



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BLVD
ARLINGTON, TEXAS 76011-4511

May 4, 2012

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

SUBJECT: GRAND GULF NUCLEAR STATION - NRC INTEGRATED INSPECTION
REPORT NUMBER 05000416/2012002

Dear Mr. Perito:

On March 23, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Grand Gulf Nuclear Station, Unit 1. The enclosed inspection report documents the inspection results, which were discussed on April 5, 2012, with you 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.

Four NRC identified findings and one self-revealing finding of very low safety significance (Green) were identified during this inspection.

Four of these findings were determined to involve violations of NRC requirements. Additionally, the NRC has determined that a traditional enforcement Severity Level IV violation occurred. This traditional enforcement violation was identified with an associated finding. Further, a licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Grand Gulf Nuclear Station.

If you disagree with a cross-cutting aspect assignment 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.

M. Perito

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agency wide Document Access and Management 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 No.: 05000416

License No: NPF-29

Enclosure: Inspection Report 05000416/2012002

w/ Attachment:

1. Supplemental Information
2. Request for Information: Occupational Radiation Safety Inspection

cc w/ encl: Electronic Distribution

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SRI:DRP/PBC	RI:DRP/PBC	SPE:DRP/PBC	C:DRS/EB1	C:DRS/EB2	
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4/23/12	4/30/12	5/4/12	4/17/12	4/17/12	
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000416

License: NPF-29

Report: 05000416/2012002

Licensee: Entergy Operations, Inc.

Facility: Grand Gulf Nuclear Station, Unit 1

Location: 7003 Baldhill Road
Port Gibson, MS 39150

Dates: January 1, 2012, through March 23, 2012

Inspectors: R. Smith, Senior Resident Inspector
B. Rice, Resident Inspector
J. Braisted, Project Engineer
J. Drake, Senior Reactor Inspector
N. Greene, PhD, Health Physicist
D. Reinert, Reactor Inspector
L. Ricketson, P.E., Senior Health Physicist

Approved By: Vincent Gaddy, Chief
Reactor Project Branch C
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000416/2012002; 01/01/2012 – 03/23/2012; GRAND GULF NUCLEAR STATION, UNIT1, Integrated Resident and Regional Report; Flood Protection Measures, Licensed Operator Requalification Program, Maintenance Risk Assessment and Emergent Work Control, Operability Evaluations and Functionality Assessment, and Follow Up of Events and Notices of Enforcement Discretion.

The report covered a 3-month period of inspection by resident inspectors and announced baseline inspections by region-based inspectors. Four Green non-cited violations and one Green finding of 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 Events

- Green. The inspectors identified a Green non-cited violation of Technical Specifications 5.4.1.a for the failure to perform an online risk assessment per severe weather off normal procedure due to a declared tornado warning affecting Grand Gulf Nuclear Station. At 7:41 p.m., on February 15, 2012, the National Weather Service issued a tornado warning for Claiborne County, the county in which Grand Gulf Nuclear Station is located. In response to a tornado warning, licensee procedures required them to enter Off-Normal Operating Procedure 05-1-02-VI-2, "Severe Weather," and evaluate online risk. This severe weather condition would have resulted in the licensee entering into an orange risk condition. On February 16, 2012, the inspectors identified that the licensee had not made a log entry for entry into their off normal severe weather procedure during the preceding evening and therefore had not evaluated online risk status for the severe weather condition. In response to the inspectors' observations, the licensee initiated a condition report detailing the failures to enter the off normal procedure and enter the correct risk condition. The licensee has implemented short-term corrective actions to ensure the site adequately evaluates the risk associated with adverse weather. The licensee entered this issue into their corrective action program as condition report CR-GGN-2012-01707.

The finding is more-than-minor because it is associated with the Initiating Events Cornerstone attribute of protection against external events, and it affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and that challenge critical safety functions during power operations.

Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Appendix K; "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flowchart 1; "Assessment of Risk Deficit"; and consulting with the regional senior reactor analyst, the inspectors determined the finding to be of very low safety significance based on a licensee's calculated determination of the incremental core damage probability deficit of 4.0E-08. This result was validated by the senior reactor analyst using the current revision of the plant-specific SPAR model. The inspectors determined the finding has a cross-cutting aspect in the area of human performance associated with the resources component because the on-shift senior reactor operators did not have adequate access to current weather information that would prompt control room personnel to re-evaluate risk due to changing weather conditions [H.2(d)](Section 1R13).

- Green. The inspectors reviewed a Green self-revealing finding for the failure to ensure the correct position (full open) of the main steam supply valve 1N11-F014B to reactor feed pump turbine B, which resulted in a manual reactor scram due to decreasing reactor water level. During plant shutdown activities to begin refueling outage 18, the at-the-controls operator manually scrambled the reactor from approximately 23 percent rated thermal power due to the decreasing reactor water level. Water level in the reactor was decreasing because valve 1N11-F014B was not fully open, and because pressure in the main steam lines had been reduced when the crew opened turbine bypass valves to begin cooling the main turbine. With valve 1N11-F014B less than fully open and reduced steam pressure, the operating feed pump wasn't able to maintain water level. After the scram, reactor core isolation cooling and reactor feed pump turbine A were used to restore water level. The licensee plans to repair valve 1N11-F014B during the current refuelling outage. The licensee entered this issue into their corrective action program as condition report CR-GGN-2012-01838.

The finding is more than minor because it is associated with the Initiating Events Cornerstone attribute of human performance and affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and that challenge critical safety functions during power operations. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors concluded that the finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors, in consultation with the regional senior reactor analyst, performed a Phase 2 estimation using the pre-solved work sheets for Grand Gulf Nuclear Station. The inspectors determined by entering the power conversion system column that the finding was of very low safety significance (Green). This result was validated by the senior reactor analyst using the current revision of the plant-specific SPAR model. The inspectors determined the finding has a cross-cutting aspect in the area of human performance associated with the decision-making component because the operating staff proceeded with the start up of the reactor feed pump B with

the main steam supply valve 1N11-F014B in an unknown position [H.1(b)](Section 1R11).

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to take timely corrective actions to correct a condition adverse to quality associated with division 1 and 2 standby service water safety related cables that were partially submerged in a cable manhole/vault. The inspectors reviewed work order 52284535 and noted that the sump pump for manhole/vault MH-01, which contained standby service water cables for division 1 and 2, was determined to be non-functional on September 10, 2011. The inspectors determined that a work order to repair the non-functioning sump pump had been developed but that the work order had not yet been scheduled. During a subsequent inspection, manhole/vault MH-01 was found to contain approximately three feet of water, with water partially covering some of the safety related cables. The electricians immediately pumped manhole/vault MH-01 and wrote a condition report. The licensee repaired the sump pump the next week and declared it functional. The cables remained operable based on the results of meggar tests. The licensee entered this issue into their corrective action program as condition reports CR-GGN-2012-00503, 01324, and 01389.

The finding is more than minor because it is associated with the equipment performance attribute of Mitigating System 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 Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors determined that the finding was of very low safety significance (Green) because the finding was not a design or qualification deficiency, did not represent either a loss of system safety function or an actual loss of safety function of a single train of one or more non-Technical Specification trains of equipment designated as risk significant, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. The finding had a cross-cutting aspect in the area of human performance associated with the work practices component, in that the licensee personnel did not initiate a condition report as required by licensee procedure when the work order associated with sump pump testing of MH-01 determined that the sump pump was not functioning properly [H.4(b)] (Section 1R06).

- Green. The inspectors identified a Green non-cited violation of Facility Operating License Condition 2.C(41), for the failure to correct a condition adverse to fire protection. Specifically, the licensee failed to adequately provide contingency lighting in the fire brigade dress out area while normal lighting was inoperable due to maintenance on an associated breaker. The inadequate lighting delayed fire brigade response to a potential fire in the turbine building. Immediate corrective action included placing temporary lighting in the area. Normal lighting

to the area was restored the next week. The licensee entered this issue into their corrective action program as condition report CR-GGN-2012-01488.

The finding is more than minor because it is associated with the protection against external factors attribute of the Mitigating System 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 Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors determined from table 3b that issues related to performance of the fire brigade are not included in Appendix F and require NRC management review using Appendix M. Regional management review evaluated the overall impact of lighting issue in the fire brigade dress out area and concluded that, while the fire protection defense-in-depth was affected by the performance deficiency, the overall defense-in-depth of the front-line systems was not impacted because of train separation and safe shutdown analysis at the site. Therefore the finding screened as having very low safety significance (Green) in accordance with Manual Chapter 0609, Appendix M. The inspectors determined the finding had a cross-cutting aspect in the area of human performance associated with the work control component, in that licensee personnel failed to ensure adequate job site conditions (lighting in the fire bridge dress out area) were in place prior to performance electrical maintenance in the turbine building [H.3(a)] (Section 40A3).

Cornerstone: Barrier Integrity

- SLIV. The inspectors identified a Severity Level IV non-cited violation of 10 CFR 50.59, "Changes, Tests and Experiments," when the licensee failed to obtain a license amendment prior to implementing a proposed change to the plant that required a change to Technical Specifications. The 10 CFR 50.59 evaluation performed by the licensee is dated January 24, 2001, thus it was performed under the requirements of the old rule based on the Entergy Operations letter dated March 5, 2001. In the 10 CFR 50.59 evaluation for the removal of Blackness Testing and the division of the spent fuel pool into two regions, the licensee determined that the modifications did not require a change to Technical Specifications. However, 10 CFR 50.36, "Technical Specifications," Section 4, "Design Features," requires that design features such as geometric arrangements, which, if altered or modified, would have a significant effect on safety, must be incorporated into Technical Specifications. The NRC considers that the establishment of two regional zones in the spent fuel pool, each having specific loading criteria to maintain keff less than 0.95, constitutes design features which, if altered or modified would have a significant effect on safety. Therefore, these design features should have been incorporated into the Technical Specifications. In a letter dated September 8, 2010, (ML102660403), the licensee submitted a power up-rate license amendment request. The NRC staff is currently reviewing the license request, which includes the licensee's technical justification for the spent fuel pool changes described above. Based on preliminary review of the amendment request, the NRC staff has determined that

an immediate safety concern does not exist. The licensee has entered this issue into their corrective action program as condition report CR-GGN-2012-01077.

The finding is more than minor because it is associated with the design control attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, containment) protect the public from radionuclide releases caused by accidents or events. Inspectors performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characteristics of Findings," and determined that the finding was of very low safety significance (Green) because it did not result in the loss of cooling to the spent fuel pool, did not result from fuel handling errors that caused damage to fuel clad integrity, and it did not result in a loss of spent fuel pool inventory. This finding is a latent issue and is not indicative of current performance; therefore, no cross-cutting aspect was identified (Section 1R15).

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and corrective action tracking numbers (condition report numbers) are listed in Section 4OA7.

REPORT DETAILS

Summary of Plant Status

Grand Gulf Nuclear Station began the inspection period at 96 percent rated thermal power. During the inspection period, the plant was limited to 96 percent power due to the isolation of the second-stage steam to both the A and B moisture separator reheaters on January 9, 2011.

- On January 13, 2012, operators reduced power to 70 percent for planned control rod testing, control rod friction testing, and turbine testing. The plant was returned to 96 percent power on January 15, 2012.
- On February 4, 2012, operators reduced power to 80 percent for a planned control rod sequence exchange. The plant was returned to 96 percent power on February 5, 2012.
- On February 19, 2012, operators initiated a shutdown for refueling outage 18. A manual scram was inserted at 7:04 p.m. due to low reactor water level caused by a loss of injection from the reactor feed pump B during the shutdown.

The plant remained shut down through the remainder of the inspection period for refueling outage 18.

1. REACTOR SAFETY

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

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

The inspectors performed a review of the adverse weather procedures for seasonal extremes (e.g., extreme high temperatures, extreme low temperatures, or hurricane season preparations). The inspectors verified that weather-related equipment deficiencies identified during the previous year were corrected prior to the onset of seasonal extremes and evaluated the implementation of the adverse weather preparation procedures and compensatory measures for the affected conditions before the onset of, and during, the adverse weather conditions.

