dose assessment because plant

operators and the emergency response organization were unaware the primary meteorological tower was inoperable. Because the finding was of very low safety significance and was documented in the licensee's corrective action program as condition report CR-GGN-2010-05748, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. NCV 05000416/2010004-04 "Primary Meteorological Tower Inoperable Without Compensatory Actions in Place".

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, procedure requirements, and technical specifications to ensure that the surveillance activities listed below demonstrated that the systems, structures, and/or components tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the significant surveillance test attributes were adequate to address the following:

- Preconditioning
- Evaluation of testing impact on the plant
- Acceptance criteria
- Test equipment
- Procedures
- Jumper/lifted lead controls
- Test data
- Testing frequency and method demonstrated technical specification operability
- Test equipment removal
- Restoration of plant systems
- Fulfillment of ASME Code requirements
- Updating of performance indicator data
- Engineering evaluations, root causes, and bases for returning tested systems, structures, and components not meeting the test acceptance criteria were correct
- Reference setting data

- Annunciators and alarms set points

The inspectors also verified that licensee personnel identified and implemented any needed corrective actions associated with the surveillance testing.

- July 23, 2010, division 3 high pressure core spray diesel generator monthly surveillance
- August 2, 2010, reactor coolant system leakage detection surveillance with elevated unidentified leakage attributed to the number 2 seal for recirculation pump A
- August 5-6, 2010, control room standby fresh air B fan test monthly surveillance
- August 20, 2010, division 3 high pressure core spray diesel generator monthly surveillance
- August 20, 2010, standby service water C system quarterly pump inservice test
- September 21, 2010, reactor core isolation cooling quarterly pump inservice test

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of 3 routine surveillances, 2 inservice tests and 1 reactor coolant system leak surveillance for a total of 6 surveillance testing samples as defined in Inspection Procedure 71111.22-05.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on June 30, 2010, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the technical support center facility to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee

staff was properly identifying weaknesses and entering them into the corrective action program. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the attachment.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.06-05.

b. Findings

No findings were identified.

.2 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on August 18, 2010, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator control room, the emergency operations facility and incident command post to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the attachment.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.06-05.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Occupational and Public Radiation Safety

2RS04 Occupational Dose Assessment (71124.04)

a. Inspection Scope

This area was inspected to: (1) determine the accuracy and operability of personal monitoring equipment; (2) determine the accuracy and effectiveness of the licensee's methods for determining total effective dose equivalent; and (3) ensure occupational dose is appropriately monitored. The inspectors used the requirements in 10 CFR Part 20, the technical specifications, and the licensee's procedures required by technical

specifications as criteria for determining compliance. During the inspection, the inspectors interviewed licensee personnel, performed walkdowns of various portions of the plant, and reviewed the following items:

- External dosimetry accreditation, storage, issue, use, and processing of active and passive dosimeters
- The technical competency and adequacy of the licensee's internal dosimetry program
- Adequacy of the dosimetry program for special dosimetry situations such as declared pregnant workers, multiple dosimetry placement, and neutron dose assessment
- Audits, self-assessments, and corrective action documents related to dose assessment since the last inspection

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of the one required sample as defined in Inspection Procedure 71124.04-05.

b. Findings

Introduction. The inspectors reviewed a self-revealing Green noncited violation of Technical Specification 5.4.1.a for a procedure violation.

Description. Radiation Work Permit 20101704 covered work on valve 1G33F253 in the reactor water cleanup room. Work on this valve was conducted over a 6-day period, May 6 through 11, 2010, during which three personnel contaminations occurred. All of the contaminations involved whole body counts due to facial area contamination, and one of the individuals received an intake of 62 mrem. Work on this valve involved disassembly, cleaning, inspection, lapping as necessary, and reassembly. The minimum protective clothing required by the radiation work permit was met. However, the radiation protection technician covering the job did not take into consideration the current state of the valve or the type of work being conducted as the work progressed, such as water being present from cleaning the valve. As a result, the appropriate protective clothing (faceshield) was not assigned and contributed to the three personnel contaminations and radioactive intake by one of the workers.

Analysis. The failure to assign appropriate protective clothing during radiological work is a performance deficiency. The finding is greater than minor because it was associated with the Public Radiation Safety Cornerstone attribute of program and process (exposure control), and affected the cornerstone objective, in that, it resulted in an individual receiving unplanned dose. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined the finding to have very low safety significance because: (1) it was not associated with ALARA planning or work

controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work component, work practices because the radiation protection technician covering the job did not use risk insights or take the job site condition into consideration when assigning protective clothing for radiological work [H.3(a)].

Enforcement. Technical Specification 5.4.1 states that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, 1978. Section 7e(1) of Appendix A of Regulatory Guide 1.33 lists procedures for contamination control. Licensee implementing Procedure EN-RP-141 "Job Coverage," Section 5.2, states, in part, that the individual providing job coverage informs workers of the radiological controls to be implemented to control the radiological hazards to keep exposures ALARA and prevent personnel contaminations. Contrary to the above, on May 6, 2010, three workers were not informed of the proper radiological controls to be implemented to keep exposures ALARA and prevent personnel contaminations. This violation was entered into the licensee's corrective action program as Condition Report CR-GGN-2010-03432. This issue is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000416/2010004-05 "Failure to Follow the Radiological Protection Job Coverage Procedure."

