



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

May 10, 2011

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

Subject: GRAND GULF NRC INTEGRATED INSPECTION REPORT NUMBER
05000416/2011002

Dear Mr. Perito:

On March 27, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Grand Gulf Nuclear Station. The enclosed integrated inspection report documents the inspection findings, which were discussed on April 14, 2011, with Mike Perito, Vice President Operations, 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.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. The NRC has also identified five issues that were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has determined that four of these findings have violations associated with these issues. Additionally, one licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. However, because of their very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as noncited violations, consistent with Section 2.3.2 of the NRC Enforcement Policy.

If you contest the significance of the noncited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 612 E. Lamar Blvd, Suite 400, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the facility. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date

Entergy Operations, Inc.

- 2 -

of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC Resident Inspector at the facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Vincent Gaddy, Chief
Project Branch C
Division of Reactor Projects

Docket: 50-416
License: NPF-29

Enclosed: NRC Inspection Report 05000416/2011002
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000416

License: NPF-29

Report: 05000416/2011002

Licensee: Entergy Operations, Inc.

Facility: Grand Gulf Nuclear Station

Location: 7003 Baldhill Road
Port Gibson, MS 39150

Dates: January 21, 2011, through March 27, 2011

Inspectors: R. Smith, Senior Resident Inspector
M. Baquera, Resident Inspector, Palo Verde
A. Fairbanks, Reactor Inspector
C. Graves, Health Physicist
L. Ricketson, P.E., Senior Health Physicist
E. Uribe, Reactor Inspector

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

SUMMARY OF FINDINGS

IR 05000416/2011002; 1/1/2011 – 3/27/2011; Grand Gulf Nuclear Station, Integrated Resident and Regional Report; Fire Protection, Maintenance Effectiveness, Radiological Hazard Assessment and Exposure Controls, and Event Follow-Up.

The report covered a 3-month period of inspection by resident inspectors and an announced baseline inspection by region-based inspectors. Five Green noncited violations of significance were identified and one Green finding of significance was 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: Mitigating Systems

- SLIV. Inspectors identified a noncited violation of 10 CFR 50.71(e)(4), which requires the final safety analysis report be updated, at intervals not exceeding 24 months, to reflect changes made in the facility or procedures described in the final safety analysis report. Licensee personnel failed to update the original revision of the final safety analysis report to reflect the actual number of low pressure coolant injection loops available for automatic initiation during shutdown cooling operations in Mode 3. The licensee plans to update the final safety analysis report at the next scheduled revision. This finding was entered into the licensee's corrective action program as condition report CR-GGN-2011-01631.

The failure of licensing personnel to update the final safety analysis report to reflect the available low pressure coolant injection loops for automatic initiation during shutdown cooling operations in Mode 3 was a performance deficiency. This finding was evaluated using traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. The inspectors used the NRC Enforcement Policy, dated September 30, 2010, to evaluate the significance of this violation. Consistent with the NRC Enforcement Policy, this finding was determined to be a Severity Level IV noncited violation.

- Green. The inspectors identified a noncited violation of 10 CFR Part 50.65(a)(2) for the licensee's failure to demonstrate that the performance of the train B control room air conditioner was being effectively controlled through the performance of appropriate preventive maintenance. Engineering did not properly evaluate maintenance rule functional failures resulting in the system remaining in an a(2) status instead of an a(1) status. As corrective action, the

train B control room air conditioner was moved into an a(1) status. The licensee entered this issue into their corrective action program as Condition Report CR-GGN-2011-01623.

The finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Inspectors performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because the maintenance rule aspect of the finding did not cause an actual loss of safety function of the system nor did it cause a component to be inoperable. As corrective action, the train B control room air conditioner was moved into an (a)(1) status. This finding had a crosscutting aspect in the area of human performance associated with the decision making component because licensee personnel failed to make appropriate safety-significant or risk-significant decisions to address the multiple failures of the train B control room air conditioner compressor. [H.1(a)] (Section 1R12.b.2)

- Green. The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, after the licensee failed to determine the cause and prevent recurrence of a significant condition adverse to quality associated with the train B control room air conditioner compressor tripping due to low oil pressure. Specifically, on December 13, 2010, the train B control room air conditioner compressor tripped on low oil pressure after the licensee had performed a root cause analysis to identify the cause and prevent recurrence of a similar compressor trip on October 14, 2010. As immediate corrective action, the licensee installed an inline suction filter. No additional failures have occurred since its installation. The finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2010-07315.

This finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, the inspectors determined that a Phase 2 analysis was required because the finding represented a loss of system safety function. The plant-specific risk informed notebook does not include the evaluation of risk caused by the loss of cooling to the main control room. Therefore, the senior reactor analyst conducted a Phase 3 analysis. Based on the bounding analysis, the analyst determined that the change in core damage frequency result was 5.9×10^{-7} . This noncited violation was therefore determined to be of very low safety significance (Green). This finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because licensee personnel failed to

thoroughly evaluate the multiple failures of the train B control room air conditioner compressor. [P.1(c)] (Section 4OA3.1.b)

Cornerstone: Barrier Integrity

- Green. The inspectors identified a noncited violation of Facility Operating License Condition 2.C(41), involving the failure to ensure that transient combustible were not stored in the fire exclusion zone near the independent spent fuel storage installation. The inspectors performed a quarterly fire protection inspection of independent spent fuel storage installation and identified a large air conditioner with combustible material covering it located in the fire exclusion zone that was within 60 feet of the dry fuel storage pad. The inspectors determined through interviews that the material had been placed there the previous day by the maintenance department. As immediate corrective action the licensee removed the combustible material from the area. The finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-00455.

This finding was more than minor because it was associated human performance attribute of the Barrier Integrity Cornerstone to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," the inspectors determined that the finding impacted the fire prevention and administrative controls category. The inspectors assigned a low degradation rating due to the fact that the amount of combustible material in the area was minimal. The inspectors concluded that the finding was of very low safety significance (Green) due to the fact there were no fire ignition sources in the area. The cause of this finding has a crosscutting aspect in the area of human performance associated with the work practices component because the licensee failed to effectively communicate expectations regarding storage of combustible material near the dry fuel storage pad. [H.4(b)] (Section 1R05.1.b)

- Green. The inspectors reviewed a self-revealing, Green finding of EN-DC-115, "Engineering Change Process," involving the failure to maintain adequate design control measures associated with the installation of the mitigation monitoring system. On November 8, 2010, a reactor coolant pressure boundary failure occurred at the skid mounted Online Noble Chemical - Mitigation Monitoring System pump inside primary containment. The positive displacement sample pump ejected the pump piston from the housing, resulting in an approximate 7 gpm leak of reactor coolant. The steam leak resulted in a reactor recirculation system flow control valve lockup (due to hydraulic power unit motor failure) and approximately 15,000 square feet of contaminated area in the primary containment structure. The licensee failed to ensure proper validation testing for the pump prior to installation. Specifically, the licensee did not ensure that the pump could withstand the operating pressures and temperatures of the system in

which it was installed. The licensee removed the mitigation monitoring system from service and isolated the skid from the reactor water cleanup system. This finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2010-07852.

The finding is more than minor because it affects the design control attribute of the Barrier Integrity Cornerstone to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Therefore, using inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet for LOCA initiators, the inspectors concluded that the finding was of very low safety significance (Green) because the failure of the mitigation monitoring system would not have exceeded technical specifications limits for identified leakage in the reactor coolant system. This finding has a crosscutting aspect in the work practices component of the human performance area; because the licensee failed to adequately oversee the design of the mitigation monitoring system such that nuclear safety is supported. [H.4(c)] (Section 4OA3.2.b)

Cornerstone: Occupational Radiation Safety

- Green. The inspectors identified a noncited violation of Technical Specification 5.7.2, resulting from the licensee's failure to use a qualified radiation protection technician to provide direct continuous coverage of work in a locked high radiation area. The finding was placed into the corrective action program as Condition Report CR-GGN-2011-01045, and corrective action was being evaluated.