During the inspection, the inspectors focused on plant-specific design features and the procedures used by plant personnel to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Updated Final Safety Analysis Report and performance requirements for systems selected for inspection and verified that operator actions were appropriate as specified by plant-specific procedures.

Specific documents reviewed during this inspection are listed in the attachment. The inspectors also reviewed corrective action program items to verify that plant personnel were identifying adverse weather issues at an appropriate threshold and entering them into their corrective action program in accordance with station corrective action procedures. The inspectors' reviews focused specifically on the following plant systems:

- Standby service water pump house and valve nest rooms
- Fire water pump house
- Division I, II, and III diesel generator rooms
- Plant service water system well switchgear room and plant service water pump houses

These activities constitute completion of one readiness for seasonal adverse weather sample as defined in Inspection Procedure 71111.01-05.

b. Findings

No findings were identified.

.2 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

Since thunderstorms with potential tornados and high winds were forecasted in the vicinity of the facility for January 22 and 25, 2012, the inspectors reviewed the plant personnel's overall preparations/protection for the expected weather conditions. On January 20 and 24, 2012, the inspectors walked down the standby service water basins, the safety related transformers, and emergency diesel generators because their safety-related functions could be affected, or required, as a result of high winds, tornado-generated missiles, or the loss of offsite power. The inspectors evaluated the plant staff's preparations against the site's procedures and determined that the staff's actions were adequate. During the inspection, the inspectors focused on plant-specific design features and the licensee's procedures used to respond to specified adverse weather conditions. The inspectors also toured the plant grounds to look for any loose debris that could become missiles during a tornado. The inspectors evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant. Additionally, the inspectors reviewed the Updated Final Safety Analysis Report and performance requirements for the systems selected for inspection and verified that operator actions were appropriate as specified by plant-specific procedures. The inspectors also reviewed a sample of corrective action program items to verify that the licensee identified adverse weather issues at an appropriate threshold and dispositioned them through the corrective action program in accordance with station corrective action procedures. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one readiness for impending adverse weather condition sample as defined in Inspection Procedure 71111.01-05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

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

- Division 1 emergency diesel generator during a division 2 emergency diesel generator surveillance
- Motor driven fire pump following scheduled maintenance
- Standby gas system A following scheduled maintenance
- Standby liquid control following scheduled 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, 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 four partial system walkdown samples as defined in Inspection Procedure 71111.04-05.

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 2 emergency diesel generator room (1D303)
- Containment building elevation 208 (1A425, 1A510, 1A601)
- Containment building elevation 185 (1A509, 1A511, 1A512)
- Control Building elevation 166, main control room
- Containment and auxiliary building fire hose staging during local leak rate testing on containment isolation valves in containment penetrations 56 and 69

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 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; that 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

No findings were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On January 19, 2012, the inspectors observed a fire brigade activation during an unannounced fire drill in the division 3 switchgear room. 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)

a. Inspection Scope

The inspectors reviewed the flooding analysis and plant procedures to assess susceptibilities involving internal flooding; the Updated Final Safety Analysis Report and corrective action program to determine if licensee personnel identified and corrected flooding problems; the underground bunkers/manholes listed below to verify the adequacy of sump pumps, level alarm circuits, cable splices subject to submergence, and drainage for bunkers/manholes. Specific documents reviewed during this inspection are listed in the attachment.

- February 8, 2012, division 1 and 2 standby service water manholes

These activities constitute completion of one bunker/manhole sample as defined in Inspection Procedure 71111.06-05.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to take timely corrective actions to correct a condition adverse to quality associated with division 1 and 2 standby service water safety related cables that were partially submerged in a cable manhole/vault.

Description. On January 12, 2012, while performing an internal flooding inspection, the inspectors reviewed work order 52284535 and noted that the sump pump for manhole/vault MH-01, which contains standby service water cables for division 1 and 2, was determined to be non-functional on September 10, 2011. The electricians performing the work order wrote a work request to fix the sump pump, but they did not initiate a condition report. The inspectors determined that the work request had been converted to work order 291091 to repair the non-functioning sump pump but the work order had not yet been scheduled in the licensee's work control process. On January 16, 2012, the inspectors presented this information to the maintenance manager, and the manager initiated a condition report and arranged for the inspectors to observe an inspection of this manhole/vault and other manholes/vaults onsite containing safety related cables. During this inspection on February 8, 2012, manhole/vault MH-01 was found to contain approximately three feet of water, with water partially covering some of the safety related cables. The licensee did not have an adequate analysis for this "as found" condition of safety related cables being partially submerged. However, the cables are meggered on a periodic basis and were determined to be operable based on those test results. The electricians immediately pumped manhole/vault MH-01 and wrote a condition report. The licensee scheduled work order 291091 to be performed on February 18, 2012, and during their repair effort, it was determined that the sump pump float device had hung up. Maintenance personnel corrected the problem and declared the sump pump operable.

The licensee documented this issue in their corrective action program as condition reports CR-GGN-2012-00503, 001324, and 01389. The short term corrective action included pumping out MH-01 on February 8, 2012, and then repairing the sump pump on February 18, 2012. Additionally, the licensee initiated an action request to inspect all safety related manholes/vaults on 30-day bases going forward.

Analysis. The inspectors determined that the failure to take timely corrective actions to fix the sump pump, which prevents safety related cables from being submerged in manhole/vault MH-01, is a performance deficiency. The finding is more than minor because it is associated with the equipment performance attribute of Mitigating System 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. In Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency, did not represent either a loss of system safety function or an actual loss of safety function of a single train of one or more non-Technical Specification trains of equipment designated as risk significant, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. The inspectors determined the finding had a cross-cutting aspect in the area of human performance associated with the work practices component in that the licensee's personnel did not initiate a condition report as required by licensee procedure when the work order associated with sump pump testing of manhole/vault MH-01 determined that the sump pump was not functioning properly [H.4(b)].

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," requires, in part, that conditions adverse to quality are promptly identified and corrected. Contrary to the above, the licensee did not promptly correct a condition adverse to quality, in that on September 10, 2011, the licensee identified a non-functioning sump pump in manhole/vault MH-01, which is used to ensure safety related cables for standby service water are not submerged, but did not correct that condition until February 18, 2012. This finding has been entered into the licensee's corrective action program as condition reports CR-GGN-2012-00503, 01324, and 01389. Because the finding was determined to be of very low safety significance and was entered into the licensee's corrective action program, this violation is being treated as a non-cited violation consistent with Section 2.3.2a of the NRC Enforcement Policy: NCV 05000416/2012002-01, "Failure to Take Timely Corrective Actions Associated with Division 1 and 2 Standby Service Water Safety Related Cables that were Partially Submerged in Cable Manhole/Vault."

1R08 In-service Inspection Activities (71111.08)

.1 Inspection Activities Other Than Steam Generator Tube Inspection, Pressurized Water Reactor Vessel Upper Head Penetration Inspections, and Boric Acid Corrosion Control (71111.08-02.01)

a. Inspection Scope

The inspectors reviewed two types of nondestructive examination activities. Welding on the steam dryer assembly was observed. There were no examinations with relevant indications accepted by licensee personnel for continued service.

The inspectors directly observed the visual and liquid penetrant examinations on the root and final welds for various sections of the steam dryer:

The inspectors reviewed records for the following welds and nondestructive examinations:

<u>System/Component</u>	<u>Description</u>	<u>Type</u>
1X77B001B	Repair Bracket for EDG 12 Cooling Unit	Shielded Metal Arc Welding
Steam Dryer	Lower Ring Splice Welds 242-1 and 242-2	Tungsten Inert Gas Welding
Steam Dryer	Splice Bar Adjusting Sleeves Welds 8000-1, 8000-2, 8000-3, 8000-4	Tungsten Inert Gas Welding

During the review and observation of each examination, the inspectors verified that activities were performed in accordance with the ASME Code requirements and

applicable procedures. The inspectors verified the qualifications of all nondestructive examination technicians performing the inspections were current.

The inspectors verified, by review, that the welding procedure specifications and the welders had been properly qualified in accordance with ASME Code, Section IX, requirements. The inspectors also verified, through observation and record review, that essential variables for the welding process were identified, recorded in the procedure qualification record, and formed the bases for qualification of the welding procedure specifications. Specific documents reviewed during this inspection are listed in the attachment.

These actions constitute completion of one sample as defined in Inspection Procedure 71111.08-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Quarterly Review of Licensed Operator Requalification Program

a. Inspection Scope

On February 15, 2012, the inspectors observed a crew of licensed operators in the plant's simulator during training. The inspectors assessed 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
- Control board manipulations
- Oversight and direction from supervisors
- Crew's ability to identify and implement appropriate technical specification actions

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.

.2 Quarterly Observation of Licensed Operator Performance

a. Inspection Scope

On February 19, 2012, the inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity due to the plant shutting down for refueling outage 18. The inspectors observed operators' performance of the following activities:

- A reduction in power to 25 percent by inserting control rods to final pattern prior to shutdown
- An infrequently performed test and evolution brief by the operations manager prior to reducing generator load to perform main turbine cooling
- Procedure use to reduce electric load on the main generator in order to open the main turbine bypass valves to perform a one-to-two hour cool down of the main turbine
- Reduction of power to 175 megawatts electric for turbine cooling
- Insertion of a reactor scram at approximately plus 13 inches above instrument zero after reactor water level began lowering due a lack of response from the reactor feed pump turbine B following the plant achieving the target power of 175 megawatts
- Stabilization of the plant in normal level band using reactor feed pump turbine A
- Commencement of a plant cooldown to start refueling outage 18

In addition, the inspectors assessed the operators' adherence to plant procedures, including conduct of operations procedure and other operations department policies.

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

b. Findings

Introduction. The inspectors reviewed a Green self-revealing finding for the failure to ensure the correct position (full open) of the main steam supply valve 1N11-F014B to reactor feed pump turbine B that resulted in a manual reactor scram due to decreasing reactor water level.

Description. On February 19, 2012, while observing plant shutdown activities for refueling outage 18, the at-the-controls operator manually scrambled the reactor from approximately 23 percent rated thermal power due to the decreasing reactor vessel water level. The cause of the lowering water level was attributed to the reactor feed

pump turbine B not responding. Water level in the reactor vessel was decreasing because valve 1N11-F014B was not fully open and because pressure in the main steam line had been reduced when the crew opened turbine bypass valves to begin cooling the main turbine. With valve 1N11-F014B less than fully open and reduced steam pressure, the operating feed pump was not able to maintain reactor vessel water level. The scram was inserted when water level was at approximately 13 inches above instrument zero. The operating crew manually started reactor core isolation cooling and reactor feed pump turbine A, which had been shutdown earlier, to restore water level. The inspectors observed the scram recovery actions in the main control room.

Site personnel investigating the scram determined that following refueling outage 17 in May 2010, the main steam supply valve 1N11-F014B to the reactor feed pump turbine B did not go full open using the hand switch at the local panel. The decision at the time was to enter the reactor feed pump turbine room and manually open the valve with the hand wheel. The operations department hung a caution tag on the hand switch to valve 1N11-F014B, stating "see CR-GGN-2010-04567". The condition report stated, "1N11F014B RFPT 'B' steam supply will not stroke full open." The site wrote a work request to fix the valve and placed this task on the forced outage list.

On November 10, 2011, the reactor feed pump turbine B tripped for an unrelated reason. After corrective maintenance was performed to restore the reactor feed pump turbine B, operations was cleared a danger tag on valve 1N11-F014B with instructions to open this valve using the operating Procedure 04-1-01-N21-1, "Feedwater System," Section 4.4 Reactor Feed Pump B Startup. The system operating instruction, Step 4.4.2.d.(1), states, "On 1H22-P175, CHECK OPEN/OPEN the following valve AND RETURN the handswitch to AUTO, 1N11-F014B, RFPT, HP IN VLV." The operator assigned to this task attempted to open the valve with the handswitch and observed a dual indication and the caution tag that stated "see CR-GGN-2010-04567". The operator stated that he called the control room and talked to a supervisor, but when interviewed, he could not remember with whom he had spoken. Additionally, the control room staff, who were in the control room at the time the valve was being opened, did not recall receiving a call about the valve.