2RS05 Radiation Monitoring Instrumentation (71124.05)

a. Inspection Scope

This area was inspected to verify the licensee is assuring the accuracy and operability of radiation monitoring instruments that are used to: (1) monitor areas, materials, and workers to ensure a radiologically safe work environment; and (2) detect and quantify radioactive process streams and effluent releases. The inspectors used the requirements in 10 CFR Part 20, the technical specifications, and the licensee's procedures required by technical specifications as criteria for determining compliance. During the inspection, the inspectors interviewed licensee personnel, performed walkdowns of various portions of the plant, and reviewed the following items:

- Selected plant configurations and alignments of process, postaccident, and effluent monitors with descriptions in the Updated Final Safety Analysis Report and the offsite dose calculation manual
- Select instrumentation, including effluent monitoring instrument, portable survey instruments, area radiation monitors, continuous air monitors, personnel contamination monitors, portal monitors, and small article monitors to examine their configurations and source checks
- Calibration and testing of process and effluent monitors, laboratory instrumentation, whole body counters, postaccident monitoring instrumentation, portal monitors, personnel contamination monitors, small article monitors,

portable survey instruments, area radiation monitors, electronic dosimetry, air samplers, and continuous air monitors

- Audits, self-assessments, and corrective action documents related to radiation monitoring instrumentation since the last inspection

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of the one required sample as defined in Inspection Procedure 71124.05-05.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

40A1 Performance Indicator Verification (71151)

.1 Data Submission Issue

a. Inspection Scope

The inspectors performed a review of the performance indicator data submitted by the licensee for the second Quarter 2010 performance indicators for any obvious inconsistencies prior to its public release in accordance with Inspection Manual Chapter 0608, "Performance Indicator Program."

This review was performed as part of the inspectors' normal plant status activities and, as such, did not constitute a separate inspection sample.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index - Emergency ac Power System (MS06)

a. Inspection Scope

The inspectors sampled licensee submittals for the mitigating systems performance index - emergency ac power system performance indicator for the period from the third quarter 2009 through the second quarter 2010. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5. The inspectors reviewed the licensee's operator narrative logs, mitigating systems performance index derivation reports, issue reports, event reports, and NRC integrated inspection reports for the period of July 2009 through June 2010, to validate the accuracy of the submittals. The inspectors reviewed the

mitigating systems performance index component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's condition report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one mitigating systems performance index emergency ac power system samples as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

40A2 Identification and Resolution of Problems (71152)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors reviewed attributes that included the complete and accurate identification of the problem; the timely correction, commensurate with the safety significance; the evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews; and the classification, prioritization, focus, and timeliness of corrective actions. Minor issues entered into the licensee's corrective action program because of the inspectors' observations are included in the attached list of documents reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure, they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. The inspectors accomplished this through review of the station's daily corrective action documents.

The inspectors performed these daily reviews as part of their daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings were identified.

.3 Selected Issue Follow-up Inspection

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, the inspectors reviewed corrective actions from condition report CR-GGN-2007-05824, which documented corrective actions from a noncited violation involving degraded standby service water structures. In relation to this, the inspectors also reviewed changes to the maintenance rule program for onsite structures.

These activities constitute completion of one in-depth problem identification and resolution sample as defined in Inspection Procedure 71152-05.

b. Findings

Introduction. The inspectors identified a Green noncited violation of 10 CFR 50 Appendix B Criterion V for failure to perform required inspection of safety-related plant structures.

Description. On August 9, 2010 the inspectors performed a problem identification and resolution follow-up review of corrective actions from NCV 05000416/2008002-02, which documented concrete deficiencies (cracks) in the standby service water cooling towers. The inspectors reviewed the structural inspection program that satisfied the maintenance rule structural monitoring requirements. The inspectors found that the licensee issued a new fleet level guidance document, EN-DC-150, "Condition Monitoring of Maintenance Rule Structures," which required a baseline inspection of structures so that inspections could be performed on five year or ten year intervals, as required. The inspectors reviewed several hundred pages of work orders which were credited as satisfying the baseline requirement and found inconsistencies in the documentation of the inspections. The inspectors found inspections that had been only partially performed and some areas that had not been documented as being inspected. In addition, the inspectors reviewed work orders for previous inspections performed per program plan GGNS-C-399,

“Maintenance Rule Inspection of Structures, Tanks, and Transformers,” and found that the data was inconsistent, incomplete and that some of the structures had not been inspected. After discovering this, the inspectors performed field walk downs of the safety and non-safety related structures. Several deficiencies were noted by the inspectors, including concrete cracks and spalling, deficient coatings, rusted tanks, and exposed rebar. The inspectors brought their concerns to station management and condition report. CR-GGN-2010-06871 was issued to document the concerns. In response to the inspector’s findings, station management created a structural inspection spreadsheet that identified the missed inspections and generated work orders to complete the missed or incomplete inspections.

Analysis. The failure to follow station procedures to inspect safety-related structures is a performance deficiency. The finding is more than minor because it is associated with the Mitigating Systems Cornerstone attribute of protection against external events and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using Inspection Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet (Initial Screening and Characterization of Findings), the finding is determined to have very low safety significance since it did not represent a loss of system safety function, an actual loss of safety function of a single train for greater than its TS allowed outage time, or screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of human performance, associated with the resources component, in that the licensee failed to accurately document structural inspections. [H.2(c)]

Enforcement. 10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Contrary to this, on August 9, 2010, inspectors identified that plant personnel failed to perform structural inspections in accordance with a station procedure (EN-DC-150, “Conditioning Monitoring of Maintenance Rule Structures”). Because the finding is of very low risk significance and has been entered into the corrective action program as CR-GGN-2010-06871, this violation is being treated as an NCV consistent with Section VI.A of the Enforcement Policy: NCV 05000416/2010004-06 “Failure to Properly Implement an Adequate Structural Monitoring Program”.