The failure to use a qualified radiation protection technician to provide direct continuous coverage of work in a locked high radiation area is a performance deficiency. The finding was more than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute (exposure control) of program and process and affected the cornerstone objective, in that, the failure to use qualified radiation protection technicians to provide job coverage in a high radiation area with dose rates in excess of 1000 mrem/hr had the potential to increase personnel dose. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined the finding to have very low safety significance because: (1) it was not associated with ALARA planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. (Section 2RS01.b)

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and 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 full rated thermal power. On January 9, 2011, operators reduced power to 68 percent for a planned control rod sequence exchange and isolation of the moisture separator reheaters (MSRs) second stage steam to both the 'A' and 'B' MSRs due to tube leaks in the 'A' MSR. The plant was returned to 96 percent power on January 10, 2011, which was maximum power level allowed with MSR second stage steam isolated. On February 18, 2011, operators reduced power to 77 percent for monthly control rod testing, turbine testing, and to remove 'B' heater drain pump from service in an attempt to repair a steam leak on the heater drain pump 'B' discharge flange. The plant was returned to 96 percent power on February 19, 2011. On March 11, 2011, operators reduced power to 84 percent power for a planned control rod testing and to remove 'B' heater drain pump from service in another attempt to repair a steam leak on the heater drain pump 'B' discharge flange. The plant was returned to 96 percent power on March 12, 2011. On March 23, 2011, operators reduced power to 93 percent power to remove the 'B' heater drain pump from service again in another attempt to repair a steam leak on the heater drain pump 'B' pump discharge flange. The plant was returned to 96 percent power on March 12, 2011. The plant remained at 96 percent power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and 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 extreme low temperatures. 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
- Emergency diesel generators
- Plant service water
- Fire water pumps and tanks

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 extreme cold conditions and icing were forecast in the vicinity of the facility for January 9, 2011, the inspectors reviewed overall preparations/protection for the expected weather conditions. On January 7, 2011, the inspectors inspected the standby service water towers because their safety-related functions could be affected as a result of the extreme cold and icing conditions forecast for the facility. The inspectors observed space heater operation and weatherized enclosures to ensure operability of affected systems. The inspectors reviewed licensee procedures and discussed potential compensatory measures with control room personnel. The inspectors focused on plant management's actions for implementing the station's procedures for ensuring adequate personnel for safe plant operation and emergency response would be available. 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 Alignments (71111.04)

.1 Partial Walkdown

a. Inspection Scope

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

- Division II standby service water system during Division I maintenance outage

- Residual heat removal system B during residual heat removal system A maintenance outage
- Residual heat removal system C during residual heat removal system A maintenance outage
- Division II standby diesel generator system during Division I maintenance outage
- Standby liquid control system A during standby liquid control system B maintenance outage

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, UFSAR, 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 five partial system walkdown samples as defined in Inspection Procedure 71111.04-05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

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 II diesel generator room (1D303)

- Residual heat removal pump and heat exchanger rooms A (1A102 and 1A103)
- Residual heat removal pump and heat exchanger rooms B (1A105 and 1A106)
- Reactor Core Isolation Pump Room (1A104)
- Dry fuel storage pad area (Area 59 the Yard)

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

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

b. Findings

Introduction. The inspectors identified a Green noncited violation of Facility Operating License Condition 2.C(41), involving the failure to ensure that transient combustible were not stored in the fire exclusion zone near the independent spent fuel storage installation.

Description. On January 24, 2011, the inspectors performed a quarterly fire protection inspection of independent spent fuel storage installation. The inspectors identified a large air conditioner with combustible material covering it located in the fire exclusion zone that appeared to be within 60 feet of the dry fuel storage pad. The inspectors brought this to the attention of the work center senior reactor operator. The work center senior reactor operator contacted the site fire engineer, who walked down the fire exclusion zone and determined that the combustible material covering the air conditioner was within the 60 feet of the dry fuel storage pad, which is in violation of plant procedural requirements. The inspectors determined through interviews that the material had been placed there the day before by the maintenance department. The site had the air conditioner and the covering material removed from the fire exclusion zone to restore compliance.

The licensee documented this violation in Condition Report CR-GGN-2011-00455. Its short-term corrective actions included removing the combustible material from the area.

Analysis. The inspectors determined that the failure to follow fire protection procedures developed for control of transient combustible material stored near the dry spent fuel storage pad was a performance deficiency. This finding was more than minor because it was associated human performance attribute of the Barrier Integrity Cornerstone to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," the inspectors determined that the finding impacted the fire prevention and administrative controls category. The inspectors assigned a low degradation rating due to the fact that the amount of combustible material in the area was minimal. The inspectors concluded that the finding was of very low safety significance (Green) due to the fact there were no fire ignition sources in the area. The finding has a crosscutting aspect in the area of human performance associated with the work practices component because the licensee failed to effectively communicate expectations regarding storage of combustible material near the dry fuel storage pad. [H.4(b)]

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, "Administrative Controls," section 9B.6.a, governs the handling and limits the use of ordinary combustible materials in safety related areas. Fire area 59, defined as the yard, contains the fire exclusion area next to the dry fuel storage pad and prohibits the storage of any combustible material in this area. Contrary to this, on January 23, 2011, the licensee stored combustible material inside the transient combustible exclusion zone near the dry fuel storage pad. The licensee restored compliance by removing the material from the area on January 25, 2011. Because the finding was of very low safety significance (Green) and was documented in the licensee's corrective action program as CR-GGN-2011-0455, this finding is being treated as a noncited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000416/2011002-01; Transient Combustible Stored in the Fire Exclusion Zone Near the Independent Spent Fuel Storage Installation.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

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

- January 11, 2011, 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

No findings were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

The inspectors reviewed licensee programs, verified performance against industry standards, and reviewed critical operating parameters and maintenance records for the Division 1 emergency diesel generator jacket water and lube oil heat exchangers. The inspectors verified that performance tests were satisfactorily conducted for heat exchangers/heat sinks and reviewed for problems or errors; the licensee utilized the periodic maintenance method outlined in EPRI Report NP 7552, "Heat Exchanger Performance Monitoring Guidelines"; the licensee properly utilized biofouling controls; the licensee's heat exchanger inspections adequately assessed the state of cleanliness of their tubes; and the heat exchanger was correctly categorized under 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one heat sink inspection sample as defined in Inspection Procedure 71111.07-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On January 31, 2011, the inspectors observed a crew of licensed operators in the plant's simulator to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

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

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

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

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

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

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

- Appendix R emergency lighting units (Z92)
- Control room air conditioning (Z51)
- Residual heat removal (E12)

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 three quarterly maintenance effectiveness samples as defined in Inspection Procedure 71111.12-05.

b. Findings

.1 Failure to Update Available Low Pressure Cooling Injection Loops in the Updated Final Safety Analysis Report

Introduction. Inspectors identified a Severity Level IV, noncited violation for the licensee's failure to update the final (updated) safety analysis report in accordance with 10 CFR 50.71(e)(4). Specifically, the licensee failed to update Section 6.3, "Emergency Core Cooling Systems," to appropriately reflect the available emergency core cooling equipment during shutdown cooling operations in Mode 3.

Description. On February 28, 2011, while reviewing the updated final safety analysis report for a maintenance effectiveness inspection of the residual heat removal system, the inspectors determined that Section 6.3.1.1.1.e, "Emergency Core Cooling Systems," states, "The ECCS is designed to satisfy all criteria specified in Section 6.3 for any normal mode of reactor operation." Additionally, Section 6.3.1.1.2.d states, "In the event of a break in a pipe that is part of the reactor coolant pressure boundary, no single active component failure in the emergency core cooling system shall prevent automatic initiation and successful operation of less than the following combination of emergency core cooling system equipment: 1) Three low pressure coolant injection loops, the low pressure core spray and the automatic depressurization system (i.e., high pressure core spray failure); 2) Two low pressure coolant injection loops, the high pressure core spray and the automatic depressurization system (i.e., low pressure core spray diesel generator failure); and 3) One low pressure coolant injection loop, the low pressure core spray, the high pressure core spray and automatic depressurization system (i.e., low pressure coolant injection diesel generator failure)."

Procedure 03-1-01-3, "Plant Shutdown," Revision 118, Section 6.14 states, "When shutdown cooling is placed in service at less than 135 psig, then the associated containment spray and low pressure coolant injection systems may be considered

operable if capable of being manually realigned and not otherwise inoperable.” Inspectors noted that because the residual heat removal system that provides shutdown cooling in Mode 3 is not available for automatic initiation (must be manually realigned) of low pressure coolant injection, in the event of a reactor coolant system pipe break, that the aforementioned statements in Section 6.3 did not appropriately reflect the available emergency core cooling equipment during shutdown cooling operations. In other words, the combinations of emergency core cooling equipment available for automatic initiation would include one less low pressure coolant injection loop.

The licensee entered this issue into their corrective actions program as Condition Report CR-GGN-2011-01631. The licensee planned to take actions to update the updated final safety analysis report at the next scheduled revision.

Analysis. The failure of licensing personnel to update the final safety analysis report to reflect the available low pressure coolant injection loops for automatic initiation during shutdown cooling operations in Mode 3 was a performance deficiency. This finding was evaluated using traditional enforcement because it had the potential for impacting the NRC’s ability to perform its regulatory function. The inspectors used the NRC Enforcement Policy, dated September 30, 2010, to evaluate the significance of this violation. Consistent with the NRC Enforcement Policy, this finding was determined to be a Severity Level IV noncited violation. This finding had no crosscutting aspect as it was associated with a traditional enforcement violation.