The licensee documented this issue in their corrective action program as condition report CR-GGN-2012-01838. The licensee plans to repair valve 1N11-F014B during the current refueling outage. The licensee will also conduct a root cause analysis to evaluate the programmatic elements to the event.

Analysis. The performance deficiency involved the failure of an operator to ensure the steam supply valve to the reactor feed pump turbine B was full open. Specifically, the operator was directed per Step 4.4.2.d.(1) of 04-1-01-N21-1, "Feedwater System," to open valve 1N11-F014B. Contrary to this, an operator attempted to open valve 1N11F014B with the local hand switch, but the valve did not indicate full open, and no action was taken to ensure the valve was full open. The finding is more than minor because it is associated with the Initiating Events Cornerstone attribute of human performance and affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and that challenge critical safety functions during power operations. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial

Screening and Characterization of Findings,” the inspectors concluded that the finding contributed to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The inspectors, in consultation with the regional senior reactor analyst, performed a Phase 2 estimation using the pre-solved work sheets for Grand Gulf Nuclear Station. The inspectors determined by entering the power conversion system column that the finding was of very low safety significance (Green). This result was validated by the senior reactor analyst using the current revision of the plant-specific SPAR model. The inspectors determined the finding has a cross-cutting aspect in the area of human performance associated with the decision making component because the operating staff proceeded with the start up of the reactor feed pump turbine B with its main steam supply valve 1N11-F014B in an unknown position [H.1(b)].

Enforcement. No violation of regulatory requirements occurred. This finding was entered into the licensee’s corrective action program as condition report CR-GGN-2012-01838 and is identified as FIN 05000416/2012002-02, “Manual Reactor Scram Caused by Failure to Ensure the Main Steam Supply Valve to Reactor Feed Pump Turbine B was Full Open.”

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

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

- Appendix R Lighting (Z92)
- Combustible Gas Control (E61)

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:

- The week of January 16, 2012, during the 24-hour surveillance of the division 2 emergency diesel generator
- The week of January 22, 2012, during the residual heat removal multiple spurious operation valve maintenance, requiring the site to enter a yellow risk condition while the site entered yellow risk due to adverse weather in the area
- February 15, 2012, during a tornado warning for the area resulting in an orange risk condition
- The week of February 19, 2012, during initiating plant shutdown, proceeding to cold shutdown and yellow risk activities for operations to drain the vessel and break secondary containment to move equipment into the auxiliary building
- The week of March 11, 2012, during a tornado watch and change in outage schedule, which moved emergency core cooling system division 1 testing up,

resulting in not having one loop of residual heat removal available for decay heat removal and two pumps available for inventory control

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 7111.13-05.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of Technical Specifications 5.4.1.a for the failure to perform an online risk assessment per severe weather off normal procedure due to a declared tornado warning affecting Grand Gulf Nuclear Station.

Description. At 7:41 p.m., on February 15, 2012, the National Weather Service issued a tornado warning for Claiborne County, the county in which Grand Gulf Nuclear Station is located. In response to a tornado warning, licensee procedures required them to enter Off-Normal Operating Procedure 05-1-02-VI-2, "Severe Weather," and evaluate online risk. This severe weather condition would have resulted in the licensee entering into an orange risk condition. On February 16, 2012, the inspectors identified that the licensee had not made a log entry for entry into their off normal severe weather procedure during the preceding evening and therefore had not evaluated online risk status for the severe weather condition. The reason they had not entered their severe weather off normal procedure was due to the shift manager not receiving an email from the AccuWeather website, which is an automatic email service to on-shift senior reactor operators alerting them of National Weather Service warnings that could affect the site. When the work control senior reactor operator learned that the warning had been declared, he initiated condition report CR-GGN-2012-01707 detailing the failure to enter the off normal procedure or to enter the correct risk condition on the evening of February 15, 2012. The inspectors also reviewed security Procedure, "Security Response During Operating Emergencies." This procedure directed security personnel to inform the control room when severe weather is in the area. The control room was not informed the evening of February 15, 2012.

The licensee documented this issue in their corrective action program as condition report CR-GGN-2012-01707. The short term corrective action was to write the condition report and determined why they had not been alerted of the severe weather condition. Additionally, the licensee has implemented immediate corrective actions to ensure the site is notified of changing weather conditions in the area, and is exploring an alternative method to receive weather alerts at the site in a more timely manner.

Analysis. The failure to perform a procedural required evaluation of changing weather conditions effects on online risk assessment which could have negatively impacted the availability of offsite power is a performance deficiency. The finding is more-than-minor because it is associated with the Initiating Events Cornerstone attribute of protection against external events, and it affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and that challenge critical safety functions during power operations. Using Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Appendix K; "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flowchart 1; "Assessment of Risk Deficit"; and consulting with the regional senior reactor analyst, the inspectors determined the finding to be of very low safety significance based on a licensee's calculated determination of the incremental core damage probability deficit of $4.0E-08$. This result was validated by the senior reactor analyst using the current revision of the plant-specific SPAR model. The inspectors determined the finding has a cross-cutting aspect in the area of human performance associated with the resources component because the on-shift senior reactor operators did not have adequate access to current weather information that would prompt control room personnel to re-evaluate risk [H.2(d)].

Enforcement. Technical Specification 5.4.1.a requires that written procedures be established, implemented, and maintained as recommended by NRC Regulatory Guide 1.33, "Quality Assurance Program Requirements," Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, Section 6w includes procedures for Acts of Nature (tornados) that can effect the operation of nuclear power plants. Procedure 05-1-02-VI-2, "Hurricanes, Tornado and Severe Weather," revision 117, step 3.1 states in part that the shift manger will "evaluate the plant safety index using the equipment out of service monitor based on predicted severe weather (high risk) conditions at Grand Gulf Nuclear Station." Contrary to the above, on the evening of February 15, 2011 the shift manager did not evaluate the plant safety index using the equipment out of service monitor based on severe weather (high risk) conditions for the site. Specifically, on February 15, 2012, the licensee failed to evaluate risk conditions resulting from a tornado warning in the area. This finding has been entered into the licensee's corrective action program as condition report CR-GGN-2012-01707. Because the finding was determined to be of very low safety significance and was entered into the licensee's corrective action program, this violation is being treated as a non-cited violation consistent with Section 2.3.2a of the NRC Enforcement Policy: NCV 05000416/2012002-03, "Failure to Perform an Online Risk Assessment Per Severe Weather Off Normal Procedure Due to a Declared Tornado Warning Affecting Grand Gulf Nuclear Station."

1R15 Operability Evaluations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed the following assessments:

- Control rod 56-41 operability following channel bow testing, CR-GGN-2012-0423
- Division 3 battery degraded condition, CR-GGN-2012-00703
- Spent fuel pool operability, CR-GGN-2012-1077
- Turbine building block wall removal, CR-GGN-2012-0666
- High pressure core spray injection valve, 1E22-F004, actuator mounting bolts found loose, CR-GGN-2012-02975
- High energy line break in turbine building during new fuel receipt, CR-GGN-2011-03691

The inspectors selected these operability and functionality assessments based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure technical specification operability was properly justified and to verify 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 Updated Final Safety Analysis Report to the licensee'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. Additionally, the inspectors 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 six operability evaluations inspection samples as defined in Inspection Procedure 71111.15-05.

c. Findings

Introduction. The inspectors identified a Severity Level IV non-cited violation of 10 CFR 50.59, "Changes, Tests and Experiments," when the licensee failed to obtain a license amendment prior to implementing a proposed change to the plant that required a change to Technical Specifications.

Description. During the License Renewal Age Management Program audit, the NRC reviewed the licensee's 10 CFR 50.59 Evaluation of SE-2001-0002-R00, which removed neutron transmission testing ("Blackness Testing") from their spent fuel pool monitoring

program and divided the spent fuel racks into two regions. Region 1 takes credit for Boraflex, with a calculated keff less than 0.95. Region 2 does not take credit for Boraflex, but instead requires certain storage locations to remain empty to maintain sub-criticality requirements. The Region 2 consists of a repeating pattern of a 4x4 array of storage cells in which six storage cells must be empty, thus ensuring a calculated keff less than 0.95. The restricted cells that are not to be loaded with fuel will be administratively and physically blocked and thus unavailable for fuel storage.

Title 10 CFR Part 50.59, "Changes, Tests, and Experiments," was revised and became effective on March 13, 2001. The NRC issued a Regulatory Issue Summary (RIS 2001-03), dated January 23, 2001, that stated, in part, that licensees may implement the revised rule at a time later than March 13, 2001. In a letter dated March 5, 2001, Entergy Operations, Inc. informed the NRC that Grand Gulf Nuclear Station would implement the revised rule on July 2, 2001, and those evaluations begun before July 2, 2001 would be processed and completed in accordance with the old rule.

The 10 CFR 50.59 evaluation performed by the licensee is dated January 24, 2001, thus it was performed under the requirements of the old rule based on the Entergy Operations letter dated March 5, 2001. In the 10 CFR 50.59 evaluation for the removal for Blackness Testing and the division of the spent fuel pool into two regions, the licensee determined that the modifications did not require a change to Technical Specifications. However, 10 CFR 50.36, "Technical Specifications," Section 4, "Design Features," requires that design features such as geometric arrangements, which, if altered or modified, would have a significant effect on safety must be incorporated into Technical Specifications. The NRC considers that the establishment of two regional zones in the spent fuel pool, each having specific loading criteria to maintain keff less than 0.95, constitutes design features which, if altered or modified would have a significant effect on safety. The NRC therefore considered that the licensee should have incorporated these design features into the Technical Specifications.

The inspectors have determined that an immediate safety concern does not exist because this issue does not involve the occurrence of a misloading event and does not have an impact on the spent fuel pool water level, water level control or cooling capabilities. Furthermore, the licensee is currently in compliance with their Technical Specifications, as written, in that, keff is being maintained below 0.95. In a letter dated September 8, 2010 (ML102660403), the licensee has submitted a power up-rate license amendment request. The NRC staff is currently reviewing the license request which includes NEDC-33621P, "Grand Gulf Nuclear Station Fuel Storage Criticality Safety Analysis of Spent and New Fuel Storage Racks," the licensee's technical justification for the spent fuel pool changes described above. Based on the preliminary review of the amendment request, the NRC staff has determined that an immediate safety concern does not exist. The licensee has entered this issue into their corrective action program as Condition Report CR-GGN-2012-01077.

Analysis. The inspectors determined that the licensee's failure to perform an adequate 10 CFR 50.59 evaluation and obtain a license amendment prior to implementing the portion of SE-2001-0002-R00, which divided the spent fuel pool into a Region 1 and Region 2 geometric design was a performance deficiency. Violations of 10 CFR 50.59

are dispositioned using the traditional enforcement process instead of the significance determination process because they are considered to be violations that potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the significance determination process to determine the severity of the violation. In this case, the inspectors determined the finding could be evaluated using the significance determination process. The finding is more than minor because it is associated with the design control attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, containment) protect the public from radionuclide releases caused by accidents or events. Inspectors performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characteristics of Findings," and determined that the finding was of very low safety significance (Green) because it did not result in the loss of cooling to the spent fuel pool, did not result from fuel handling errors that caused damage to fuel clad integrity, and did not result in a loss of spent fuel pool inventory. This finding is a latent issue and is not indicative of current performance; therefore, no cross-cutting aspect was identified.