40A3 Event Follow-up (71153)

.1 (Closed) Licensee Event Report 05000416/2010-001-00, “Automatic Reactor Scram on Decreasing Coolant level Due to Inadvertent Reactor Feed Pump Trip”

The inspectors reviewed the event report and the associated cause determination and corrective actions. Documents reviewed as part of this inspection are listed in the attachment. The enforcement aspects of this finding were discussed in NRC Inspection Report 05000416/2010002 in Section 4OA3. This LER is closed.

.2 Partial Loss of Plant Service Water due to Inadvertent Plant Service Water Pump Trip

a. Inspection Scope

On July 28, 2010, a plant service water pump tripped causing a partial loss of plant service water and a transient in plant service water pressure. The operators entered the Off-normal Event Procedure, "Loss of Plant Service Water." The inspectors responded to the control room to monitor operator actions to recover from the event. Plant personnel performed extensive troubleshooting and could not identify the cause of the plant service water pump trip. Documents reviewed for this inspection are listed in the attachment.

b. Findings

No findings were identified.

40A6 Meetings

Exit Meeting Summary

On August 20, 2010, the inspectors presented the results of the radiation safety inspections to M. Richey, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On October 5, 2010 the inspectors presented the inspection results to J. Browning, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

40A7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as NCVs.

- Technical Specification Section 5.4.1.a requires that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Section 9(e) of Appendix A requires general procedures for the control of maintenance, repair, replacement, and modification work. The regulatory guide also states that those procedures should include information necessary for minimizing radiation exposure to workmen, in preparing the detailed work procedures. Contrary to this, on March 18, 2010, while setting the steam dryer assembly into the reactor vessel, an area radiation monitor alarmed on the refuel bridge due to a loss of water shielding over the dryer assembly. The maximum dose rate measured on the refuel bridge was 136 mrem per hour. The licensee determined that neither the maintenance procedure nor the operations procedure specified a minimum water level in the reactor vessel to ensure adequate shielding of the steam dryer assembly. The licensee immediately evacuated

the area upon receiving the alarms, restored reactor water level, and administratively established minimum and maximum reactor vessel water levels prior to proceeding with the evolution. Since the licensee's procedure 08-S-02-75, "Coverage and Control of Refueling Operations," Revision 11, required the placement of the area radiation monitor on the refuel bridge during movement of those assemblies, this issue is considered licensee identified. The issue was documented in the licensee's corrective action program as Condition Reports CR-GGN-2010-04333 and CR-GGN-2010-04366. This violation is considered to be of very low safety significance because the finding did not involve the ALARA program, did not result in an overexposure, did not involve a substantial potential for overexposure, and did not compromise the ability to assess dose.

- Title 10 CFR 50.54(q) requires in part that a licensee follow and maintain in effect emergency plans which meet the standards of 10 CFR 50.47(b). Title 10 CFR 50.47(b)(4) requires in part that a standard emergency classification and action level scheme be in use and Grand Gulf Activation of the Emergency Plan, Revision 119, Section 5, required that an unusual event be declared if vibratory ground motion felt in the protected area and recognized as an earthquake AND activated seismic switches as indicated by activation of the seismic monitoring system strong motion accelerometer system activation. Contrary to 10 CFR 50.54(q), from April 21, 2010, through August 17, 2010, Grand Gulf Nuclear Station failed to implement adequate compensatory measures to address the out-of-service seismic instruments, therefore preventing the prompt assessment and classification of an unusual event following an earthquake. Specifically, with the seismic activation equipment in an inoperable condition, the site failed to establish adequate compensatory measures due to the phone number provided to operators in the control room not being manned 24 hours a day, seven days a week, which would not ensure prompt assessment and implementation of the facility emergency plan. This issue was documented in the licensee's corrective action program in condition report CR GGN-2010-06140. This finding is of very low safety significance because the finding did not represent a loss of function or degradation of a Risk Significant Planning Standard in that other seismic recording instruments were available which would permit the site to make an accurate classification of the event, although the classification may have been delayed beyond 15 minutes from the occurrence of an earthquake.
- Technical Specification 5.4.1.a requires written procedures to be established, implemented, and maintained covering the activities specified in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, Item 2.g requires procedures for control of nuclear power plant power operation and process monitoring. Procedure 03-1-01-2, Revision 144, "Power Operations," step 2.29 requires a licensed operator to verify and ensure that each step in the control rod movement sheet is performed correctly. Contrary to the above, on August 20, 2010, Grand Gulf Nuclear Station reactor operators selected and moved the wrong control rod during a planned sequence exchange, resulting in an improper rod pattern. This issue was documented in the licensee's corrective action program in condition report CR GGN-2010-06225. The finding is of very low safety significance because the mispositioned control rod only impacted the fuel cladding barrier.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Browning, General Plant Manager
D. Coulter, Licensing
R. Douet, Site Vice President
G. Giles, Corrective Action Program Manager
K. Higgenbotham, Operations Manager
J. Houston, Maintenance Manager
R. James, Containment Examinations
R. Jackson, Licensing
M. Larsen, Engineer, Licensing
D. Maye, Repair and Replacement Program Manager
C. Perino, Licensing Manager
P. Rescheske, Licensing
F. Rosser, Supervisor, Dosimetry
M. Richey, Director, Nuclear Safety and Assurance
T. Trichell, Radiation Protection Manager
D. Wiles, Engineering Director