Enforcement. Title 10 CFR 50.71(e)(4) requires the final safety analysis report be updated, at intervals not exceeding 24 months, and states in part, “the revisions must reflect all changes made in the facility or procedures described in the FSAR.” Contrary to the above, licensing personnel failed to update the original revision of the final safety analysis report to reflect the actual number of low pressure coolant injection loops available for automatic initiation during shutdown cooling operations in Mode 3. Because the finding is of very low safety significance and has been entered into the corrective action program as Condition Report CR-GGN-2011-01631, this violation is being treated as a noncited violation consistent with the NRC Enforcement Policy: NCV 0500416/20011002-02, "Failure to Update Available Low Pressure Coolant Injection Loops in the Updated Final Safety Analysis Report."

.2 Failure to Demonstrate Maintenance Effectiveness of Train B Control Room Air Conditioner

Introduction. The inspectors identified a Green noncited violation of 10 CFR Part 50.65(a)(2) for the failure to demonstrate that the performance of the train B control room air conditioner was being effectively controlled through the performance of appropriate preventive maintenance.

Description. On March 2, 2011, the inspectors performed a maintenance effectiveness inspection of the control room air conditioning system. Inspectors determined that on February 3, 2010, the train B control room air conditioner compressor was replaced with a remanufactured compressor as part of annual preventative maintenance of the system. On March 27, 2010, the control room air conditioner compressor tripped on low

usable oil pressure. The licensee's investigation revealed that the compressor pencil strainer was approximately fifty percent covered with unidentified contaminants. Similar contaminants were identified on the oil sump strainer. The licensee concluded that the compressor had been installed with contaminants inside the lower half of the compressor, and subsequently replaced the remanufactured compressor on April 1, 2010, with a newly rebuilt compressor. System engineering did not classify this event as a maintenance rule functional failure even though operations had declared the train inoperable and also stated in their operability determination that it could not meet its 30 day mission time.

The train B control room air conditioner compressor subsequently either tripped or failed to properly cool the control room, due to low usable oil pressure, on three separate occasions (once in April, once May, and once in June). In response to the June failure, the licensee performed extensive maintenance on the train B control room air conditioner compressor, which included installing a five micron suction line filter in the system. Additionally, all three events were identified as maintenance rule functional failures attributed to foreign material fouling in the system, which would have resulted in the performance criteria being exceeded (less than or equal to two maintenance rule functional failure events or as a repeat functional failure). However, the site's maintenance rule coordinator informed the inspectors that the first two events in April and May were not counted toward the criteria because they were from the same cause as the June event and; therefore, they would all be counted as one failure even though the train was returned to service each time after corrective maintenance was performed and declared operable by operations. Additionally, on June 22, 2010, the train was declared inoperable due to multiple Freon leaks and was classified as another maintenance rule functional failure for the train. On August 10, 2010, the licensee performed a Maintenance Rule (a)(1) evaluation for the subject system and, based on the presentation to the expert panel by system engineering, the panel only considered two events as maintenance rule functional failures. System engineering did not count the one failure in March or consider the two failures in April or May. The expert panel only considered the failures in June due to low oil pressure and Freon leaks. Therefore the expert panel concluded that, although the train B control room air conditioner system had exceeded its established performance criteria for functional failure events, a number of effective corrective actions had been identified and implemented and additional corrective actions were not necessary; therefore, the subject system was allowed to retain its (a)(2) status.

The train B control room air conditioner compressor subsequently either tripped or failed to properly cool the control room, due to low usable oil pressure, on two separate occasions (once in September and once in October). The October trip of the subject system compressor occurred while the train A control room air conditioner was out of service for routine maintenance. The compressor pencil strainer and sump strainer were again identified with contaminants on them. The licensee was required to make an eight-hour report to the NRC and submit a licensee event report due to both trains of control room air conditioner being inoperable. The licensee's root cause analysis failed to identify that the train B control room air conditioner performance had not been demonstrated through the performance of appropriate preventative maintenance; nor did the root cause identify that the licensee failed to set goals and monitor the system as

required by 10 CFR 50.65(a)(1). The train B control room air conditioner was ultimately moved into (a)(1) status on February 4, 2011, after the subject compressor again tripped due to low oil pressure on December 13, 2010. After this trip and upon further evaluation, the licensee performed an additional corrective action that installed an in line suction filter with smaller filtering diameter and larger surface area to remove foreign material from the system. They also modified the operator rounds to obtain daily readings of differential pressure across this new filter and through calculation, determined a differential pressure necessary for the filter to be changed out and the unit to be inspected for foreign materials.

The licensee entered this issue into their corrective actions program as Condition Report CR-GGN-2011-01623. From installation of the new inline suction filter to the conclusion of the inspection period, no additional trips of train B control room air conditioning have occurred.

Analysis. The inspectors determined that the failure to demonstrate that the performance of the train B control room air conditioner was being effectively controlled through the performance of appropriate preventive maintenance was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Inspectors performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it did not result in a loss of system safety function since the train A control room air conditioner remained operable. This finding had a crosscutting aspect in the area of human performance associated with the decision making component because licensee personnel failed to make appropriate safety-significant or risk-significant decisions to address the multiple failures of the train B CRAC compressor. [H.1(a)]

Enforcement. Title 10 CFR 50.65(a)(2), states, in part, that "monitoring as specified in paragraph (a)(1) of this section is not required where it has been demonstrated that the performance or condition of a structure, system, or component is being effectively controlled through the performance of appropriate preventative maintenance, such that the structure, system, or component remains capable of performing its intended function." Contrary to the above, from March 2010 to February 2011, the licensee failed to demonstrate that the performance of the train B control room air conditioning system was effectively controlled through the performance of appropriate preventative maintenance. This finding was entered into the licensee's corrective action program as Condition Report CR-GGN-2011-01623. Because this 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 noncited violation consistent with the NRC Enforcement Policy: NCV 05000285/2011002-03, "Failure to Demonstrate Maintenance Effectiveness of Train B Control Room Air Conditioner."

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:

- On January 9, 2011, during an ice storm requiring the plant to enter a yellow risk condition and enter their off normal event procedure for severe weather.
- On February 3, 2011, during an ice storm requiring the plant to enter a yellow risk condition and enter their off normal event procedure for severe weather. The weather required the site to cancel work and monitor their safety related standby service water system for icing conditions.
- On February 9, 2011, during a winter storm, while a divisions 1 diesel generator and residual heat removal A were out for planned maintenance outage requiring the plant to enter orange risk.
- On February 28, 2011, during the accidental unearthing of energized plant service water pump cables, no consequence to the plant but resulted in work stoppage and evaluation of risk status for the site.
- On March 8-9, 2011, with an emergent issue with the division 1 diesel generator and a tornado watch issued for the area requiring the plant to enter yellow risk. The site entered their severe weather off normal procedure; this procedure required the site to secure from half scram surveillances.

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 emergent work control inspection samples as defined in Inspection Procedure 71111.13-05.

b. Findings

No findings were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following issues:

- Division 3 high pressure core spray diesel generator outside air fan temperature switch fluctuating
- Train A standby service water drift eliminator support base plate corrosion and missing brass bolts
- Train A standby service water valve P41-F299A flange degradation
- Residual heat removal equipment area temperature high/inoperable due to temperature switch
- Site fire truck inoperable
- Division 1 diesel generator auxiliary oil pump not obtaining procedural pressures during pre-lube prior to surveillance run

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

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

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

To verify that the safety functions of important safety systems were not degraded, the inspectors reviewed the following temporary modifications:

- Temporary Modification for RWCU A/B Leak Detection (EC 22625 & EC 22635)
- Temporary Modification to install bypass signals for 'B' first stage Pressure Sensor (EC22768)

The inspectors reviewed the temporary modifications and the associated safety-evaluation screening against the system design bases documentation, including the updated final safety analysis report and the technical specifications, and verified that the modification did not adversely affect the system operability/availability. The inspectors also verified that the installation and restoration were consistent with the modification documents and that configuration control was adequate. Additionally, the inspectors verified that the temporary modification was identified on control room drawings, appropriate tags were placed on the affected equipment, and licensee personnel evaluated the combined effects on mitigating systems and the integrity of radiological barriers.

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

b. Findings

No findings were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

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

- For standby liquid B after a maintenance outage
- For reactor protection motor generator B after required maintenance
- For residual heat removal system A after a maintenance outage

- For standby service water system A after a maintenance outage
- For division 1 diesel generator after a maintenance outage
- For high pressure core spray minimum flow valve 1E22-F012 after corrective maintenance

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

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

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

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the UFSAR, 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
- Test data
- Testing frequency and method demonstrated technical specification operability
- Test equipment removal
- Restoration of plant systems
- 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 7, 2011, reactor coolant system leakage detection surveillance
- On February 4, 2011, inservice test of residual heat removal system B quarterly
- On February 23, 2011, reactor coolant routine chemistry surveillance
- On March 2, 2011, fuel handling area ventilation exhaust radiation monitor time response test
- On March 10, 2011, division 1 diesel generator monthly surveillance
- On March 18, 2011, division 3 diesel generator monthly surveillance
- On March 20-21, 2011, functional checks with reactor core isolation cooling valves at the remote shutdown panel

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

These activities constitute completion of seven surveillance (one reactor coolant system leakage detection, one inservice test, and five routine tests) testing inspection samples as defined in Inspection Procedure 71111.22-05.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on March 3, 2011, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator control room and emergency operations facility to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the attachment.