Enforcement. The NRC Enforcement Manual states that the NRC can take enforcement action under the revised or current 10 CFR 50.59 regulations. The inspectors reviewed the changes made to the spent fuel pool under the requirements of both the revised and the current 10 CFR 50.59 regulations and determined that in both cases NRC approval prior to implementing the changes was required. The enforcement action will therefore be taken against the 10 CFR 50.59 evaluation performed under the requirements of the old rule in effect on January 24, 2001. Title 10 CFR Part 50.59, "Changes, Tests, and Experiments," Section (a)(1), states, in part, that the holder of a license may make changes in the facility as described in the safety analysis report, without prior Commission approval, unless the proposed change involves a change in the technical specifications incorporated in the license. Contrary to the above, on January 24, 2001, the licensee made changes in the facility as described in the safety analysis report, without prior Commission approval, involving a change in the technical specifications incorporated in the license. Specifically, the licensee geometrically arranged the spent fuel pool into two regions without incorporating the change and associated loading restrictions for each region into the technical specifications. In accordance with the Enforcement Policy, the violation was classified as a Severity Level IV violation because the underlying technical issue was of very low safety significance. Since this violation was of very low safety significance, was not repetitive or willful, and was entered into the licensee's corrective action program as condition report CR-GGN-2012-1077, this violation is being treated as a non-cited violation, consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000416/2012002-04, "Modification of the Spent Fuel Pool without Prior NRC Approval."

1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications (71111.17)

.1 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications

a. Inspection Scope

Review of Anticipated Transient Without SCRAM Safety Evaluation

The inspectors reviewed the licensee's safety evaluation of an anticipated transient without SCRAM (ATWS). The inspectors performed portions of NRC Procedure 71004, "Power Uprate," to verify that equipment performance, procedures, and processes were adequate to support operations at an increased power level. The inspectors also used portions of NRC Inspection Procedure 71111.17, "Evaluations of Changes, Tests, and Experiments, and Permanent Plant Modifications" to verify that safety issues related to the changes were resolved. The inspectors performed a margin assessment of the anticipated transient without SCRAM analysis to verify that the design bases have been correctly implemented and maintained.

An ATWS is defined as an anticipated operational occurrence followed by the failure of the reactor trip portion of the protection system. Boiling water reactors are required to have an alternate rod injection system and must have equipment to trip the reactor coolant recirculation pumps automatically under conditions indicative of an ATWS. Additionally, boiling water reactors must have a standby liquid control system to inject borated water into the reactor vessel at maximum reactor pressure to bring the reactor from full power to a subcritical condition.

The licensee performed a plant specific ATWS evaluation to support extended power uprate activities. The primary changes associated with the ATWS requirements concerned standby liquid control system boron enrichment and pump discharge pressure. In order to maintain standby liquid control system subcriticality margins for future core reload designs, the sodium pentaborate enrichment of Boron-10 solution is being increased. Boron concentration is verified in surveillance requirement 3.1.7.5. The licensee is also increasing the standby liquid control pump discharge pressure from 1300 psig to 1340 psig. The modified pump discharge pressure requirement is verified in surveillance requirement 3.1.7.7. There are no changes to the required operator actions associated with the extended power uprate ATWS analysis. The inspectors also verified that calculations, analyses, design change documentation, procedures, the Updated Final Safety Analysis Report, and the Technical Specifications accurately reflected the changes. Documents reviewed are listed in the attachment. These activities constitute completion of one safety evaluation sample as defined by Inspection Procedure 71111.17-05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed key affected parameters associated with energy needs, materials, replacement components, timing, heat removal, control signals, equipment protection from hazards, operations, flow paths, pressure boundary, ventilation boundary, structural, process medium properties, licensing basis, and failure modes for the permanent modifications listed below.

- EC-25649 – Standby Service Water Siphon Line Extension Modification
- EC-20720 – Standby Liquid Control System (Boron-10 Enrichment Change) Modification

The inspectors verified that modification preparation, staging, and implementation did not impair emergency/abnormal operating procedure actions, key safety functions, or operator response to loss of key safety functions; post-modification testing will maintain the plant in a safe configuration during testing by verifying that unintended system interactions will not occur; systems, structures and components' performance characteristics still meet the design basis; the modification design assumptions were appropriate; the modification test acceptance criteria will be met; and licensee personnel identified and implemented appropriate corrective actions associated with permanent plant modifications. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of two samples for permanent plant modifications as defined in Inspection Procedure 71111.18-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

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

- Residual heat removal valve F064A following scheduled maintenance
- Residual heat removal valves F004A and F006A following scheduled maintenance
- Residual heat removal valve F068A following scheduled maintenance

- Residual heat removal valve F014A following scheduled maintenance
- Residual heat removal valve F018A following scheduled maintenance
- Control room air conditioner B following compressor pressure switch replacement

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 (as applicable):

- The affect 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 post-maintenance 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 six postmaintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

The inspectors reviewed the outage safety plan and contingency plans for the Grand Gulf Nuclear Station refueling outage 18, conducted from February 19, 2012, through the end of the first quarter, to confirm that licensee personnel had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense in depth. During the refueling outage, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below.

- Configuration management, including maintenance of defense in depth, is commensurate with the outage safety plan for key safety functions and

compliance with the applicable technical specifications when taking equipment out of service

- Clearance activities, including confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing
- Installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication, accounting for instrument error
- Status and configuration of electrical systems to ensure that technical specifications and outage safety-plan requirements were met, and controls over switchyard activities
- Monitoring of decay heat removal processes, systems, and components
- Verification that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system
- Reactor water inventory controls, including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss
- Controls over activities that could affect reactivity
- Maintenance of secondary containment as required by the technical specifications
- Refueling activities, including fuel handling and sipping to detect fuel assembly leakage
- Licensee identification and resolution of problems related to refueling outage activities

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

These activities constitute completion of one refueling outage and other outage inspection sample as defined in Inspection Procedure 71111.20-05.

b. Findings

No findings were identified.

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 setpoints

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

- On January 18, 2012, division 2 emergency diesel generator 24 hour surveillance
- On January 13, 2012, channel bow testing on control rod 56-41
- On January 24, 2012, average power range monitor calibration channel G surveillance

- On February 6, 2012, low pressure core spray inservice testing surveillance
- On February 13, 2012, division 1, 2, and 3 battery pilot cell surveillance
- On February 15, 2012, reactor coolant system leakage
- On February 22, 2012, main steam lines A and C isolation valves local leak rate tests
- On March 16, 2012, emergency core cooling system division 1 loss of power/loss of cooling accident surveillance

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

These activities constitute completion of eight surveillance testing inspection samples as defined in Inspection Procedure 71111.22-05.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Occupational and Public Radiation Safety

2RS01 Radiological Hazard Assessment and Exposure Controls (71124.01)

a. Inspection Scope

This area was inspected to: (1) review and assess licensee's performance in assessing the radiological hazards in the workplace associated with licensed activities and the implementation of appropriate radiation monitoring and exposure control measures for both individual and collective exposures, (2) verify the licensee is properly identifying and reporting Occupational Radiation Safety Cornerstone performance indicators, and (3) identify those performance deficiencies that were reportable as a performance indicator and which may have represented a substantial potential for overexposure of the worker.

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 the radiation protection manager, radiation protection supervisors, and radiation workers. The inspectors performed walkdowns of various portions of the plant, performed independent radiation dose rate measurements, and reviewed the following items:

- Performance indicator events and associated documentation reported by the licensee in the Occupational Radiation Safety Cornerstone
- The hazard assessment program, including a review of the licensee's evaluations of changes in plant operations and radiological surveys to detect dose rates, airborne radioactivity, and surface contamination levels
- Instructions and notices to workers, including labeling or marking containers of radioactive material, radiation work permits, actions for electronic dosimeter alarms, and changes to radiological conditions
- Programs and processes for control of sealed sources and release of potentially contaminated material from the radiologically controlled area, including survey performance, instrument sensitivity, release criteria, procedural guidance, and sealed source accountability
- Radiological hazards control and work coverage, including the adequacy of surveys, radiation protection job coverage, and contamination controls; the use of electronic dosimeters in high noise areas; dosimetry placement; airborne radioactivity monitoring; controls for highly activated or contaminated materials (non-fuel) stored within spent fuel and other storage pools; and posting and physical controls for high radiation areas and very high radiation areas
- Radiation worker and radiation protection technician performance with respect to radiation protection work requirements
- Audits, self-assessments, and corrective action documents related to radiological hazard assessment and exposure controls 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 71124.01-05.

b. Findings

No findings were identified.

2RS03 In-plant Airborne Radioactivity Control and Mitigation (71124.03)

a. Inspection Scope

This area was inspected to verify in-plant airborne concentrations are being controlled consistent with ALARA principles and the use of respiratory protection devices on site does not pose an undue risk to the wearer. 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:

- The licensee's use, when applicable, of ventilation systems as part of its engineering controls
- The licensee's respiratory protection program for use, storage, maintenance, and quality assurance of NIOSH certified equipment, qualification and training of personnel, and user performance
- The licensee's capability for refilling and transporting SCBA air bottles to and from the control room and operations support center during emergency conditions, status of SCBA staged and ready for use in the plant and associated surveillance records, and personnel qualification and training
- Audits, self-assessments, and corrective action documents related to in-plant airborne radioactivity control and mitigation since the last inspection

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

These activities constitute completion of the one sample as defined in Inspection Procedure 71124.03-05.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

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

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 fourth Quarter 2011 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 Unplanned Scrams per 7000 Critical Hours (IE01)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams per 7000 critical hours performance indicator for the period from the first quarter 2011 through the fourth quarter 2011. 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 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 2011 through December 2011, to validate the accuracy of the submittals. 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 unplanned scrams per 7000 critical hours sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.3 Unplanned Power Changes per 7000 Critical Hours (IE03)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned power changes per 7000 critical hours performance indicator for the period from the first quarter 2011 through the fourth quarter 2011. 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 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports, and NRC integrated inspection reports for the period of January 2011 through December 2011, to validate the accuracy of the submittals. 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 unplanned transients per 7000 critical hours sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.4 Unplanned Scrams with Complications (IE04)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams with complications performance indicator for the period from the first quarter 2011 through the fourth quarter 2011. 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 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 2011 through December 2011, to validate the accuracy of the submittals. 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 unplanned scrams with complications sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.5 Occupational Exposure Control Effectiveness (OR01)

a. Inspection Scope

The inspectors reviewed performance indicator data for the first quarter 2001 through the fourth quarter 2011. The objective of the inspection was to determine the accuracy and completeness of the performance indicator data reported during these periods. The inspectors used the definitions and clarifying notes contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, as criteria for determining whether the licensee was in compliance.

The inspectors reviewed corrective action program records associated with high radiation area (greater than 1 rem/hr) and very high radiation area non-conformances. The inspectors reviewed radiological, controlled area exit transactions greater than 100 mrem. The inspectors also conducted walkdowns of high radiation areas (greater than 1 rem/hr) and very high radiation area entrances to determine the adequacy of the controls of these areas.

These activities constitute completion of the occupational exposure control effectiveness sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.6 Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual
Radiological Effluent Occurrences (PR01)

a. Inspection Scope

The inspectors reviewed performance indicator data for the first quarter 2011 through the fourth quarter 2011. The objective of the inspection was to determine the accuracy and completeness of the performance indicator data reported during these periods. The inspectors used the definitions and clarifying notes contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, as criteria for determining whether the licensee was in compliance.

The inspectors reviewed the licensee's corrective action program records and selected individual annual or special reports to identify potential occurrences such as unmonitored, uncontrolled, or improperly calculated effluent releases that may have impacted offsite dose.

These activities constitute completion of the radiological effluent technical specifications/offsite dose calculation manual radiological effluent occurrences sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

40A2 Problem Identification and Resolution (71152)

.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.

40A3 Followup of Events and Notices of Enforcement Discretion (71153)

.1 Smoke Event on Unit 2 Turbine Deck, 166 Foot Elevation

a. Inspection Scope

On February 10, 2012, the inspectors responded to the control room to observe operator response to a smoking exhaust fan on the unit 2 turbine deck, 166 foot elevation. The main control room received a notification at 9:51 a.m. from workers that smoke was coming from a Siemens office on the turbine deck. The control room dispatched an operator to investigate the smoke, and it was confirmed that smoke was coming from the Siemens office, so the fire brigade was dispatched. The fire brigade responded to the scene, entered the office, and de-energized the smoking exhaust fan by opening the disconnect switch powering the fan. The event was terminated at 10:18 a.m. The shift manager evaluated whether he was required to enter an emergency action level and determined, since there had be no report of fire, smoking equipment had be de-energized, and the smoke had cleared the area, that no emergency action level entry was warranted. The inspectors reviewed the bases for the fire emergency action level, discussed this with the shift manager, and determined his actions were reasonable. Documents reviewed for this inspection are listed in the attachment. These activities constitute completion of one event follow-up as defined in Inspection Procedure 71153-05.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of Facility Operating License Condition 2.C(41), for the failure to correct a condition adverse to fire protection. Specifically, the licensee failed to adequately provide contingency lighting in the fire brigade dress out area while normal lighting was inoperable.