NRC Personnel

B. Hagar, Senior Project Engineer
R. Kumana, Project Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000416/2010004-01	NCV	Degraded Fire Door Barrier Protecting the Safeguards Switchgear Rooms (Section 1R05)
05000416/2010004-02	NCV	Inadequate Risk Assessment for Switchyard Battery Replacement (Section 1R13)
05000416/2010004-03	NCV	Failure to Remove Foreign Material from the Control Room Air Conditioning Systems (Section 1R15)
05000416/2010004-04	NCV	Primary Meteorological Tower Inoperable Without Compensatory Actions in Place (Section 1R19)
05000416/2010004-05	NCV	Failure to Follow the Radiological Protection Job Coverage Procedure (Section 2RS04)
05000416/2010004-06	NCV	Failure to Properly Implement an Adequate Structural Monitoring Program (Section 40A2)

Closed

05000416/2010-001-00	LER	Automatic Reactor Scram on Decreasing Coolant level Due to Inadvertent Reactor Feed Pump Trip
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LIST OF DOCUMENTS REVIEWED

Section 1RO4: Equipment Alignment

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
02-S-01-2	Plant Operations Manual, Control and Use of Operations Section Directives	47
04-S-01-P64-1	Plant Operations Manual, Fire Protection Water System	56
06-OP-SP64-M-0011	Plant Operations Manual, Fire Protection System Valve Lineup Verification	110
04-1-01-C41-1	Plant Operations Manual, Standby Liquid Control System	117
EN-OP-104, Attachment 9.5	Operability Evaluation for Diesel Switch	4

OTHER

TITLE

Procurement Engineering Evaluation 65657

EC 17291

CONDITION REPORT

CR-GGN-2008-04293	CR-GGN-2008-04381	CR-GGN-2008-06362
CR-GGN-2008-06412	CR-GGN-2008-06603	CR-GGN-2008-07026
CR-GGN-2008-07075	CR-GGN-2008-07101	CR-GGN-2008-07147
CR-GGN-2009-00272	CR-GGN-2009-01546	CR-GGN-2009-01916
CR-GGN-2009-02082	CR-GGN-2009-02423	CR-GGN-2009-03321
CR-GGN-2009-05654	CR-GGN-2009-06869	CR-GGN-2009-06873
CR-GGN-2009-06874	CR-GGN-2009-06882	CR-GGN-2010-00152
CR-GGN-2010-00342	CR-GGN-2010-00454	CR-GGN-2010-00636
CR-GGN-2010-00798	CR-GGN-2010-02361	CR-GGN-2010-02470

CR-GGN-2010-03034	CR-GGN-2010-04656	CR-GGN-2010-04687
CR-GGN-2010-05798	CR-GGN-2010-06091	CR-GGN-2007-04851
CR-GGN-2007-03102	CR-GGN-2008-03862	CR-GGN-2008-04841
CR-GGN-2009-00875	CR-GGN-2009-03399	CR-GGN-2009-03476
CR-GGN-2009-03859	CR-GGN-2009-03931	CR-GGN-2009-03949
CR-GGN-2009-04519	CR-GGN-2009-04520	CR-GGN-2009-04539
CR-GGN-2010-00283	CR-GGN-2010-01496	CR-GGN-2010-01500
CR-GGN-2010-01749	CR-GGN-2010-04293	CR-GGN-2009-00102
CR-GGN-2009-04519	CR-GGN-2010-06640	

WORK ORDER

WO222793

WO237704

Section 1RO5: Fire Protection

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
Fire Pre-Plan C-03	Division I SWGR Area and Battery Room OC202 & OC207	3
Fire Pre-Plan C-07-1	Division II Switchgear Room and Battery Room OC211 and OC 215	3
Fire Pre-Plan C-07-2	Div. II Switchgear Room (U2) – OC203, Div I Battery Room (U2) – OC212, Div. III Battery Room (U2) – OC204, Div. III Switchgear Room (U2) – OC213, Em. HSD Room (U2) – OC205 & OC205a, Div. I Switchgear Room OC214, Div. II Battery Room (U2) OC206, Corridor – OC216	2
10-S-03-7	Plant Operations Manual, Fire Protection Training Program	13
06-OP-SP64-D-0044	Plant Operations Manual, Fire Door Check	114
06-OP-SP64-M-0043	Plant Operations Manual, Fire Doors Alarm Check	107

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/ DATE</u>
9A.5.31	GG USFAR Fire Area 31	
9A.5.32	GG USFAR Fire Area 32	
9A.5.37	GG USFAR Fire Area 37	
9A.5.38	GG USFAR Fire Area 38	
FPE94-0002	Fire Protection Evaluation	0
9A.5.30.4	GG USFAR	
9A.5.36.4	GG USFAR Fire Zone Analysis	
9A.5.40.4	GG USFAR Fire Zone Analysis	
9A.5.47	GG USFAR Fire Area 47	
	2009-2010 Division II Battery Room Temp Trends	January 1, 2009- September 30, 2010
1-FTR-10-01- 0137	Fire Detection Instrumentation	August 19, 2010