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

b. Findings

No findings were identified.

2. 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

Introduction. The inspectors identified a Green, noncited violation of Technical Specification 5.7.2, resulting from the licensee's failure to use a qualified radiation protection technician to provide direct continuous coverage of work in a locked high radiation area.

Description. The inspectors reviewed Condition Report CR-GGN-2011-00655, which documented the identification by Cooper Nuclear Station that a contractor seeking employment as a radiation protection technician did not meet ANSI 18.1 requirements. The finding, documented February 2, 2011, was discussed with Entergy sites during a teleconference. Then, Grand Gulf Nuclear Station determined the individual had been employed as a radiation protection technician at Grand Gulf Nuclear Station during Refueling Outage 17, conducted in April and May 2010. In response, Grand Gulf Nuclear Station reviewed the radiation surveys performed by the individual (from April 15 through May 13, 2010), concluded the surveys contained "data comparable with that documented in other surveys in the same areas under similar conditions," and closed the condition report on February 8, 2011. The inspectors reviewed the radiation survey records included in the condition report and noted something the licensee had not addressed. On April 27, 2010, the individual had provided job coverage for work in a locked high radiation area (an area with dose rates greater than 1000 mrem/hour). Survey GG-1004-0660 identified the work area as the 128-foot auxiliary pipe chase, above the reactor water cleanup pump rooms. Since the individual used by the licensee to provide job coverage and surveillance in a locked high radiation area was not a qualified radiation protection technician, the inspectors identified this as a performance deficiency.

Analysis. The failure to use a qualified radiation protection technician to provide direct continuous coverage of work in a locked high radiation area is a performance deficiency. The finding was more than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute (exposure control) of program and process and affected the cornerstone objective, in that, the failure to use qualified radiation protection technicians to provide job coverage in a high radiation area with dose rates in excess of 1000 mrem/hr had the potential to increase personnel dose. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined the finding to have very low safety significance because: (1) it was not associated with ALARA planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The inspectors identified no cross-cutting aspect associated with this finding.

Enforcement. Technical Specification 5.7.2, controls for high radiation areas with dose rates greater than 1000 mrem/hour, consists of all the controls for high radiation areas (Technical Specification 5.7.1) plus it requires doors to the area remain locked except during periods of access by personnel under an approved radiation work permit that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification for the radiation work permit, direct or remote continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure

control over the activities being performed within the area. Contrary to the above, during work in an area with dose rates greater than 1000 mrem/hour on April 27, 2010, in lieu of the stay time specification for the radiation work permit, direct or remote surveillance was not made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area. Instead, an unqualified person was assigned to provide surveillance of a locked high radiation on April 27, 2010. The licensee initiated Condition Report CR-GGN-2011-01045 to document the fact that it failed to identify this performance deficiency as part of the review associated with the closure of Condition Report CR-GGN-2011-00655. Because the violation was of very low safety significance and it was entered into the licensee's corrective action program, the violation is being treated as a noncited violation, consistent with the enforcement policy. NCV 05000416/2011002-04, "Failure to Use a Qualified Radiation Protection Technician to Provide Direct Continuous Coverage of Work in a Locked High Radiation Area."

2RS02 Occupational ALARA Planning and Controls (71124.02)

a. Inspection Scope

This area was inspected to assess performance with respect to maintaining occupational individual and collective radiation exposures as low as is reasonably achievable (ALARA). 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 and reviewed the following items:

- Site-specific ALARA procedures and collective exposure history, including the current 3-year rolling average, site-specific trends in collective exposures, and source-term measurements
- ALARA work activity evaluations/postjob reviews, exposure estimates, and exposure mitigation requirements
- The methodology for estimating work activity exposures, the intended dose outcome, the accuracy of dose rate and man-hour estimates, and intended versus actual work activity doses and the reasons for any inconsistencies
- Records detailing the historical trends and current status of tracked plant source terms and contingency plans for expected changes in the source term due to changes in plant fuel performance issues or changes in plant primary chemistry
- Radiation worker and radiation protection technician performance during work activities in radiation areas, airborne radioactivity areas, or high radiation areas
- Audits, self-assessments, and corrective action documents related to ALARA planning and 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 71124.02-05.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

40A1 Performance Indicator Verification (71151)

.1 Data Submission Issue

a. Inspection Scope

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

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

b. Findings

No findings were identified.

.2 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 2010 through the fourth quarter 2010. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, condition reports, event reports, and NRC integrated inspection reports for the period of January 2010 through December 2010 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 Scrams with Complications (IE02)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams with complications performance indicator for the period from first quarter 2010 through the fourth quarter 2010. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, condition reports, event reports, and NRC integrated inspection reports for the period of January 2010 through December 2010 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.

.4 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 first quarter 2010 through the fourth quarter 2010. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, condition reports, event reports, and NRC integrated inspection reports for the period of January 2010 through December 2010 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.

.5 Occupational Exposure Control Effectiveness (OR01)

a. Inspection Scope

The inspectors reviewed performance indicator data for the second quarter of 2010 through the fourth quarter of 2010. 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 NEI 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 second quarter of 2010 through the fourth quarter of 2010. 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 NEI 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 Identification and Resolution of Problems (71152)

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

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

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

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

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of

items entered into the licensee's corrective action program. The inspectors accomplished this through review of the station's daily corrective action documents.

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

b. Findings

No findings were identified.

.3 Selected Issue Follow-up Inspection

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, the inspectors recognized CR-GGN- 2009-05879 a corrective action item documenting temperature switches for safety related ventilation system. The inspectors reviewed that item as described in Inspection Procedure 71152.02 to verify, in part, licensee evaluation and disposition of operability and reportability issues; consideration of extent of condition and cause, generic implications, common cause, and previous occurrences; classification and prioritization of the problem's resolution commensurate with the safety significance; and identification of corrective actions that were appropriately focused to correct the problem.

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

b. Findings

No findings were identified.

4OA3 Event Follow-up (71153)

.1 (Closed) LER 05000416/2010-002-00, "Control Room Air Conditioning Inoperability – Loss of Both Trains"

a. Inspection Scope

On October 14, 2010, while operating at approximately 100 percent power, the train B control room air conditioner subsystem tripped on low oil pressure while the train A control room air conditioner subsystem was out of service for maintenance. The control room temperature increased and actions were taken to maintain control room temperatures below the technical specification limit of 90 degrees Fahrenheit. The two control room air conditioning subsystems were inoperable for 64 hours and 24 minutes until the train A control room air conditioner was declared operable.

The three possible failure mechanisms that the licensee identified in their root cause evaluation were 1) the intermittent failure of the low oil differential pressure switch, 2) the

intermittent failure of one or more loading/unloading mechanisms, and 3) one or more of the temperature control valves were in an open condition or in a more than desired open position. The licensee also identified a contributing cause of failure to exclude foreign material during maintenance activities on the train B control room air conditioner. Inspectors reviewed the circumstances surrounding the event, the licensee's response to the event, and the licensee's corrective actions to preclude repetition. Documents reviewed as part of this inspection are listed in the attachment. The enforcement aspects of this finding are discussed in this section and in Section 1R12. This LER is closed.

b. Findings

Introduction. The inspectors reviewed a self-revealing, Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, after the licensee failed to determine the cause and prevent recurrence of a significant condition adverse to quality associated with the train B control room air conditioner compressor tripping due to low oil pressure.

Description. On October 14, 2010, the train B control room air conditioner subsystem tripped on low oil pressure while the train A control room air conditioner subsystem was out of service for maintenance. The control room temperature increased, and actions were taken to maintain control room temperatures below the technical specification limit of 90 degrees Fahrenheit. The licensee determined that the event (i.e., one subsystem inoperable and unavailable for maintenance while the other subsystem was inoperable due to a trip) was reportable to the NRC. The two control room air conditioning subsystems were inoperable for 64 hours and 24 minutes until the train A control room air conditioner was declared operable. This was a significant condition because it rendered technical specification required equipment inoperable.