Description. On February 10, 2012, the inspectors responded to the control room to observe operator response to a smoking exhaust fan on the unit 2 turbine deck 166 foot elevation. The main control room received a notification at 9:51 a.m. from workers that smoke was coming from a Siemens office on the turbine deck. The control room dispatched an operator to investigate the smoke, and it was confirmed that smoke was coming from the Siemens office, so the fire brigade was dispatched. The fire brigade responded to the scene, entered the office, and de-energized the smoking exhaust fan by opening the disconnect switch powering the fan. The event was terminated at 10:18 am. The inspectors walked down the area to understand what equipment was involved during the smoking event. During the walkdown, the inspectors noted that there was no lighting in the fire brigade dress out area on the 166 foot elevation. The inspectors learned that this lighting issue was an ongoing problem at the site for the last several months. During questioning, fire brigade members stated that their response to this event had been delayed due to no lighting in the dress out area.

The inspectors raised this concern to the shift manager. The shift manager ensured temporary lighting was installed in the area and wrote a condition report documenting the issue. The inspectors performed a condition report review for issues dealing with lighting in the fire brigade dress out area on the turbine deck and found two additional condition reports from October and November 2011, reporting issues with the lighting in this area. Both condition reports were closed to work orders to be performed on February 24, 2012. The inspectors determined from an interview with the licensee that the cause of the failure of lighting was a breaker that had been opened to perform other electrical work. However, no contingency plan was in place to provide temporary lighting for the fire brigade dress out area while the work was underway.

The licensee documented this issue in their corrective action program as condition report CR-GGN-2012-01488. The short term corrective action included placing temporary lighting in the area that day. The site restored the normal lighting in the area the next week. The inspectors were briefed by the maintenance manager stating that, although at the time of the event the site had two contract electrical workers assigned to work on lighting issues in the plant, the proper oversight and sensitivity to prioritize lighting concerns was not in place. Since the event, the maintenance manager reviews all lighting concerns identified daily at the site to ensure timely resolutions and proper prioritization is assigned.

Analysis. The failure to ensure there was adequate lighting in the fire brigade dress out area is a performance deficiency. The finding is more than minor because it is associated with the protection against external factors attribute of the Mitigating System 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 Inspection Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the inspectors determined from table 3b that issues related to performance of the fire brigade are not included in Appendix F and require NRC management review using Appendix M. Regional management review evaluated the overall impact of the lighting issue in the fire brigade dress out area and concluded that, while the fire protection defense-in-depth was affected by the performance deficiency, the overall defense-in-depth of front-line systems was not impacted because of train separation and safe shutdown analysis at the site. Therefore the finding screened as having very low safety significance (Green) in accordance with Manual Chapter 0609, Appendix M. The inspectors determined the finding had a cross-cutting aspect in the area of human performance associated with the work control component, in that licensee personnel failed to ensure job site conditions, adequate lighting in the fire bridge dress out area, were in place prior to performance electrical maintenance in the turbine building [H.3(a)].

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 UFSAR." UFSAR Section 9B.2.1.9.c requires in part, that prompt and effective corrective actions are taken to correct conditions adverse to the Fire Protection Program. Contrary to this, on or before February 10, 2012, the licensee did not ensure that prompt and effective actions were taken to correct a condition adverse to the Fire Protection Program. Specifically, the licensee did not ensure adequate lighting was available in the fire brigade dress out area while normal lighting was inoperable. As a result, the operators had to dress out with no lighting in the area during an actual event at the site which delayed their response. The licensee restored compliance by installing temporary lighting in the area. This finding has been entered into the licensee's corrective action program as condition reports CR-GGN-2012-01488. Because the finding was determined to be of very low safety significance and was entered into the licensee's corrective action program, this violation is being treated as a non-cited violation consistent with Section 2.3.2a of the NRC Enforcement Policy: NCV 05000416/2012002-05, "Failure to Correct a Condition Adverse to Fire Protection, in That the Licensee Failed to Adequately Provide Contingency Lighting in the Fire Brigade Dress Out Area While Normal Lighting was Inoperable."

40A5 Other Activities

.1 Power Uprate Related Inspection Activities (71004)

a. Inspection Scope

During this inspection period, the inspectors observed several activities related to the power uprate amendment. As documented in previous sections above, the inspectors reviewed the following:

- Standby service water siphon line extension modification (1R18)
- Standby liquid control system (Boron-10 enrichment change) modification (1R18)

- Steam dryer assembly welding processes and examinations (1R08)
- Review of Anticipated Transient Without SCRAM Safety Evaluation (1R17)

These activities constitute completion of four inspection samples as defined in Inspection Procedure 71004, Section 2.01.

b. Findings

No findings were identified.

.2 Flow Accelerated Corrosion (FAC) Inspection in Support of Extended Power Uprate (EPU) (71004)

a. Inspection Scope

The objectives of this inspection were to determine whether licensee programs and procedures relative to FAC monitoring and maintenance were adequately addressing plant changes resulting from EPU in accordance with 10 CFR 50.65 and licensee commitments to implement Generic Letter 89-08, "Erosion/Corrosion Induced Pipe Wall Thinning." The inspectors reviewed the FAC program to determine whether the licensee had taken required action to detect adverse effects (wall thinning) on systems and components as a result of operating changes related to EPU, such as increased flow in primary or secondary systems, including their interfacing systems.

The inspectors reviewed the following modifications with respect to their potential affect on flow accelerated corrosion in the plant:

- EC 22367 GGNS EPU T1010 - Plant Life FAC (Flow Accelerated Corrosion)
- EC 20727 High Pressure Turbine Replacement
- EC 20952 Condensate Full Flow Filtration (CFFF) system
- EC 23022 Heaters Drain System Level Control Valves
- EC 22735 Feedwater Level Control System

The inspectors reviewed procedures and administrative controls to determine whether those procedures and controls ensure the structural integrity of high energy (single-phase and two-phase) carbon steel systems. The inspectors reviewed the licensee's established FAC program to determine whether the degradation of piping and components was described in the procedures, and the examination activities were managed, maintained, and documented. In particular, the inspectors reviewed those steps taken to identify specific locations that were most likely to be adversely affected by a change (increase) in operating variables (temperature, flow, etc.) as a result of increased power levels. Also, the inspectors reviewed the licensee's FAC activity to determine status and effective utilization of the industry sponsored predictive program

[CHECWORKS] to verify the selection of the most susceptible locations for inspection and additional locations based on unique operating conditions and industry experience. Also, the inspectors reviewed how inspection data was trended to determine FAC wear rates and identify the future inspection locations. The inspectors selected portions of the FW system, a risk significant system affected by EPU, for review of the licensee's FAC monitoring activities and effectiveness. The inspectors performed a walk down of portions of the selected system (piping and components) to verify the as-built configuration matched the plant-specific FAC program isometrics. The inspectors also reviewed selected locations in this system that had been identified as susceptible to a projected increase in FAC wear rates using the higher EPU operational variables with the CHECWORKS model. The inspectors determined that the increase in wear rates was recognized and being incorporated into the program database for future inspection sample selection.

This activity constitutes completion of one inspection sample as defined in Inspection Procedure 71004, Section 2.01.

- b. Findings
No findings were identified.

40A6 Meetings, Including Exit

Exit Meeting Summary

On March 9, 2012, the inspector presented the inspection results of the review of Extended Power Uprate inspection activities to Mr. M. Perito, Operations Vice President, 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. All proprietary information identified was returned to the licensee.

On March 15, 2012, the inspectors presented the results of the radiation safety inspections to Mr. J. Browning, General Plant Manager of Operations, 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 April 5, 2012, the inspectors presented the inspection results to Mike Perito, Site Vice President Operations, 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 violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy Section 2.3.2 for being dispositioned as a Non-Cited Violation.

- .1 Technical Specifications section 3.6.1.3 requires that main steam isolation valves have a closure time of less than or equal to 5 seconds. Contrary to this, on February 20, 2012, during refueling outage 18, the licensee performed Surveillance Procedure 06-OP-1B21-V-0001, Revision 114, "MSIV Operability Test", on main steam isolation valve 1B21F028A, and the valve closure time was 6.7 seconds. The licensee entered this issue into their corrective action program in condition report CR-GGN-2012-01848 and initiated work order 306292 to repair the valve prior to the end of the refueling outage. The finding was determined to be of very low safety significance (Green) because it did not represent a degradation of the radiological barrier function provided for the control room, or auxiliary building, or spent fuel pool, or standby gas treatment system, a degradation of the barrier function of the control room against smoke or a toxic atmosphere, an actual open pathway in the physical integrity of reactor containment, and the finding did not involve an actual reduction in function of hydrogen igniters in the reactor containment.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Browning, General Plant Manager
J. Caery, Manager, Training
J. Dorsey, Security Manager
H. Farris, Assistant Operations Manager
K. Higgenbotham, Manager, Planning and Scheduling
J. Houston, Manager, Maintenance
D. Jones, Manager, Design Engineering
C. Justiss, Licensing
C. Lewis, Manager, Emergency Preparedness
W. Mashburn, EPU Director
J. Miller, Manager, Operations
L. Patterson, Manager, Program Engineering
C. Perino, Manager, Licensing
M. Perito, Site Vice President of Operations
M. Richey, Director, Nuclear Safety Assurance
R. Scarbrough, Specialist and Lead Offsite Liaison, Licensing
J. Seiter, Senior Licensing Specialist
J. Shaw, Manager, System Engineering
D. Wiles, Director, Engineering
T. Trichell, Manager, Radiation Protection

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000416/2012002-01	NCV	Failure to Take Timely Corrective Actions Associated with Division 1 and 2 Standby Service Water Safety Related Cables that were Partially Submerged in Cable Manhole/Vault (1R06)
05000416/2012002-02	FIN	Manual Reactor Scram Caused by Failure to Ensure the Main Steam Supply Valve to Reactor Feed Pump Turbine B was Full Open (1R11)
05000416/2012002-03	NCV	Failure to Perform an Online Risk Assessment Per Severe Weather Off Normal Procedure Due to a Declared Tornado Warning Affecting Grand Gulf Nuclear Station (1R13)
05000416/2012002-04	NCV	Modification of the Spent Fuel Pool without Prior NRC Approval (1R15)
05000416/2012002-05	NCV	Failure to Correct a Condition Adverse to Fire Protection, in That the Licensee Failed to Adequately Provide Contingency Lighting in the Fire Brigade Dress Out Area While Normal Lighting was Inoperable (40A3)

LIST OF DOCUMENTS REVIEWED

Section 1RO1: Adverse Weather Protection

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
05-1-02-VI-2	Hurricanes, Tornados, and Severe Weather	117
05-1-02-VI-2	Hurricanes, Tornados, and Severe Weather, Operations' Marked Up copy for January 25, 2012	117
05-1-02-VI-2	Hurricanes, Tornados, and Severe Weather, Operations' Marked Up copy for February 1, 2012	117
ENS-EP-302	Severe Weather Response	11

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Single Trend Point – C84J009, Wind Peaks Onsite	January 25, 2012
	PDS Trend Tool for 10 meter wind	January 22, 2012
	PDS Trend Tool for Wind Speed 162 Feet	January 22, 2012

CONDITION REPORT

CR-GGN-2011-7971	CR-GGN-2011-7713	CR-GGN-2011-9336
CR-GGN-2012-4530	CR-GGN-2012-7486	CR-GGN-2012-7488
CR-GGN-2012-00361	CR-GGN-2012-00596	

Section 1RO4: Equipment Alignment

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
04-1-01-P75-1	Standby Diesel Generator System Manual Valve Lineup Check Sheet (Standby DG 11 Lube Oil System)	93
04-S-01-P64-1	Fire Protection Water System	61
04-1-01-T48-1	Standby Gas Treatment	32
02-S-01-2	Control and Use of Operations Section Directives	49