CALCULATION

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MC-OSP64- 86058	Fire Zone OC207/Fire Area 32	40
MC-OSP64- 86058	Fire Zone OC211/Fire Area 37	40
MC-OSP64- 86058	Fire Zone OC215/Fire Area 38	37
MC-OSP64- 86058	Fire Zone OC202/Fire Area 31	30

CONDITION REPORT

CR-GGN-2010-05909	CR-GGN-2010-05752	CR-GGN-2010-05753
CR-GGN-2010-05754	CR-GGN-2010-05757	CR-GGN-2010-05764

CR-GGN-2010-05619

CR-GGN-2010-05212

CR-GGN-2010-01180

CR-GGN-2010-06203

WORK ORDER

WO52022663

Section 1R06: Flood Protection Measures

OTHER

<u>NUMBER</u>	<u>TITLE</u>
SIPD 1500	Solar Pumping for Electrical Manholes

CONDITION REPORT

CR-GGN-2010-05335

WORK ORDER

WO52265881

WO52210679

WO00202572

Section 1R11: Licensed Operator Requalification Program

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
GSMS-LOR-WEX09	DG 12 Control Air Leak/ Loss of Feedwater Heating/ ATWS/ Suppression Pool Leak/ EP-2, 2A, 3, 3	16

Section 1R12: Maintenance Effectiveness

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
04-1-01-E12	Plant Operations Manual, Residual Heat Removal System	137
07-S-24-E51-C002-5	Plant Operations Manual, RCIC Oil Draining, Filling and Venting	2
07-S-24-E51-C002-5	Plant Operations Manual, RCIC Oil Draining, Filling and Venting	3

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	RHR System Health Report 1st Qtr. 2010	0
	RHR System Health Report 2nd Qtr. 2010	0
E51	RCIC System, Maintenance Rule Database	
E51	Reactor Core Isolation Cooling System, System Health Plan	0
7.5	GG USFAR, Safety-Related Display Instrumentation	
	E12 RHR 'C' SYS OTG -**EOOS 9.5**	August 13, 2010
	E12 - Residual Heat Removal System (RHR)	1 st Qtr 2010
	E12 - Residual Heat Removal System (RHR)	2 nd Qtr 2010

CONDITION REPORT

CR-GGN-2010-00945	CR-GGN-2010-01797	CR-GGN-2010-02770
CR-GGN-2010-05107	CR-GGN-2010-05157	CR-GGN-2008-03751
CR-GGN-2008-05945	CR-GGN-2008-06109	CR-GGN-2008-06832
CR-GGN-2008-06988	CR-GGN-2010-00258	CR-GGN-2009-04518
CR-GGN-2009-00141	CR-GGN-2009-00339	CR-GGN-2009-00416
CR-GGN-2009-01042	CR-GGN-2009-05640	CR-GGN-2009-04960
CR-GGN-2009-04755	CR-GGN-2009-06275	CR-GGN-2009-05034
CR-GGN-2009-04970	CR-GGN-2009-04974	CR-GGN-2009-05217
CR-GGN-2009-05183	CR-GGN-2009-05154	CR-GGN-2009-05251
CR-GGN-2009-05513	CR-GGN-2009-05348	CR-GGN-2009-05639
CR-GGN-2010-01369	CR-GGN-2009-05379	CR-GGN-2009-05432
CR-GGN-2009-05918	CR-GGN-2009-05890	CR-GGN-2009-06164
CR-GGN-2009-05699	CR-GGN-2009-05754	CR-GGN-2009-06286
CR-GGN-2009-06068	CR-GGN-2008-04121	CR-GGN-2009-03384

CR-GGN-2009-01893	CR-GGN-2009-02232	CR-GGN-2009-03405
CR-GGN-2009-03112	CR-GGN-2009-03082	CR-GGN-2009-05520
CR-GGN-2009-00194	CR-GGN-2009-03005	CR-GGN-2009-03103
CR-GGN-2009-00478	CR-GGN-2009-05617	CR-GGN-2009-03643
CR-GGN-2009-06065	CR-GGN-2009-05000	CR-GGN-2009-03864
CR-GGN-2009-05405	CR-GGN-2009-00592	CR-GGN-2008-05658
CR-GGN-2010-02635	CR-GGN-2008-05908	CR-GGN-2009-04024
CR-GGN-2010-01763	CR-GGN-2010-01896	CR-GGN-2010-02911
CR-GGN-2010-02936	CR-GGN-2008-06117	CR-GGN-2009-00144
CR-GGN-2009-00037	CR-GGN-2009-00146	CR-GGN-2009-00125
CR-GGN-2009-00201	CR-GGN-2009-00132	CR-GGN-2008-06772
CR-GGN-2009-00564	CR-GGN-2009-00933	CR-GGN-2009-00218
CR-GGN-2009-00763	CR-GGN-2009-00990	CR-GGN-2009-04929
CR-GGN-2009-04817	CR-GGN-2010-03182	CR-GGN-2010-03867
CR-GGN-2010-04462	CR-GGN-2010-05139	CR-GGN-2009-02863
CR-GGN-2009-06083	CR-GGN-2008-06147	CR-GGN-2009-00451
CR-GGN-2009-00149	CR-GGN-2009-05636	CR-GGN-2009-05549
CR-GGN-2010-02186	CR-GGN-2010-01528	CR-GGN-2010-00621