The licensee's corrective actions to address the event involved performing a root cause evaluation. The licensee concluded that the three possible failure mechanisms were 1) an intermittent failure of low oil differential pressure switch, 2) an intermittent failure of one or more loading/unloading mechanisms, and 3) failure of one or more thermal expansion valves. The licensee also concluded that a contributing cause of the event was the failure to exclude foreign material during maintenance activities of the system. The licensee addressed each of the possible root causes, as well as the contributing cause, since a single root cause could not be determined. The corrective action for the three probable root causes included 1) ensuring that only original differential pressure switches are used (or a suitable equivalent) for replacement; 2) revising planned maintenance tasks to include instructions for the loader/unloader disassembly, inspection and reassembly; 3) revising tasks for compressor A and B rebuilds; and 4) revising compressor preventative maintenance tasks to record the degree of superheat for each thermal expansion valve.

Despite the corrective actions implemented by the licensee, the train B control room air conditioner compressor again tripped on December 13, 2010, due to low oil pressure. After this trip and upon further evaluation, the licensee performed an additional corrective action that installed an inline suction filter with smaller filtering diameter and

larger surface area to remove foreign material from the system. The licensee also modified the operator rounds to obtain daily readings of differential pressure across this new filter and through calculation, determined a differential pressure necessary to change the filter. The condition report that documented the December 13th event was closed to the corrective actions associated with the October 14th compressor trip and the new corrective action associated with the newly installed in line suction filter.

The licensee entered this event into their corrective actions program as condition report CR-GGN-2010-07315. Since the use of the new inline suction filter, they have not had any additional trips of the control room air conditioning B. The April 2011 inspection showed that the filter had reduced foreign material on the compressor suction strainer by 40 percent from the March 2011 inspection. Also in May 2011, the licensee plans to boroscope the evaporation section of the air conditioner to search for any other foreign material.

Analysis. The inspectors determined that the failure to take corrective actions to prevent recurrence of the train B control room air conditioner compressor tripping due to low oil pressure was a performance deficiency. This finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, the inspectors determined that a Phase 2 estimate was required because the finding represented a loss of system safety function. The plant-specific risk informed notebook does not include the evaluation of risk caused by the loss of cooling to the main control room. Therefore, the senior reactor analyst conducted a Phase 3 analysis.

The analyst noted that understanding the risk affect of control room chillers required a review of the following items:

- Loss of offsite power frequency (λ_{LOOP}): Several alternative methods of cooling control room equipment are available provided offsite power is available. Therefore, the dominant risk impact of essential chillers is during a loss of offsite power. The loss of offsite power frequency documented in the plant-specific SPAR model is $3.59 \times 10^{-2}/\text{year}$.
- Loss of the opposite train probability (P_{CH-A}): The performance deficiency only affected Train B CRAC. Therefore, the Train A would still be available to cool the main control room. The generic failure probability for a single train of safety-related equipment is approximately $3 \times 10^{-2}/\text{demand}$.
- Exposure Period (EXP): Although the Train B CRAC system was placed in service without correcting the failure mechanism on November 1, 2010, the chiller continued to be utilized and run for much of the time until failure on December 13, 2010. The analyst noted that the chiller ran from November 12 until it failed on December 13, 2010. Therefore, the time that the chiller was actually unavailable to perform it's 24-hour risk significant mission time was

about 48 hours (the last 24 hours of its run and the 24 hours it took to repair). This gave an exposure time of 2 days.

- Conditional Core Damage Probability (CCDP): In the worst case failure of control room air conditioning would result in main control room abandonment. The generic CCDP for shutting the reactor down from outside the main control room is approximately 0.1.

The analyst determined that a bounding assessment of the change in core damage frequency (Δ CDF), can be calculated as follows:

$$\begin{aligned}\Delta\text{CDF} &= \lambda_{\text{LOOP}} * P_{\text{CH-A}} * \text{EXP} * \text{CCDP} \\ &= 3.59 \times 10^{-2}/\text{year} * 3 \times 10^{-2}/\text{demand} * 2 \text{ days}/365 \text{ days}/\text{year} * 0.1 \\ &= 5.9 \times 10^{-7}\end{aligned}$$

Based on the above bounding analysis, the analyst determined that the change in core damage frequency result was 5.9×10^{-7} . This noncited violation was therefore determined to be of very low safety significance (Green). This finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because licensee personnel failed to thoroughly evaluate the multiple failures of the train B control room air conditioner compressor. [P.1(c)]

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that in the case of a significant condition adverse to quality, "measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition." Contrary to the above, plant personnel did not implement corrective actions to preclude repetition of a significant condition adverse to quality associated with the tripping of the train B control room air conditioning compressor due to low oil pressure. Specifically, on December 13, 2010, the train B control room air conditioner compressor tripped due to low oil pressure after the licensee had performed a root cause analysis to identify the cause and prevent recurrence of the compressor tripping due to low oil pressure. Because the finding was of very low safety significance and has been entered into the corrective action program as Condition Report CR-GGN-2010-07315, this violation is being treated as a noncited violation, consistent with the NRC Enforcement Policy. NCV 05000416/2011002-05, "Failure to Prevent Recurrence of Control Room Air Conditioner Compressor Tripping Due to Low Oil Pressure."

.2 Steam Leak in the Containment

a. Inspection Scope

On November 8, 2010, the inspectors responded to the control room to observe operator response to a steam leak in containment. The newly installed mitigation monitoring system positive displacement pump ejected the cylinder causing an approximate seven gallons per minute reactor coolant leak. The inspectors observed operator actions, control room briefs and overall plant response to the event. The inspectors also

observed control room indications used to identify abnormal conditions in the containment building. Documents reviewed for this inspection are listed in the attachment.

b. Findings

Introduction. The inspectors reviewed a self-revealing, Green finding of EN-DC-115, "Engineering Change Process," involving the failure to maintain adequate design control measures associated with the installation of the mitigation monitoring system.

Description. On November 8, 2010, at approximately 5:30 am, a reactor coolant pressure boundary failure occurred at the skid mounted Online Noble Chemical - Mitigation Monitoring System pump inside primary containment. The positive displacement sample pump ejected the pump piston from the housing resulting in an approximate 7 gpm leak of reactor coolant. The leak was not detected for approximately 4.5 hours, resulting in the release of approximately 2,000 gallons of reactor coolant which flashed directly to steam. The steam leak resulted in a reactor recirculation system flow control valve lockup (due to HPU motor failure) and approximately 15,000 square feet of contaminated area in the primary containment structure.

The inspectors reviewed the mitigation monitoring system modification documentation and found that the design documentation did not appropriately address the design requirements for the installation of the mitigation monitoring system pump. The licensee failed to ensure proper validation testing for the pump prior to installation in the plant. Specifically, they did not ensure that the pump would be able to withstand the system operating pressures and temperatures in which it was installed. They failed to validate the design, which had a single point vulnerability, that resulted in the piston injecting from the pump and caused the leakage and contamination of the containment. In addition, the inspectors reviewed the root cause analysis of the event and found that the licensee failed to apply the appropriate oversight of the engineering vendor due to weaknesses in the procedure EN-DC-114, "Vendor Quality Management/Oversight."

The licensee entered this event into their corrective actions program as condition report CR-GGN-2010-07852. The licensee has currently removed the mitigation monitoring system pump from the plant, and isolated the mitigation monitoring system skid from the reactor water cleanup system. They are evaluating the design to make appropriate changes to ensure a repeat of this event will not occur.

Analysis. The failure to implement adequate design control measures for modifications to the plant, which impacted the reactor coolant pressure boundary, is a performance deficiency. Specifically procedure EN-DC-115, "Engineering Change Process," step 5.1[1], requires "during the engineering change development a choice of new technology or application is an error precursor which will need to have defensive functions built into the design, testing and maintenance, including developing in-house expertise." Contrary to this, the engineering change package that implemented this design change failed to ensure proper validation testing was performed prior to installation in the plant. The finding is more than minor because it affects the design control attribute of the Barrier Integrity Cornerstone to provide reasonable assurance that physical design barriers

protect the public from radionuclide releases caused by accidents or events. Therefore, using inspection Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet for LOCA initiators, the inspectors concluded that the finding was of very low safety significance (Green) because the failure of the mitigation monitoring system would not have exceeded technical specifications limits for identified leakage in the reactor coolant system. This finding has a crosscutting aspect in the area of human performance associated with the work practices component because the licensee failed to adequately oversee the design of the mitigation monitor system such that nuclear safety is supported. [H.4(c)]

Enforcement. No violation of regulatory requirements occurred. This finding was entered into the licensee's corrective action program as CR-GGN-2010-07852, and is identified as: FIN 05000416/2011002-06, "Inadequate Design Control for the Mitigation Monitoring System Modification."