Section 1R04: Equipment Alignment

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
02-S-01-37	Component Position Control	8
04-1-01-C41-1	Standby Liquid Control System	119

CONDITION REPORT

CR-GGN-2012-1164 CR-GGN-2009-3582

Section 1R05: Fire Protection

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
Fire Pre-Plan DG-03	Division II Diesel generator Room 1D303 Area 12 Elevation 133'	5
GG UFSAR	9A.5.25 Fire Area 25	
Fire Pre-Plan A-38	Standby Liquid Control System – 1A512, Drywell Purge Compartment – 1A511, Area - Containment Elevation 185	1
Fire Pre-Plan A-40	Heat Exchanger 1A507, Misc. Equipment Area – 1A509, Sample Area 1A514, Holdup Piping Room 1A515, Filter Demin Area 1A516 – 1A517, Area – Containment Elevation 185'	2
Fire Pre-Plan A-47	Containment Fuel Pool – Room 1A425, Steam Separator Storage Area – Room 1A510, Reactor Containment Area – Room 1A601, Area 11, Elevation 208	1
04-1-05-P11-1	Local Leak Rate Testing Alignment Instructions Condensate and Refueling Water Storage and Transfer Penetration	0
10-S-03-9	Control of Fire Preplans	3
Fire Pre-Plan C-13	Control Room, Control Panel, Suspended Ceiling and Support Areas OC501, OC502, OC503, OC504, OC 516 and OC517 Areas 25A and B Elevation 166'	1
Fire Pre-Plan C-14	Auxiliary Shop – OC507, Corridor – OC509 & 515, Office – OC510, Dining Area – OC511, Kitchen 0 OC512, Toilet 0 OC513, Locker Room – OC514, and Electrical Space – OC518 (Elevation 166')	1
EN-TQ-125	Fire Brigade Drills	1

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
E-0964	Raceway Plan Miscellaneous Buildings Fire and Smoke detection Systems Unit 1 & 2	10

CONDITION REPORT

CR-GGN-2012-00705	CR-GGN-2012-02769	CR-GGN-2012-01082
CR-GGN-2012-00705	CR-GGN-2012-03034	

Section 1RO6: Flood Protection Measures

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
50018869-02	Inspect MH20 & MH21 & Pump Out as Needed	
50018869 01	Test 15 Sump Pump Manholes Switches and Pumps	
10942	Manhole Sump Pump Test	
AR# 141099	Perform Inspection of Manhole Water Level	March 26, 2012
PM 50018869 02	Inspect MH20 & MH21& Pump Out as Needed	
AR# 00123943	Inactive PMRQ 50018869-02 and cancel WO 52318515	
AR# 00103935	Update PM 50018869 Task 2 and add Task 3 to Test MH20 Equipment	
AR# 00104761	Update PM 50018869 Task 2 and add Task 4 to Test MH21 Equipment	
PMRQ 50018869	Inspect MH20 & MH21Pump Out as Needed	
PMRQ 50018869	Manhole Equipment Test the '15' Sump Pump Manhole Switches A	September 20, 2012

CONDITION REPORT

CR-GGN-2011-5250	CR-GGN-2012-00503	CR-GGN-2012-01324
CR-GGN-2012-01389	CR-GGN-2009-00965	

WORK ORDER

WO 291091
WO 00303318

WO 52284535
WO 00303317

WO 00303319
WO 52315788

Section 1R08: In-service Inspection Activities

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-DC-315	Flow Accelerated Corrosion Program	6
NE-10-00068	GGNS EPU Plant Life – FAC	1
EN-DC-127	Control of Hot Work	10
10-S-03-8	Fire Protection Procedure	11
PT-173279	Liquid Penetrant Examination	1
UK-173279	Ultrasonic Thickness Test	0
VT-173279	Visual Examination	0
WPS-1713-1	Gas Tungsten Arc Welding	6
WPS-1713-2	Flux Core Arc Welding	5
WPS-1713-5	Gas Tungsten Arc Welding	6

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
ENTGGG072- GGNS-FAC-04	FAC Program Extended Power Uprate Document	February 5, 2010
0700.104-10	Grand Gulf Nuclear Generating Station FAC System Susceptibility Evaluation (SSE)	October 20, 2009
DRF-0000-0102- 2054	ENTERGY OPERATIONS, INC Grand Gulf Nuclear Station Extended Power Uprate	May 2010

ENGINEERING CHANGE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
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EC 0000022367	GGNS EPU T1010 - Plant Life FAC (Flow Accelerated Corrosion)	1
EC 20727	High Pressure Turbine Replacement	0
EC 20952	Condensate Full Flow Filtration (CFFF) system	0
EC 23022	Heaters Drain System Level Control Valves	0
EC 22735	Feedwater Level Control System	0

Section 1R11: Licensed Operator Requalification Program

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
04-1-01-N21-1	Feedwater System	64
03-1-01-2, Attachment V	Shutdown by Scram From 25-30% Reactor Power	149
03-1-01-3	Plant Shutdown	118

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
GLP-NLOR- N21-10cyc2	Operator Training: Feedwater System	0
OBJ 4.2 5.1	Reactor Feed Pump Turbines Training Information	
N21-033- 1N21C004B	Reactor Feed Pump Turbine	February 21, 2012
N11-001- 1N11F014B	Reactor Feed Pump Turbine "B" High Pressure Steam Supply Valve N11F014B	February 21, 2012
	NRC Current Even Notification Report for February 21, 2012	February 21, 2012
	GGNS Operations Logs- Nights	February 20, 2012
	GGNS Operations Logs- Days	February 19, 2012
GSMS-LOR- 00239	RF18 Shutdown Just In Time Training – Days	0

GSMS-LOR- RF18 Shutdown Just In Time Training – Nights 0
00240

CONDITION REPORT

CR-GGN-2010-04567 CR-GGN-2012-01832 CR-GGN-2012-01838
CR-GGN-2012-01842

Section 1R12: Maintenance Effectiveness

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-FP-S-001-MULTI	Appendix R Emergency Lighting Units	0
EN-DC-206	Maintenance Rule (a)(1) Process	1
EN-DC-205	Maintenance Rule Monitoring	3
EN-LI-119	Apparent Cause Evaluation (ACE) Process, CR-GGN-2010-06627	11

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Control Room and Emergency Lighting (Z92) PSEUDO System (a)(1) Evaluation (CR-GGN-2011-03350)	
	Control Room and Emergency Lighting (Z92) PSEUDO System (a)(1) Action Plan (CR-GGN-2011-03350)	
	Maintenance Rule Program Expert Panel Meeting Minutes	August 31, 2011
	Maintenance Rule (a)(1) Systems List (Updated January 9, 2012)	
GIN 2005-0494	Changing Status of Selected Calculations to Historical	September 15, 2005
ER 98-0384	Procurement Evaluation Request Action Taken by Materials Technical Group to Complete Stock Code GG98272007	September 29, 1998
	Control Room and Emergency Lighting (Z92) PSEUDO System (a)(1) Evaluation (CR-GGN-2011-03350)	

CONDITION REPORT

CR-GGN-2011-03631	CR-GGN-2011-03169	CR-GGN-2011-03404
CR-GGN-2011-03395	CR-GGN-2011-04000	CR-GGN-2011-04576
CR-GGN-2011-06809	CR-GGN-2011-06773	CR-GGN-2011-06836
CR-GGN-2011-06630	CR-GGN-2011-06405	CR-GGN-2011-06647
CR-GGN-2011-06406	CR-GGN-2011-06781	CR-GGN-2011-06826
CR-GGN-2011-06631	CR-GGN-2011-07833	CR-GGN-2012-00324
CR-GGN-2012-00906	CR-GGN-2011-03144	CR-GGN-2011-02891
CR-GGN-2011-02084	CR-GGN-2011-02833	CR-GGN-2011-02395
CR-GGN-2011-02198	CR-GGN-2011-02656	CR-GGN-2011-02823
CR-GGN-2011-02655	CR-GGN-2010-01984	CR-GGN-2010-04822
CR-GGN-2010-05444	CR-GGN-2010-05694	CR-GGN-2010-07388
CR-GGN-2010-07716	CR-GGN-2010-07718	CR-GGN-2010-08468
CR-GGN-2011-00070	CR-GGN-2011-02676	CR-GGN-2011-08592
CR-GGN-2011-08915	CR-GGN-2010-04821	CR-GGN-2010-05163
CR-GGN-2010-05266	CR-GGN-2010-05485	CR-GGN-2010-05547
CR-GGN-2010-06869	CR-GGN-2010-06916	CR-GGN-2010-07195
CR-GGN-2010-07277	CR-GGN-2010-07676	CR-GGN-2010-07787
CR-GGN-2010-07808	CR-GGN-2011-00676	CR-GGN-2011-00720
CR-GGN-2011-00729	CR-GGN-2011-01823	CR-GGN-2011-03962
CR-GGN-2011-04924	CR-GGN-2011-05388	CR-GGN-2011-05930
CR-GGN-2011-07938	CR-GGN-2011-08061	CR-GGN-2011-08448
CR-GGN-2011-08751	CR-GGN-2011-09339	CR-GGN-2012-00208
CR-GGN-2012-01248	CR-GGN-2012-01550	CR-GGN-2012-02683

Section 1R13: Maintenance Risk Assessment and Emergent Work Controls

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-WM-101	On-line Work Management Process for the Week of January 15, 2012	7
EN-WM-101	On-line Work Management Process for the Week of January 22, 2012	7
05-1-02-VI-2	Off-Normal Event Procedure: Hurricanes, Tornados, and Severe Weather	117
01-S-18-6	Risk Assessment of Maintenance Activities	11

Section 1R13: Maintenance Risk Assessment and Emergent Work Controls

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
02-S-01-27	Operation's Philosophy	41
02-S-01-41	On Line Risk Assessment	5
EN-OU-1-108	Shutdown Safety Management Program (SSMP) Outage Change/Emergent Activity Evaluation	3
02-S-01-27	Operation's Philosophy	42
11-S-11-6	Security Response During Operating Emergencies	18

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Bulletin – EAS Activation Requested Tornado Warning NWS Jackson, MS	February 15, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.25 Hrs (9 p.m.)	February 20, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.25 Hrs (2:44 a.m.)	February 21, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.25 Hrs (2:22 p.m.)	February 21, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.3 Hrs (9:17 p.m.)	February 21, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.3 Hrs (11:03 a.m.)	February 22, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.4 Hrs (11:03 a.m.)	February 23, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.4 Hrs (8:45 a.m.)	February 24, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.4 Hrs (8:30 p.m.)	February 22, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.4 Hrs (11:35 p.m.)	February 23, 2012
	Shutdown Condition 1, Time to 200 degrees F, 0.5 Hrs (4:45 a.m.)	February 20, 2012

Shutdown Condition 1, Time to 200 degrees F, 0.6 Hrs (2:45 p.m.)	February 24, 2012
Shutdown Condition 1, Time to 200 degrees F, 0.6 Hrs (5:06 p.m.)	February 24, 2012
Shutdown Condition 1, Time to 200 degrees F, 1.4 Hrs (3:45 a.m.)	March 11, 2011
Shutdown Condition 1, Time to 200 degrees F, 1.5 Hrs (8:42 a.m.)	March 11, 2012
Shutdown Condition 1, Time to 200 degrees F, 1.5 Hrs (3:35 p.m.)	March 11, 2012
Shutdown Condition 1, Time to 200 degrees F, 1.5 Hrs (4:05 p.m.)	March 11, 2012
Shutdown Condition 1, Time to 200 degrees F, 1.5 Hrs (8:32 a.m.)	March 12, 2012
Shutdown Condition 1, Time to 200 degrees F, 1.6 Hrs (8:36 p.m.)	March 12, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.1 Hrs (7:32 a.m.)	March 13, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.1 Hrs (1:15 p.m.)	March 13, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.1 Hrs (8:54 p.m.)	March 13, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.1 Hrs (9:08 a.m.)	March 14, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (9:27 p.m.)	March 14, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (5:48 a.m.)	March 15, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (9:24 a.m.)	March 15, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (2:30 p.m.)	March 15, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (5:26 p.m.)	March 15, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (12:35 a.m.)	March 16, 2012

Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (2:31 a.m.)	March 16, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (3:40 p.m.)	March 16, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (4:20 p.m.)	March 16, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (5:02 p.m.)	March 16, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (8:00 p.m.)	March 16, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (2:35 a.m.)	March 17, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (11:21 a.m.)	March 17, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (4:51 p.m.)	March 17, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (6:50 p.m.)	March 17, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (12:25 a.m.)	March 18, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (1:05 a.m.)	March 18, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (5:15 a.m.)	March 18, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (6:37 a.m.)	March 18, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.2 Hrs (3:02 p.m.)	March 18, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.25 Hrs (8:18 p.m.)	March 18, 2012
Shutdown Condition 1, Time to 200 degrees F, 2.25 Hrs (3:15 a.m.)	March 19, 2012

CONDITION REPORT

CR-GGN-2012-01707

Section 1R15: Operability Evaluations

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
01-S-06-2	Conduct of Operations	120
02-S-01-27	Operation's Philosophy	42

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	50.59 Evaluation # SE 2001-0002-R00	January 24, 2001
	GG UFSAR Appendix 3C	0
	GG UFSAR Table 3.6A-18	0
EC No. 35414	Engineering Evaluation	0
EC No. 35527	Engineering Evaluation	0
AECM-82/171	Letter: IE Information Notice 79-22, Qualifications of Control Systems; SER License Condition 1.11(9)	April 29, 1982
ER #: ER-GG-2002-0082-000	Evaluation of HELB Doors	0

CONDITION REPORT

CR-GGN-2012-00423	CR-GGN-2012-00672	CR-GGN-2012-00676
CR-GGN-2012-00708	CR-GGN-2012-01077	CR-GGN-2012-01484
CR-GGN-2012-00275	CR-GGN-2012-00666	CR-GGN-2011-03691
CR-GGN-2012-02975	CR-GGN-2012-02991	CR-GGN-2011-09033

Section 1R17: Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications

MISCELLANEOUS DOCCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
GNRO-2010/00056	Grand Gulf, Unit 1, License Amendment Request, Extended Power Uprate	September 8, 2010

MISCELLANEOUS DOCCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
NEDO-33477	Safety Analysis Report for Grand Gulf Nuclear Station Constant Pressure Power Uprate	0
NEDO-33004-A	Licensing Topical Report Constant Pressure Power Uprate	4
Grand Gulf Updated Final Safety Analysis Report	15.8 Anticipated Transients without SCRAM (ATWS)	7

Section 1R18: Plant Modifications

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
EC-25649 PAD	SSW UHS Siphon Line Extension Mod Change	0
EC-28247	Evaluation of the Loss Coefficient of the SSW Basin Siphon Line Between SSW A and SSW B CR-GGN-2011-1406	0
UFSAR 9.2.1	Standby Service Water System	
TS 3.7.1	Standby Service Water (SSW) System and Ultimate Heat Sink (UHS)	
TSB 3.7.1	Standby Service Water (SSW) System and Ultimate Heat Sink (UHS)	
GGNS-NE-10-00062	GGNS EPU Standby Liquid Control Requirements	0
WO-52377676-01	Quarterly / SBLC 'B' Monthly Test	0

Section 1R18: Plant Modifications

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
UFSAR 9.3.5	Standby Liquid Control System	
TS 3.1.7	Standby Liquid Control (SLC) System	
TSB 3.1.7	Standby Liquid Control (SLC) System	
GFIG-OPS-C4100	Standby Liquid Control System	2
EC-20720 PAD	Standby Liquid Control System (Boron-10 Enrichment Change) Mod	0
Vendor Manual 460000042	Union Pump Company, Standby Liquid Control Pumps	301
Bechtel Letter (MPB-87/0103) to Grand Gulf	NPSH Requirements for SLC System Pumps DCP 85/4053(6)	March 20, 1987

CALCULATIONS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MC-Q1P41-11001	GGNS Standby Service Water Ultimate Heat Sink Thirty Day Performance at EPU	0
MC-Q1P41-03016	Standby Service Water Maximum Allowable Post-LOCA System Leakage	0
MC-Q1P41-86007	Standby Service Water Ultimate Heat Sink Performance	0

CALCULATIONS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MC-Q1P41-86007, Supplement 1	Standby Service Water Ultimate Heat Sink – Three Division Operation	0
MC-Q1P41-86054	Standby Service Water Heat Sink Performance	0
PDS-0507	SSW Basin “A” and “B”, Transfer Siphon Piping	1
PDS-0508	SSW Basin “A” and “B”, Transfer Siphon Piping	1
XC-Q1111-10001	Evaluation of the Use of Enriched Sodium Pentaborate Decahydrate in the Standby Liquid Control System and Its Effect on Suppression Pool pH 30 Days Following a DBA LOCA	0
MC-Q1C41-87082	Net Positive Suction Head Available for Two Pump SLC Operation	0
MC-Q1C41-10001	Mass of Sodium Pentaborate Decahydrate Necessary for Purchase	0

CONDITION REPORT

CR-GGN-2012-00708 CR-GGN-2011-03691 CR-GGN-2011-01406
CR-GGN-2012-03613

Section 1R19: Postmaintenance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-OP-1P41-Q-0004	Standby Service Water Loop A Valve and Pump Operability Test	119
06-OP-1E12-Q-0005	LPCI/RHR Subsystem A MOV Functional Test	112

Section 1R19: Postmaintenance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-OP-1P41-Q-0004	Standby Service Water Loop A Valve and Pump Operability Test	119
01-S-07-43	Control of Loose Items, Temporary Electrical Power, and Access to Equipment	5

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
E-1181-001	Schematic Diagram E12 Residual Heat Removal System RHR Pump E12-C002A Suction Valve F004A-A	5
E-0740-005	Motor Operated Valves Wiring Diagrams	3
E-0560-094	Wiring Diagram MCC-FVR Starter-Typical with "74" Relay (IB531-A5, C2, E2, E3, F2, G3, G4, and I4) (1B511-J3)	1
E-KB0740-005	Motor Operated Valves Wiring Diagrams	B
E-KD0560-094	MCC-FVR Starter-Typical With "74" Relay (1B531-A5, C2, E2, E3, F2, G3, G4, and I4) (1B511)	
E-1181-004	Residual Heat Removal System Shutdown Cooling VLV F006A-A	5
E-1181-34	Schematic Diagram E12 Residual Heat Removal System RHR Pump Minimum Flow Valve F064A Unit 1	5
E-KC0560-094	Wiring Diagram MCC-FVR Starter Typical With "74" Relay (1B531-A5, C2, E2, E3, G3, G4 and I4)	A
E-1181-080	E12 Residual Heat Removal System Computer Inputs and Status Lights	12
E-1181-067	Schematic Diagram Residual heat Removal System Relay Logic Bus "A" Unit 1	17
E-1181-078	E12 Residual heat Removal System Ann, Ckts. And Display Cont. Sys. Inputs	12
E-0560-117	Wiring Diagram MCC-FVR Starter-Typical With "74" relay	0
E-1225-050	P41 Standby Service Water System Computer Points Unit 1	6
E-1225-015	P41 Standby Service Water System SSW System A in Operator Annunciation	14
E-1225-013	P41 Standby Service Water System SSW System A Out of	13

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
	Service Annunciator Unit 1	
E-1225-49	P41 Standby Service Water System Computer Points Unit 1	6
E-1225-007	P41 Standby Service Water System RHR A Heat Exchanger Outlet MOV F068A-A Unit	14
E-0560-93	MCC-FVR Starter-Typical with "74" Relay	0
E-1225-008	SSW System Diesel Gen II Heat Exchange Inlet	12
E-0740-002	Motor Operated Valves Wiring Diagram	2
E-083.0-Q1H22P152-1.4-011	Transfer Panel 1H22-P152 Unit 1	0

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	Unit 1, LCOTR #: 1-TS-11-0444	January 23, 2012
	Unit 1, LCOTR #: 1-TS-11-0443	January 23, 2012
	Unit 1, LCOTR #: 1-TS-11-0497	January 23, 2012
	GGNS SDP/DCD Impact Report (for ECs)	August 10, 2011
	GGNS SDP/DCD Impact Report (for ECs)	March 14, 2011
Vendor Manual: 460000535	Operation and Maintenance Manual for Control Room Air Conditioning Units	302

CONDITION REPORT

CR-GGN-2011-08842	CR-GGN-2012-00793	CR-GGN-2012-00827
CR-GGN-2012-01495	CR-GGN-2012-01793	

WORK ORDER

WO 00267048 01	WO 00267048 02	WO 00267048 03
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WO 00267054 03	WO 00267053 01	WO 00267053 02
WO 00262804 02	WO 00262804 03	WO 00260808 01
WO 00267054 01	WO 00267054 02	WO 00260808 03
WO 00267053 03	WO 00262804 01	WO 00260808 02
WO 00267045 01	WO 00262809 01	WO 00262809 02
WO 00262809 03	WO 00267045 02	WO 00267045 03
WO 00305567 07	WO 00252708 29	WO 00305567 06

ENGINEERING CHANGE

EC 27408

EC 26441 Rev 002

Section 1R20: Refueling and Other Outage Activities

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
02-S-01-17	Control of Limiting Conditions for Operation	122
01-S-02-3	Temporary Change, Directive # 03-1-01-2	119
03-1-01-3	Plant Shutdown	118
01-S-02-3	Administrative Procedure: Plant Shutdown	119
03-1-01-3,	Plant Shutdown Heat up/Cool down Data Sheets Attachment III	118

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
	ACE Report: Unexpected Alarm LPCS Low Flow Trip Unit 'Trip unit in Cal/Gross fail' CR-GGN-2011-6174; Event Date: 09-01-2011REPORT DATE: 10-04-2011	0
Attachment 9.10	TIME AFTER SHUTDOWN AT END OF CYCLE 18 AND OPERATING CONDITIONS REQUIRED FOR ADHRS TO BE CAPABLE OF REMOVING CORE DECAY HEAT WITH OR WITHOUT RWCU AND/OR FPCCU	
Desk Guide 13	Contamination Walk down	0
	Shutdown Operations Protection Plan RF 18 (January 20, 2012)	11

Section 1R22: Surveillance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-OP-1P75-R-0004	SDG 12, 18 Month Functional Test-General Instructions	117
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 56-41	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 32-61	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 56-44	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 36-57	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 08-33	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 16-09	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 40-57	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 28-09	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 56-25	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 56-33	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 08-37	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 36-05	13
04-1-03-C11-7	Control Rod Settle and Insertion Test Control Rod 04-37	13
06-EL-1L11-W-0001	125-Volt battery Bank Pilot Cell Check	104
04-1-01-E21-1	Low Pressure Core Spray System	38
04-1-01-C11-7	Control Rod Settle and Insertion Test	12
07-S-02-2	Special Guidance for the Performance of Electrical Activities	5
06-EL-SP64-W-0001	Fire Pump Diesel Battery Weekly Check	101
EN-RE-215	Reactivity Maneuver Plan (BWR)	1
EN-OP-109	Drywell Leakage	2
06-ME-1M10-O-0003	Drywell Bypass Leakage Rate	103

Section 1R22: Surveillance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-OP-1P75-R-0003, Attachment IV	SDG11, 18 Month Functional Test – Test No. 6 – Div 1 LOP/LOCA Test	118
06-OP-1M61-V-0002	Local Leak Rate Test – AIR (Using Graftel Model 9623-7 Leak Rate Monitor	3

CALCULATION

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MC-Q1M24-08008	Drywell Bypass Pressure Drop System	0
04-1-05-B21-1	Local Leak Rate Alignment Instructions Main Steam and Drywell Pressure transmitter Penetrations	0