WORK ORDER

WO00184377

Section 1R13: Maintenance Risk Assessment and Emergent Work Controls

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
02-S-01-41	Online Risk Assessment Worksheet, Attachment I	2

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
EN-WM-101	On-line Work Management Process for the Week of July 12, 2010	6
EN-WM-101	On-line Work Management Process, On-line Emergent Work Addition/Deletion Approval Form	July 13, 2010 Rev 6
EN-WM-101	On-line Work Management Process, On-line Emergent Work Addition/Deletion Approval Form	July 15, 2010 Rev 6
EN-WM-101	On-line Work Management Process, On-line Emergent Work Addition/Deletion Approval Form	August 19, 2010 Rev 6
02-S-01-41, Attachment I	Online Risk Assessment Worksheet	2
02-S-01-41, Attachment II	Managing and Approving Risk Significant Activities Section 1	2
EN-MA-119	Nuclear Management Manual, Material Handling Program	9
01-S-18-6	Risk Assessment of Maintenance Activities	8
EN-FAP-WM- 002, Attachment 7.4	Critical Evolutions Meeting Presentation Format	
01-S-18-6	Plant Operations Manual, Risk Assessment of Maintenance Activities	8

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Qualitative Yellow EOOS Condition Division 1 CTMT H2 Analyzer	Week of July 13, 2010
Model GGEOOSR3	PROBABLISTIC SAFETY ANALYSIS GROUP GGNS EOOS Risk Monitor Users' Manual (Model 3a)	

CONDITION REPORT

CR-GGN-2010-06667 CR-GGN-2010-06668

WORK ORDER

WO52242080	WO00246797	WO00247579
WO00247226	WO00247226	WO00208057
WO00245448		

Section 1R15: Operability Evaluations

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
GEH/GNF-0000-0013-9020-03	Base for Surveillance Plan for GNF Thick/Think Channel-Control Blade Interference Monitoring	6
EN-RE-216	Nuclear Management Manual, Channel-Control Blade Interference Monitoring	0
ECH-NE-09-00040	GGNS C17 Channel-Control Blade Interference Monitoring Plan	2
01-S-02-3	Control Rod Settle and Insertion Test	116
EN-LI-119	Nuclear Management Manual, Apparent Cause Evaluation Process	8
EN-WM-101	Nuclear Management Manual, On-line Work Management Process	6
EN-WM-102	Nuclear Management Manual, Work Implementation and Closeout	4
EN-AD-102	Nuclear Management Manual, Procedure Adherence and Level of Use	5

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	Channel-Control-Blade Interference in GE Boiling Water Reactors, BWR D-Lattice Plants with Zircaloy-2 Channels from 2007 to 2009	
SC08-05	10 CFR Part 21 Communication, Updated Surveillance Program for Channel-Control Blade Interference Monitoring	1
Proceedings of Top Fuel, 2009	Channel-Control Blade Interference Management at LaSalle 1 and 2 during 2007 and 2008	September 6-10, 2009

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
Paper 2154	Fuel Channel Bow Progression Rate for Control Cell 16-21 CFR Core Map GGNS C17	
EC#0000010289	Engineering Evaluation Documenting the Acceptance of the 'Use As Is" of the DIV III 125 Volt Battery 1C3 (Battery bank 1E22S001) Crack on the Positive Post Seal	0

CONDITION REPORT

CR-GGN-2009-06480	CR-GGN-2010-02657	CR-GGN-2010-02097
CR-GGN-2010-02055	CR-GGN-2010-02000	CR-GGN-2010-04839
CR-GGN-2010-04930	CR-GGN-2010-05119	CR-GGN-2010-05642
CR-GGN-2010-05619	CR-GGN-2008-03640	CR-GGN-2010-01180
CR-GGN-2010-04797	CR-GGN-2010-05212	

Section 1R19: Postmaintenance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
07-S-14-386	ECCS Jockey Pump Coupling Maintenance	1
07-S-14-58	Oil Change on Pumps with Trico Oilers	6
06-OP-1T48-M-0002	Standby Gas Treatment System B Operability	105
06-IC-SC84-SA-1003	Primary Tower Wind Speed/Direction, Air Temp (T/dT) & Relative Humidity	102
10-S-01-12	Plant Operations Manual, Radiological Assessment and Protective Action Recommendations	40
10-S-01-1	Activation of the Emergency Plan	119

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/DATE</u>
1C18-1 X77-001-X77C001B/N601	STBY DSL GEN RM O/A INET/TEMPERATURE SWITCH	
	Tagout Holder Sign On Checklist 1C18-1 E21-001-1E21C001	July 12, 2010
Clearance:1C18-1	1-E21-Pump-1E21C001 LPCS Pump	July 12, 2010
1-TS-10-0259	SBGT "B" Relay Calibrations	
EPP 12-03	Dosecalc Data Sheet	0
	GGNS MET Tower Condition Identification on July 27, 2010 Impact Evaluation	0

CONDITION REPORT

CR-GGN-2010-05340	CR-GGN-2010-05748	CR-GGN-2010-05759
CR-GGN-2010-05829	CR-GGN-2010-05833	CR-GGN-2010-06016

WORK ORDER

WO00161949	WO52243874 01	WO 00241851 01
WO00240284 01	WO52233020	WO00187079 01
WO00242946	WO52226984	WO52245109
WO00239970	WO00203361	WO00203244
WO52195685		