40A5 Other Activities

1. (Closed) Temporary Instruction (TI) 2515/179, "Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in the National Source Tracking System Pursuant to Title 10, Code of Federal Regulations, Part 20.2207 (10 CFR 20.2207)"

a. Inspection Scope

An NRC inspection was performed to confirm that the licensee has reported their initial inventories of sealed sources pursuant to 10 CFR 20.2207 and to verify that the National Source Tracking System database correctly reflects the Category 1 and 2 sealed sources in custody of the licensee. Inspectors interviewed personnel and performed the following:

- Reviewed the licensee's source inventory
- Verified the presence of any Category 1 or 2 sources
- Reviewed procedures for and evaluated the effectiveness of storage and handling of sources
- Reviewed documents involving transactions of sources
- Reviewed adequacy of licensee maintenance, posting, and labeling of nationally tracked sources

b. Findings

While comparing the National Source Tracking System database information, the Licensee's information submittal, and original source certificates, the inspector noted that the licensee erroneously reported information for one of the four sources meeting the reporting criteria. The licensee used original leak test data and submitted the wrong

serial number and activity date for the source. The licensee reviewed all relevant data and submitted corrected documents within the five business days allowed by 10 CFR 20.2207(g). This finding was considered as an administrative error and of minor safety significance.

40A6 Meetings

Exit Meeting Summary

On February 18, 2011, the inspectors presented the results of the radiation safety inspections to Mr. J. Browning, General Plant Manager, 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 14, 2011, the inspectors presented the inspection results to M. 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 violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section 2.3.2 of the NRC Enforcement Policy for being dispositioned as noncited violations.

- .1 Technical Requirements Manual (TRM) section 6.2.1 requires that fire detection instrumentation for each fire detection zone shall be operable and if the required detection system is inoperable an hourly fire watch must be established. Contrary to this, on February 9, 2011 the licensee identified that fire detection instrumentation for fire zone 2-12 had been left in the non-audible alarm for the main control room on the fire computer when the limiting condition for operations was cleared on December 8, 2010 when zone was returned to operable status. The control room supervisor on February 9, 2011, discovered this condition when entering a fire-limiting condition for operation for the division 1 diesel generator room to allow welding. The licensee determined that it had been in non-audible status from December 8, 2010, through February 9, 2011. This issue was documented in the licensee's corrective action program in condition report CR-GGN-2011-00851. The senior reactor analyst from region IV performed a bounding evaluation of the change in risk caused by this condition. According to the Grand Gulf Updated Final Safety Analysis Report, Fire Zone 2-12 only contains Division I equipment. A fire that consumed the equipment in the area could not result in a loss of offsite power or other unplanned transient. Given the ignition frequency of the area, the 60-day exposure period, and the conditional core damage probability with the loss of the Division I emergency diesel generator, the analyst calculated that the change in risk was significantly less than 1E-6. Therefore, this finding was of very low safety significance (Green).

SUPPLEMENTAL INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel

R. Benson, Manager (Acting), Radiation Protection
J. Browning, General Plant Manager
D. Coulter, Senior Licensing Specialist
H Farris, Assistant Operation Manager
K. Higgenbotham, Planning and Scheduling Manager
J. Houston, Maintenance Manager
R. Jackson, Licensing
C. Lewis, Manager, Emergency Preparedness
C. Perino, Licensing Manager
M. Perito, Site Vice President of Operations
M. Richey, Director, Nuclear Safety Assurance
F. Rosser, Supervisor, Dosimetry
R. Sumrall, Superintendant, Operations Training
R. Sylvan, Supervisor, Radiation Protection
T. Trichell, Radiation Protection Manager
D. Wiles, Engineering Director
R. Wilson, Manager, Quality Assurance
E. Wright, Supervisor, Radiation Protection

NRC Personnel

R. Smith, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000416/2011002-01	NCV	Transient Combustible Stored in the Fire Exclusion Zone Near the Independent Spent Fuel Storage Installation (Section 1R05)
05000416/2011002-02	NCV	Failure to Update Available Low Pressure Coolant Injection Loops in the Updated Final Safety Analysis Report (Section 1R12)
05000416/2011002-03	NCV	Failure to Demonstrate Maintenance Effectiveness of Train B Control Room Air Conditioner(Section 1R12)
05000416/2011002-04	NCV	Failure to Use a Qualified Radiation Protection Technician to Provide Direct Continuous Coverage of Work in a Locked High Radiation Area (Section 2RS01)
05000416/2011002-05	NCV	Failure to Prevent Recurrence of Control Room Air Conditioner Compressor Tripping Due to Low Oil Pressure (Section 4OA3)
05000416/2011002-06	FIN	Inadequate Design Control for the Mitigation Monitoring System Modification (Section 4OA3)

Closed

TI 2515/179	TI	Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in the National Source Tracking System Pursuant to Title 10, Code of Federal Regulations, Part 20.2207 (10 CFR 20.2207) (Section 4OA5)
05000416/2010-002-00	LER	Control Room Air Conditioning Inoperability – Loss of Both Trains (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Section 1RO1: Adverse Weather Protection

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
ENS-EP-302	Severe Weather Response	11
05-1-02-VI-2	Hurricanes, Tornados, and Severe Weather	113
04-1-01-P41-1	Standby Service Water System	133
04-1-01-N71-1	Circulating Water System	72
04-1-03-A30-1	Cold Weather Protection	20

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	SSW Pump Discharge Temperatures	January 6-10, 2011

WORK ORDER

WO 52233022

Section 1RO4: Equipment Alignment

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
9.3-17 – 9.3-25	GG UFSAR	3
07-1-34-C41-C001-1	Standby Liquid Control Pump	10
04-1-01-C41-1	Standby Liquid Control System	119
04-1-01-P75-1	Standby Diesel Generator System	88
04-1-01-P41-1	Standby Service Water System	133
04-1-01-E12-1	System Operating Instructions Residual Heat Removal System	137
04-1-01-E12-1	Residual Heat Removal B	137
04-1-01-E12-1	Residual Heat Removal C	137

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
04-1-01-E12-1	Residual Heat Removal B Attachment IB	137
04-1-01-E12-1	Residual Heat Removal B Attachment IIIB	137
04-1-01-E12-1	Residual Heat Removal C Attachment IC	137
04-1-01-E12-1	Residual Heat Removal B Attachment VB	137
04-1-01-E12-1	Residual Heat Removal (Interface Valves) Attachment IIE	137
04-1-01-P41-1	Standby Service Water System Attachment IIB	133
04-1-01-P41-1	Standby Service Water System Attachment IIIB	113

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
11-4568	Scaffolding Evaluation Request	February 15, 2001

CALCULATION

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
9645	Diesel Generator Building Walls	August 2, 1976
C-C400	SSW CT and Basin (Pump-House) Tornado and No Earthquake	May 28, 1976
C-0-100	Diesel Generator Bldg. Walls Tornado Wind Load W'	August 2, 1976

WORK ORDER

WO 52256371 WO 00260559 WO 00259801

Section 1RO5: Fire Protection

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
Fire Pre-Plan DG-03	Division II Diesel Generator Room	3
9A-343 – 9A347	GG UFSAR	
Fire Pre-Plan A-02	RHR A Pump Room 1A103	1

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
Fire Pre-Plan A-03	RCIC Pump Room 1A104	1
Fire Pre-Plan A-04	RHR B Pump Room 1A105	1
9A.5.2.2	Safe Shutdown Equipment	
Appendix 9B	Fire Protection Program	

CONDITION REPORT

CR-GGN-2011-00862	CR-GGN-2011-01939	CR-GGN-2011-00851
CR-GGN-2011-00455		

Section 1RO6: Flood Protection Measures

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
9A-336 – 9A338	GG UFSAR	
9A.5.59	GG UFSAR FIRE AREA 59	
EN-OP-104	Operability Determination Process Immediate Determination For Degraded of Nonconforming Conditions	4

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Russell Daniel Oil Co. Inc. Delivery Date Schedule	February 10, 2011

CONDITION REPORT

CR-GGN-2011-00198	CR-GGN-2011-00562	CR-GGN-2011-00654
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WORK ORDER

WO 52281566	WO 52210679 03	WO 52210679 02
WO 52210679 01	WO 00041743	WO 52210679

ENGINEERING CHANGE

EC No. 24971

EC No. 24904

EC No. 24972

Section 1R07:

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
08-S-03-10	Chemistry Procedure-Closed Loops	48

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
CCE 2006-0002	Commitment Change Evaluation Form	
Letter	Response to Generic Letter 89-13; Service Water System Problems Affecting Safety-Related Equipment	January 29, 1990

WORK ORDER

WO 00178965 01

WO 00178965 02

WO 00178965 03

Section 1R11: Licensed Operator Requalification Program

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
GSMS-LOR-WEX03	LOR Training-Double Recirculation Pump Trip/ATWS	January 18, 2011 Rev 17
	Turnover and Simulator Differences 2011 Cycle 1 Simulator Training	1
	Per Control Room Walkdown, Modifications to TREX Load	January 7, 2011
Letter	Emergency Preparedness January 31, 2011 Simulator Drill Performance Indicators	February 1, 2011