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	GGNS friction Testing Recommendations and its Basis for the Remainder of Cycle 18	
	Control Rod 56-41 Cell Friction White Paper	
	Vitro Model 2210 Battery Monitor Instruction Manual	April 1985
	Engineering Calculation EC-Q1L21-90032	2
Calc # 51Q	Bechtel Control Circuit Voltage Drop for Class E1 124Vdc Circuits	0
NUREG 1481	Guidelines for Inservice Testing at Nuclear Power Plants	2
	3DM V6.58.08/P11E9 Predictor Log	January 5, 2012
	Drywell Leakage per EN-OP-109	
ANS 56.8-2002	Containment System Leakage Testing Requirements	August 9, 2011
SEP-APJ-003	PRIMARY CONTAINMENT LEAKAGE RATE TESTING (APPENDIX J) PROGRAM ENTERGY NUCLEAR ENGINEERING PROGRAMS	2

CONDITION REPORT

CR-GGN-2012-00572	CR-GGN-2012-00779	CR-GGN-2012-1325
CR-GGN-2012-1326	CR-GGN-2011-03259	CR-GGN-2011-06174
CR-GGN-2011-05889	CR-GGN-2011-05888	CR-GGN-2011-01275
CR-GGN-2011-04014	CR-GGN-2012-00423	CR-GGN-2012-00428
CR-GGN-2012-01459	CR-GGN-2012-01486	CR-GGN-2012-01487
CR-GGN-2010-01256	CR-GGN-2010-01446	CR-GGN-2010-01736
CR-GGN-2010-04556	CR-GGN-2010-04746	CR-GGN-2010-04887
CR-GGN-2010-05968	CR-GGN-2010-06807	CR-GGN-2011-02315
CR-GGN-2011-02449	CR-GGN-2011-04842	CR-GGN-2011-08155
CR-GGN-2012-02038	CR-GGN-2012-02065	CR-GGN-2012-01164
CR-GGN-2012-01848	CR-GGN-2012-02038	

WORK ORDER

WO 52313213	WO 52381062	WO 52358668 01
WO 52391752 01	WO 52391848 01	WO 52391707 01
WO 52391784 01	WO 52391768 01	WO 52382585
WO 00150146		

Section 2RS01: Radiological Hazard Assessment and Exposure Controls

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-101	Access Control for Radiologically Controlled Areas	6
EN-RP-105	Radiological Work Permits	9
EN-RP-108	Radiation Protection Posting	9
EN-RP-121	Radioactive Material Control	6
EN-RP-122	Alpha Monitoring	5
EN-RP-123	Radiological Controls for Highly Radioactive Objects	0
EN-RP-131	Air Sampling	8
EN-RP-143	Source Control	8

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
LO-ALO-2010-0048	Pre-NRC Assessment	January 10, 2011
LO-GLO-2010-00100	Occupational Exposure Control and Effectiveness	October 7, 2011

CONDITION REPORTS

CR-GGN-2011-04388	CR-GGN-2011-08140	CR-GGN-2011-08738
CR-GGN-2012-02658	CR-GGN-2012-00118	CR-GGN-2012-01108

RADIATION WORK PERMITS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
20121508	Under Vessel Maintenance	0
20121512	Remove and Replace Main Stream Relief Valves	0
20121527	Recirc System PMS and RTs	1
20121536	Install Permanent Shielding in the Drywell During RF18	0

SURVEY MAPS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
2012-0672	100' Drywell	February 20, 2012
2012-1101	121' Drywell Mezzanine Above TIPs	March 8, 2012
2012-1129	139' Drywell Upper Mezzanine	March 8, 2012
2012-1110	114' Drywell	March 8, 2012
2012-0819	147' Drywell	February 22, 2012
2012-1149	161' Drywell	March 8, 2012

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
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MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	Radiation Protection Logs	March 5 - 12, 2012
	Source Control Log Sheet (11-004, 11-005, 11-0038, 11-041)	September 19, 2011 and February 9, 2012
Att. 9.5 to EN-RP-143	Source Control – Radioactive Source List	7

Section 2RS03: In-plant Airborne Radioactivity Control and Mitigation

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-501	Respiratory Protection Program	4
EN-RP-502	Inspection and Maintenance of Respiratory Protection Equipment	8
EN-RP-503	Selection, Issue and Use of Respiratory Protection Equipment	5
EN-RP-504	Breathing Air	3
08-S-02-45	Operation and Maintenance of Boron II SCBA Fill System	8
08-S-02-117	Flow Testing of SCBA Regulators	1
08-S-10-2	Calibration of Portable Air Samplers	3

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
Att. 9.1 and 9.2 to EN-RP-502	Monthly SCBA and Face Piece Inspection Log	May 2010 - February 2012
LO-GLO-2011-00165	Pre-NRC Inspection for In-Plant Airborne Radioactivity Controls and Mitigation Assessment	December 13, 2011
GG-OT-1203-00072-PI	“A” MSR Turbine Building Air Sample	March 5, 2012

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
GG-RT-1203-00197-PI	Turbine Building 133 I/S "A" Air Sample	March 12, 2012
GG-RT-1203-00215-PI	Turbine Building 136 I/S "A" Condenser Air Sample	March 13, 2012

CONDITION REPORTS

CR-GGN-2010-03356	CR-GGN-2010-03660	CR-GGN-2010-04289
CR-GGN-2010-07323	CR-GGN-2011-02000	CR-GGN-2011-03955
CR-GGN-2012-01081	CR-GGN-2012-02263	CR-GGN-2011-07852
CR-GGN-2010-07274	CR-GGN-2010-06266	CR-GGN-2012-01036

RADIATION WORK PERMITS

<u>NUMBER</u>	<u>TITLE</u>
20121004	Maintenance Personnel – General Maintenance Activities and Support Work
20121800-1	RP Job Coverage for All Turbine Building Work
20121800-4	Stop and Control Valves and Support Work (Non-EPU)
20121801	Replace MSRs 1N35B001A/B to include all welding and support work
20121802-2	Remove LP Feedwater Heaters and Piping
20121902-1	MOV/AOV Program Valve Work, Votes/Viper Testing in the Turbine Building

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	MSA BMR Certified C.A.R.E. Technicians Authorization	September 15, 2010
166548-0	Compressed Air/Gas Quality Testing (Grade D/L Certification)	February 6, 2012
LM-0311	Qualification Matrix – SCBA Qualified Personnel	February 29, 2012

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Radiation Protection Logs	March 5 - 12, 2012
	ProCheck3 Test Results for SCBA SV-077 – Passed	March 13, 2012

Section 40A1: Performance Indicator Verification

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
GIN 2011-00189	NRC PI Summary Report for 1 st Qtr 2011	April 21, 2011
GIN 2011-00257	NRC PI Summary Report for 2 nd Qtr 2011	July 21, 2011
GIN 2011-00339	NRC PI Summary Report for 3 rd Qtr 2011	October 19, 2011
GIN 2011-00019	NRC PI Summary Report for 4 th Qtr 2011	January 20, 2012

Section 40A3: Event Follow-Up

CONDITION REPORT

CR-GGN-2011-05477	CR-GGN-2011-07824	CR-GGN-2011-07788
CR-GGN-2011-07409		

Section 40A5: Other Activities

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
01-1-S-10-1	Fire Protection Plan	103
10-S-03-2	Response to Fires	24
Appendix 9B	GG UFSAR Fire Protection Program	

CONDITION REPORT

CR-GGN-2012-01488	CR-GGN-2012-01489	CR-GGN-2012-01492
CR-GGN-2012-01494	CR-GGN-2012-02054	

Section 40A7: Licensee-Identified Violations

CONDITION REPORT

CR-GGN-2012-01848

**The following items are requested for the
Occupational Radiation Safety Inspection
at Grand Gulf Nuclear Station
(March 12-16, 2012)
Integrated Report 2012002**

Inspection areas are Radiological Hazard Assessment and Exposure Controls (71124.01),

The items listed below are needed to support the Radiation Safety inspection to be conducted by Natasha Greene (817-200-1154) and Larry Ricketson (817-200-1165).

1. Radiological Hazard Assessment and Exposure Controls (71124.01)

NOTE: Please submit this information using the same lettering system as below. For example, all contacts and phone numbers for the above inspector should be in a file/folder titled 1- A, Applicable organization charts in file/folder 1- B, etc.

Please provide the requested information for regional inspector review by February 20, 2012.

- A List of contacts and telephone numbers for the following areas:
 - 1 Radiation Protection Organization Staff and Technicians

- B Applicable organization charts

- C Audits, self assessments, surveillances, vendor or NUPIC audits of contractor support, and LERs written since February 14, 2011, related to:
 - 1. Access Control to Radiologically Significant Areas
 - 2. Radioactive material control
 - 3. Locked High Radiation Area Key Control

- D Procedure indexes for the following areas
 - 1. Access Control to Radiologically Significant Areas
 - 2. Radioactive material control
 - 3. Locked High Radiation Area Key Control
 - 4. Radiation Protection Programs

- E Please provide specific procedures related to the following areas. Additional Specific Procedures will be requested by number after the inspector reviews the procedure indexes.
 - 1. Radiation Protection Program Description
 - 2. Radiation Protection Conduct of Operations
 - 3. Posting of Radiological Areas
 - 4. High Radiation Area Controls
 - 5. RCA Access Controls and Radworker Instructions
 - 6. Conduct of Radiological Surveys
 - 7. Radioactive Source Inventory and Control

- F List of corrective action documents (including corporate and subtiered systems) written since February 14, 2011, associated with Radiological hazard assessment including:
1. Control of access to radiologically controlled areas
 2. Electronic dosimeter alarms
 3. Locked high radiation area key control

NOTE; The lists should indicate the significance level of each issue and the search criteria used.

Also include a summary of corrective action documents since February 14, 2011, involving unmonitored releases, unplanned releases, or releases in which any dose limit or administrative dose limit was exceeded (for Public Radiation Safety Performance Indicator verification in accordance with of IP 71151)

- G List of radiologically significant work activities scheduled to be conducted during the inspection week(s)
- H Radioactive source inventory list

Inspection area is In-Plant Airborne Radioactivity Control and Mitigation (71124.03).

2. In-Plant Airborne Radioactivity Control and Mitigation (71124.03)

NOTE: In an effort to keep the requested information organized, please submit this information to us using the same lettering system below. For example, all contacts and phone numbers for the above inspector should be in a file/folder titled 2- A, Applicable organization charts in file/folder 2- B, etc.

- A List of contacts and telephone numbers for the following areas:
[If different than Part 1]

- 1 Respiratory Protection Program
- 2 Self contained breathing apparatus

- B Applicable organization charts
[If different than Part 1]

- C Copies of audits, self-assessments, surveillances, vendor or NUPIC audits for contractor support (SCBA), and LERs, written since May 3, 2010, related to:

- 1 Installed air filtration systems, such as containment purge, spent fuel pool ventilation, and auxiliary building ventilation
- 2 Self contained breathing apparatuses

- D. Procedure index for:
[If different than Part 1]

- 1 use and operation of continuous air monitors

- 2 use and operation of temporary air filtration units
- 3 Respiratory protection

E. Please provide specific procedures related to the following areas. Additional Specific Procedures will be requested by number after the inspector reviews the procedure indexes.

- 1 Respiratory protection program
- 2 Use of self contained breathing apparatuses
- 3 Air quality testing for SCBAs
- 4 containment purge
- 5 auxiliary building ventilation

F. A summary list of corrective action documents (including corporate and subtiered systems) written since May 3, 2010, related to the Airborne Monitoring program including:

- 1 continuous air monitors -
- 2 Self contained breathing apparatuses
- 3 respiratory protection program
- 4 Installed air filtration systems, such as containment purge, spent fuel pool ventilation, and auxiliary building ventilation

NOTE; The lists should indicate the significance level of each issue and the search criteria used.

- G List of SCBA qualified personnel - reactor operators and emergency response personnel
- H Surveillance records for self contained breathing apparatuses (SCBAs) staged in the plant for use since May 3, 2010.
- I SCBA training and qualification records for control room operators, shift supervisors, STAs, and OSC personnel for the last year.
- J A selection of personnel may be asked to demonstrate proficiency in donning, doffing, and performance of functionality check for respiratory devices.

PAPERWORK REDUCTION ACT STATEMENT

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011.