Section 1R22: Surveillance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-OP-1P81-M-0002	GGNS Surveillance Procedure: HPCS Diesel Generator 13 Functional Test	123
06-OP-SZ51-M-0002	Control Room Standby Fresh Air Unit B Blower Test	108

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-OP-109	Drywell Leakage	2
06-OP-1P41-Q-0006	HPCS Service Water System Valve Pump Operability Test	110
02-S-01-28	Diesel Generator Start Log Diesel Generator Start Information Sheet: Diesel Generator No. 13	3
06-OP-1P81-M-0002	HPCS Diesel Generator 13 Functional Test	123
06-OP-1E51-C-0005	RCIC Pump Low Pressure Flow Verification Test	106
06-OP-1E51-0003	RCIC System Quarterly Pump Operability Verification	130

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/DATE</u>
Plan of Action	Issue: Drywell Unidentified Leakage Rate	July 21, 2010
	ODMI Implementation Action Plan Unidentified Drywell Leakage	0
	Terry Turbine Maintenance Guide, RCIC Application	November 2002
	D-R Electronic Governor Conversion Project	March 2005
NUREGICR-5857 ORNL-67 13	Aging of Turbine Drives for Safety-Related Pumps in Nuclear Power Plants	June 1995

CONDITION REPORT

CR-GGN-2010-05568	CR-GGN-2009-03781	CR-GGN-2009-05640
CR-GGN-2010-06844	CR-GGN-2010-06850	CR-GGN-2010-06858
CR-GGN-2010-06859	CR-GGN-2010-06862	CR-GGN-2010-06896
CR-GGN-2010-06900	CR-GGN-2010-5107	

WORK ORDER

WO52228825 01

WO52271249

WO51796018

WO52267828

Section 1EP6: Drill Evaluation

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
GGNS EP Drill	Emergency Facility Log TSC	June 30, 2010
GGNS EP Drill	ENN Repair and Corrective Action Table	June 30, 2010
	Emergency Notification Form 1-9 for EP Drill	June 30, 2010
	GGNS 2010 2 nd Quarter ERO Training Drill	
	Emergency Notification Form 1-7 for EP Drill 8/18/10	August 18, 2010
	Emergency Facility Log EOF	August 18, 2010
	Grand Gulf Nuclear Station 2010 3 rd Qtr ERO Training Drill	

CONDITION REPORT

CR-GGN-2010-5364	CR-GGN-2010-5365	CR-GGN-2010-5367
CR-GGN-2010-5368	CR-GGN-2010-5369	CR-GGN-2010-5266
CR-GGN-2010-5267	CR-GGN-2010-5270	CR-GGN-2010-5247
CR-GGN-2010-6222	CR-GGN-2010-6291	CR-GGN-2010-6293
CR-GGN-2010-6299	CR-GGN-2010-6300	CR-GGN-2010-6304
CR-GGN-2010-6305	CR-GGN-2010-6306	CR-GGN-2010-6308
CR-GGN-2010-6309		

2RS04 Occupational Dose Assessment

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-201	Dosimetry Administration	3
EN-RP-202	Personnel Monitoring	7
EN-RP-203	Dose Assessment	3
EN-RP-205	Prenatal Monitoring	3
EN-RP-208	Whole Body Counting/In-Vitro Bioassay	3
EN-RW-104	Scaling Factors	7
01-S-08-2	Exposure and Contamination Control	118

CONDITION REPORT

CR-GGN-2010-03429	CR-GGN-2010-03432	CR-GGN-2010-03554
CR-GGN-2010-04262	CR-GGN-2010-04333	CR-GGN-2010-04404
CR-GGN-2010-05188		

RADIATION WORK PERMIT

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
20101704	Inspect/Test/Lube/Rework Valve 1G33F253	0

2RS05 Radiation Monitoring Instrumentation

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-301	Radiation Protection Instrument Control	3
EN-RP-303	Source Checking of Radiation Protection Instrumentation	2
EN-RP-306	Calibration and Operation of the Eberline PM-7	2
EN-RP-307	Operation and Calibration of the Eberline Personal Contamination Monitors	1

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-308	Operation and Calibration of Gamma Scintillation Tool Monitors	4
01-S-08-32	Radiation Protection Central Calibration Facility Organization and Responsibilities	2
06-CH-1D17-A-0025	Surveillance Procedure; Building Ventilation Gaseous Monitor Calibration	104
08-S-01-92	Central Calibration Facility	3
08-S-04-206	Operation and Calibration Instruction for Gas Flow Proportional Counter	103
08-S-07-15	Operation and Calibration of Radiation Protection Instrumentation Radioactive Sources	6
08-S-10-02	Calibration of Portable Air Samplers	3
08-S-10-03	Calibration of Portable Area Radiation Monitors	4
08-S-10-04	Calibration of Portable Dose Rate Instruments	4
08-S-10-06	Calibration of Extendable Dose Rate Instruments	2
08-S-10-08	Calibration of Portable Count Rate Instruments	2

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
LO-GLO-2010-00047	Occupational Safety	July 2, 2010

CONDITION REPORT

CR-GGN-2009-04017	CR-GGN-2009-04304	CR-GGN-2009-04572
CR-GGN-2009-04857	CR-GGN-2009-05041	CR-GGN-2009-05802
CR-GGN-2010-00741	CR-GGN-2010-02624	CR-GGN-2010-04347
CR-GGN-2010-05188	CR-GGN-2010-05204	CR-GGN-2010-05211
CR-GGN-2010-05439		