Section 1R12: Maintenance Effectiveness

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
EN-FP-S-001-Multi	Engineering Standard-Appendix R Emergency Lighting Units	January 10, 2011
07-S-12-143	Big Beam Emergency Light Inspection, Battery Capacity Verification, and Functional Test	2
EN-DC-203	Maintenance Rule Program	1
EN-DC-206	Maintenance Rule (a)(1) Process	1
EN-DC-207	Maintenance Rule Periodic Assessment	1
NMM EN-LI-118	Root Cause Evaluation Report Attachment IV (54 of 54)	12
EN-DC-205	Maintenance Rule Monitoring	2
	GG UFSAR Table 7.5-1 Safety-Related Display Instrumentation	
	GG UFSAR Table 7.5-2 Post-Accident Monitoring Instrumentation	
	GG UFSAR 6.3 Emergency Core Cooling Systems	0
03-1-01-3	Integrated Operating Instructions Plant Shutdown	118

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	Emergency Lighting – GGNS Discussion of Recent Activities	
	Maintenance Rule Expert Panel June 22, 2010 Meeting Minutes	
	Maintenance Rule Expert Panel August 10, 2010 Meeting Minutes	
	Entergy Nuclear-GGNS Maintenance Rule Program Basis Document, Control Room and Emergency Lighting (Z92) System	0
Z92	Maintenance Rule Database Control Room and Emergency Lighting	
TM M348X.8001	Midtron 3200 Battery Conductance Tester	

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
VMA97/0181	Emergency Lights Maintenance Rule Database Information – Main Control Room Air Conditioning (Z51) System	March 21, 2009 to December 23, 2010
	Maintenance Rule Database Z51 Control Room HVAC System	
EC No.: 27856	Engineering Evaluation Maintenance Rule Program (a)(1) Evaluation and Action Plan Main Control Room Air Conditioning (Z51) System Agenda for Maintenance Rule Expert Panel Meeting	0 February 4, 2010
	RHR Heat Exchanger SSW Flow Indication (a)(1) Status Maintenance Rule Database E12 RHR System	
	Maintenance Rule Program (a)(1) Evaluation for the Residual Heat Removal (E12/RHR) System CR-GGN-2009-0754 CA No. 002	
	Maintenance Rule (a)(1) Evaluation Standby Service Water (P41) System (GR-GGN-2010-00305) Agenda Items from Maintenance Rule Expert Panel Meeting	June 24, 2010
	Agenda Items from Maintenance Rule Expert Panel Meeting	June 22, 2010

CONDITION REPORT

CR-GGN -2009-05330	CR-GGN -2010-00381	CR-GGN -2010-04575
CR-GGN -2010-04585	CR-GGN -2010-06346	CR-GGN -2011-00481
CR-GGN -2011-00521	CR-GGN -2011-01212	CR-GGN-2011-01650
CR-GGN-2010-01984	CR-GGN-2011-11505	CR-GGN-2011-01308
CR-GGN-2010-07315	CR-GGN-2009-00842	CR-GGN-2009-00754
GR-GGN-2009-01729	CR-GGN-2009-02477	CR-GGN-2009-03394
CR-GGN-2009-02947	CR-GGN-2009-02848	CR-GGN-2009-03292
CR-GGN-2009-03574	CR-GGN-2009-03592	CR-GGN-2009-04219

CR-GGN-2010-01031	CR-GGN-2009-04048	CR-GGN-2009-05930
CR-GGN-2009-05215	CR-GGN-2009-05932	CR-GGN-2009-05472
CR-GGN-2009-06066	CR-GGN-2009-04733	CR-GGN-2010-00036
CR-GGN-2010-01329	CR-GGN-2011-00789	CR-GGN-2010-07351
CR-GGN-2010-04009	CR-GGN-2010-05892	CR-GGN-2011-00791
CR-GGN-2011-00820	CR-GGN-2011-00985	CR-GGN-2009-01204
CR-GGN-2010-00684	CR-GGN-2010-05290	CR-GGN-2010-01585
CR-GGN-2010-00800	CR-GGN-2010-01474	CR-GGN-2010-01337
CR-GGN-2009-05508	CR-GGN-2010-01320	CR-GGN-2010-01345
CR-GGN-2009-05731	CR-GGN-2009-06174	CR-GGN-2010-02797
CR-GGN-2010-02200	CR-GGN-2010-03655	CR-GGN-2010-04629
CR-GGN-2010-02990	CR-GGN-2010-03241	CR-GGN-2009-00350
CR-GGN-2009-00426	CR-GGN-2009-00846	CR-GGN-2009-01518
CR-GGN-2010-02805	CR-GGN-2010-04015	CR-GGN-2010-03333
CR-GGN-2010-04625	CR-GGN-2010-04255	CR-GGN-2009-05527
CR-GGN-2010-02974	CR-GGN-2010-06137	CR-GGN-2010-05208
CR-GGN-2010-05330	CR-GGN-2010-04686	CR-GGN-2010-04963
CR-GGN-2010-05572	CR-GGN-2010-03650	CR-GGN-2010-06978
CR-GGN-2010-06148	CR-GGN-2010-06150	CR-GGN-2010-05328
CR-GGN-2010-06142	CR-GGN-2011-00403	CR-GGN-2011-00749
CR-GGN-2011-00819	CR-GGN-2011-00850	CR-GGN-2010-06895
CR-GGN-2010-06918	CR-GGN-2011-01212	CR-GGN-2010-05147

WORK ORDER

WO 52255810	WO 52223396	WO 52271013 01
WO 52196016	WO 52220690	

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	7
EN-WM-100	Work Request Generation, Screening and Classification	5
EN-WM-101	On-line Work Management Process	8
EN-WM-101	On Line Emergent Work Addition/Deletion Approval Form for the Week of March 7, 2011	7

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-WM-101	On Line Emergent Work Addition/Deletion Approval Form for the Week of February 28, 2011	7

WORK ORDER

WO250074	WO247598	WO52290243
WO52290462	WO52290463	WO52290464
WO70346	WO52291451	WO52291458
WO52291454	WO52291456	WO52291689
WO52291690	WO261213	WO52284287
WO52269835	WO52290236	WO52290463
WO52290464	WO52291844	WO52291454
WO52291456	WO261601	WO250966-02
WO237429	WO256910-01	WO52290639
WO52287735	WO52290638	WO52287736
WO52276935	WO260417	WO260212-02
WO260212-01	WO00219198	WO260529-07
WO52204865	WO260503	WO52243284
WO260529-07	WO52204865	WO52199495
WO255787-01,02,03,04	WO52249417	WO52271012
WO261175	WO259639	WO257881
WO200935-02	WO00257063	WO224859
WO261706	WO255360-08	WO263130
WO261181-01 and 02	WO262143	WO234988-04
WO234992-04	WO52250110-03	WO234985-04
WO259003-05	WO259005-05	WO259007-05
WO112951-08	WO52270042	WO52259286
WO52275616	WO52288663	WO52290468
WO52270252	WO52291424	WO52270250
WO52291423	WO235034	WO52288844
WO51563342	WO160041	WO52290473
WO52281103		

Section 1R15: Operability Evaluations

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-OP-104	Operability Determination Process	4
EN-DC-115	EC No. 20228	0

CALCULATION

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
PDS0170B	SSW Basin "A" Relief Valve	2

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
FSK-M-KC187-01C1-Y	Design Change Drawing SSW Basin "A" and "B"	8
	Design Change Drawing Reinforced Concrete Distribution Support System Tower Elevation 157'-8"	8

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
2007-029	LBD CR Initiation	
	Grand Gulf Nuclear Station, Unity 1 – Conforming License Amendment to Incorporate the Mitigation Strategies Required by Section B.5.b of the Commission Order EA – 02 - 026	July 18, 2007
GNRO-2007/00037	Supplementary Response Regarding Implementation Details for the Phase 2 and 3 Mitigation Strategies Grand Gulf Nuclear Station	June 7, 2007
NEI 06-12	B.5.b Phase 2 & 3 Submittal Guideline	Rev 2 December 2006
7-15	GG FSAR	Rev 59
9.5-3	GG UFSAR	
Attachment 9.2	Immediate Determination for Degraded of Nonconforming Conditions CR-GGN-2011-01512	

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
Attachment 9.5	Operability Evaluation CR-GGN-2011-00155 NUS Switch Status	

CONDITION REPORT

CR-GGN-2011-01173	CR-GGN-2011-00765	CR-GGN-2011-00155
CR-GGN-2011-00766	CR-GGN-2011-00799	CR-GGN-2011-01512
CR-GGN-2009-06838	CR-GGN-2011-01349	CR-GGN-2011-04701
CR-GGN-2011-00369	CR-GGN-2011-00643	CR-GGN-2011-00647
CR-GGN-2011-00665	CR-GGN-2011-00666	CR-GGN-2011-00667
CR-GGN-2011-00668	CR-GGN-2011-00669	CR-GGN-2011-00670
CR-GGN-2011-00671		