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
CHPAMSD026	Portable Instrumentation Calibration Data Sheet; AMS-4	March 23, 2010
HP-CS-003	Portable Instrumentation Calibration Data Sheet; BC-4	March 24, 2010
RHP-DR-078	Portable Instrumentation Calibration Data Sheet; RO-2	July 28, 2010
11401	Portable Instrumentation Calibration Data Sheet; ASP-1	August 4, 2010
52221126	Surveillance; Fuel Handling Area Pool Sweep Radiation Monitor Calibration	August 6, 2010
52235870	Surveillance; GE Radioactive Gaseous Effluent Monitor Calibration, Turbine Building	July 29, 2010
51669644	Surveillance; Liquid Radwaste Effluents Radiation Monitor Calibration	January 8, 2010

Section 40A1: Performance Indicator Verification

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
Attachment 9.2	NRC Performance Indicator Technique/Data Sheet, Mitigating Systems Performance Indicator	2 nd Qtr 2009
Attachment 9.2	NRC Performance Indicator Technique/Data Sheet, Mitigating Systems Performance Indicator	3 rd Qtr 2009
Attachment 9.2	NRC Performance Indicator Technique/Data Sheet, Mitigating Systems Performance Indicator	4 th Qtr 2009
Attachment 9.2	NRC Performance Indicator Technique/Data Sheet, Mitigating Systems Performance Indicator	1 st Qtr 2010
P75A	System/Train Unavailability Data Form	January 26, 2009- August 13, 2010
P75B	System/Train Unavailability Data Form	January 19, 2009- August 4, 2010

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
P81	System/Train Unavailability Data Form	January 3, 2009- August 20, 2010
Consolidated Data Entry 4.0	June 2010 Grand Gulf MSPI Emergency AC Power System Unavailability Index	July 27, 2010

Section 40A2: Identification and Resolution of Problems

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
M-1051A	P&ID Main and Reheat Steam System	33
M-1115B	Turbine Cycle Heat Balance (Guaranteed Reactor Rating)	7
J-909.0- N1H22P172-1.5- 004	Turbine Low Power Logic	4
07-S-07-211	Service Level I Coating Condition Assessment	1
EN-DC-150	Condition Monitoring of Maintenance Rule Structures	0
GGNS-C-399.0	Grand Gulf Nuclear Station Program Plan for Maintenance Rule Inspection of Structures, Tanks, and Transformers Inspections	9
GGNS-CS-10- 00001	Natural Draft Cooling Tower, Auxiliary Cooling Tower and Circulating Water Pipe	0
06-ME-1M10-O- 0001	Plant Operations Manual, Primary Containment and Drywell Structure Integrity Check	102

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
Attachment 9.4 Ec. No.: 20939	Temporary Modification Control Form	0

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	Turbine 1 st Stage Pressure Sensing Line Failure Grand Gulf Nuclear Station	
851E903AA	Schematic Diagram Activity Register Card	2
865E404AA	Schematic Diagram Activity Compare Card	4
851E981AA	Schematic Diagram Condition Generator	2
133D9883AA	Schematic Diagram Monitor Card	4
	Program Plan No. GGNS-C-399.0	9
GG UFSAR 3.3	Wind and Tornado Loadings	0
GIN:2010-00129	Service Level I Coating Condition Assessment Continuation	May 10, 2010
CEP-CII-004	Examination Documentation	
	MPRC Capital Spreadsheet	August 16, 2010
ER No. 97-0330-00	Engineering Request Form, SSW Basin A & B	1

CONDITION REPORT

CR-GGN-2007-05824-1	CR-GGN-2010-02964	CR-GGN-2002-00011
CR-GGN-2010-01854	CR-GGN-2000-00177 CA9	CR-GGN-2010-02964
CR-GGN-2010-6295	CR-GGN-2009-02148	CR-GGN-2007-05824
CR-GGN-2009-02738	CR-GGN-2010-01236	CR-GGN-2007-05824-2
CR-GGN-2010-5922	CR-GGN-2010-06067	CR-GGN-2010-06069
CR-GGN-2009-02510	CR-GGN-2007-05824 CA-24	CR-GGN-2007-05824 CA-25
CR-GGN-2007-05824 CA 11	CR-GGN-2008-7128	CR-GGN-2009-02510
CR-GGN-2007-05824 CA 27	CR-GGN-2007-05824	CR-GGN-2009-102, CA-201
GR-GGN-2010-06871		

WORK ORDER

WO51040661	WO00068420	WO00178617
WO51087888	WO00091005	WO00178617
WO00150146	WO52244967	WO51087888
WO00238005	WO00238006	WO00237249
WO00167871	WO00167869	WO00069565
WO00078870	WO51087888	WO51208898
WO51522475	WO51523441	WO52030262

Section 40A3: Event Follow-Up

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
05-1-02-V-11	Loss of Plant Service Water	31

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
GNRO/2010-00036	LER 2010-01-00 Automatic Reactor Scram on Decreasing Coolant Level Due to Inadvertent Reactor Feed Pump Trip	May 5, 2010

CONDITION REPORT

CR-GGN-2010-05737

Section 40A7: Licensee Identified Violations

CONDITION REPORT

CR-GGN-2010-06140	CR-GGN-2010-04333	CR-GGN-2010-04366
CR GGN-2010-06225		