Section 1R18: Plant Modifications

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-DC-136	Temporary Modifications	5
EN-LI-102	Corrective Action Process	16

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
E-1187-007	E31 Leak Detection System RWCU Flow Circuit Computer Input	7
E1165014	Schematic Design Rod Control and Information System Rod Position Information and SCRAM Time Test	13
E1173028	Schematic Design Reactor Protection System Testability	6
M1051A	Main and Reheat System	33

OTHER

<u>NUMBER</u>	<u>TITLE</u>
	06-OP-1000-D-0001 Log Data

OTHER

<u>NUMBER</u>	<u>TITLE</u>
CR-GGN-2009-02198 CA 26	CR Periodic Review (initial at 6 months/follow by annual) and/or Long Tem CA Classification Form

CONDITION REPORT

CR-GGN-2009-02198	CR-GGN-2010-04451	CR-GGN-2011-01231
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WORK ORDER

WO00238932	WO00238928	WO00193921
WO00193920	WO002239736-01	WO002239736-02
WO002239736-03		

ENGINEERING CHANGE

EC22768	EC22625	EC22635
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Section 1R19: Postmaintenance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
06-OP-1E12-Q-0005	LPCI/RHR Subsystem A MOV Functional Test	112
06-OP-1E12-Q-0023	LPCI/RHR Subsystem A Quarterly Functional Test	121
06-OP-1E12-0006	LPCI/RHR System B MOV Functional Test	111
06-OP-1P41-Q-0004	Standby Service Water Loop A Valve AND Pump Operability Test	119
04-1-03-P75-1	Div 1 Diesel Generator Unexcited Run	7
06-OP-1P75-M-001	Data Sheet III Standby Diesel Generator 11 Functional Test	February 12, 2011
07-S-12-40	General Cleaning and Inspection of Rotating Electrical Equipment	2
07-S-12-146	General Maintenance Instruction Motor Off Line Diagnostic	1

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	Data Acquisition	
07-S-12-55	Insulation Resistance Testing	10
06-IC-1E22-Q-0004	HPCS System Flow Rate – Low (Bypass) Functional Test	104

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	RPS Motor GEN B – MCE Stator	February 2, 2011
	HPCS Min Flow Valve Position	March 18, 2011

DRAWING

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
BRKR No. 52-142229	IC71SOOIOB	
BRKR No. 52-142229	IC7IS003B (Local C71-S003B)	
BRKR No. 52-142229	IC7IS003D (Local C71-S003D)	
	Timeline for Events leading to NRC Notification Call on HPCS	March 18, 2011

CONDITION REPORT

CR-GGN-2011-00945

WORK ORDER

WO52311451	WO52311569	WO52285575
WO00251847	WO52224645	WO52223715
WO00262318	WO00259110-01	WO00259110-03
WO00237650-01	WO00237650-04	WO00237650-05
WO00237650-06	WO52304041	WO00270205-01

WO00270205-02

Section 1R22: Surveillance Testing

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-CH-1B21-O-0002	Reactor Coolant Routine Chemistry-Sample February 23, 2011	106
06-CH-1B21-O-0002	Reactor Coolant Routine Chemistry-Sample February 18, 2011	106
06-CH-1B21-O-0002	Plant Operations Manual-Reactor Coolant Routine Chemistry	106
06-CH-1B21-W-0008	Reactor Coolant Dose Equivalent Iodine	104
06-OP-1C61-R-0002	Functional Checks with E51 Valves	109
06-OP-1P75-M-0001	Standby Diesel Generator Functional Test	132
06-IC-1D17-R-0010	Fuel Handling Area Ventilation Exhaust High High Radiation Electronics Time Response Test	102
04-1-01-P81-1	High Pressure Core Spray Diesel Generator	67
06-OP-1P81-M-0002	HPCS Diesel Generator 13 Functional Test	123
EN-OP-109	Conduct of Operations	2

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Drywell Unidentified Leakage Rate vs. "A" Recirc Seal Delta T	June 2010- January 2011

CONDITION REPORT

CR-GGN-2011-01932 CR-GGN-2011-01868

WORK ORDER

WO52271012 WO52289870 WO52288401
WO52261837 WO52307262 WO00270146-01

Section 1EP6: Drill Evaluation

OTHER

NUMBER	TITLE	DATE
	Emergency Facility Log	March 3, 2011
	Repair and Corrective Action Table	March 3, 2011
	Emergency Notification Form 1-7 for EP Drill	March 3, 2011
	GGNS 2011 1 st Quarter ERO Training Drill	

CONDITION REPORT

CR-GGN-2011-01481	CR-GGN-2011-01486	CR-GGN-2011-01495
CR-GGN-2011-01499	CR-GGN-2011-01510	CR-GGN-2011-01519
CR-GGN-2011-01520	CR-GGN-2011-01522	

Section 2RS01: Radiological Hazard Assessment and Exposure Controls

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-100	Radiation Worker Expectations	6
EN-RP-101	Access Control for Radiologically Controlled Areas	5
EN-RP-102	Radiological Control	2
EN-RP-106	Radiological Survey Documentation	2
01-S-08-1	Administration of the GGNS Radiation Protection Program	105
01-S-08-6	Radioactive Source Control	113
08-S-02-50	Radiological Surveys and Surveillances	116

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
LO-GLO-2010-93	Pre-NRC Rad Hazard Assessment and Exposure Controls Assessment	December 16, 2010

CONDITION REPORTS

CR-GGN-2011-00183	CR-GGN-2011-00551	CR-GGN-2011-00655	CR-GGN-2011-00926
CR-GGN-2011-00740			

RADIOLOGICAL SURVEY

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
GG-1102-0146	Routine Daily Surveys	February 15, 2011
GG-1012-0083	208 CTMT Entire Elevation	December 7, 2010
GG-1102-0152	208 CTMT Entire Elevation	February 15, 2011
GG-1012-0118	119 AB RHR A Room	December 9, 2010
GG-1012-0086	119 AB RHR A Room	February 7, 2011
GG-1011-0254	119 AB RHR B Room	November 30, 2010
GG-1101-0156	119 AB RHR B Room	January 16, 2011
GG-1011-0064	93 Aux RHR C & ADHR Hx Rooms	November 6, 2010
GG-1102-0044	93 Aux RHR C & ADHR Hx Rooms	February 3, 2011
GG-1011-0018	119 Aux Piping Penetration & Valve Room	November 2, 2010
GG-1102-0041	119 Aux Piping Penetration & Valve Room	February 3, 2011
GG-1011-0063	93 Aux HPCS Pump Room	November 6, 2010
GG-1102-0042	93 Aux HPCS Pump Room	February 3, 2011

RADIATION WORK PERMITS

<u>NUMBER</u>	<u>TITLE</u>
20101005	Tours and Inspections into all areas
20111054	Locked High Radiation Area Entries for Plant/System Investigations, Valve Manipulations, Tagouts, and Misc. Activities
20111058	Maintenance in HRA /HCA & Above

Section 2RS02: Occupational ALARA Planning and Controls

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-105	Radiological Work Permits	9
EN-RP-110	ALARA Program	7

AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
LO # LO-GLO-2010-00094	Pre-NRC Inspection for ALARA Planning and Controls-Assessment	November 9, 2010

CONDITION REPORTS

RADIATION WORK PERMIT PACKAGES

<u>NUMBER</u>	<u>TITLE</u>
2010-1402	Refuel Floor High Water Activities
2010-1403	Reactor Disassemble/Reassemble
2010-1508	Under Vessel Activities
2010-1530	B Recirc Pump Replacement
2010-1534	B21F011B Stem Replacement

Section 40A1: Performance Indicator Verification

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-LI-114	1 st Quarter 2010 Unplanned Scrams per 7,000 Critical Hours	4
EN-LI-114	2 nd Quarter 2010 Unplanned Scrams per 7,000 Critical Hours	4
EN-LI-114	3 rd Quarter 2010 Unplanned Scrams per 7,000 Critical Hours	4
EN-LI-114	4 th Quarter 2010 Unplanned Scrams per 7,000 Critical Hours	4
EN-LI-114	1 st Quarter 2010 Unplanned Scrams with Complications	4
EN-LI-114	2 nd Quarter 2010 Unplanned Scrams with Complications	4
EN-LI-114	3 rd Quarter 2010 Unplanned Scrams with Complications	4
EN-LI-114	4 th Quarter 2010 Unplanned Scrams with Complications	4
EN-LI-114	1 st Quarter 2010 Unplanned Power Changes per 7,000 Critical Hours	4
EN-LI-114	2 nd Quarter 2010 Unplanned Power Changes per 7,000 Critical Hours	4
EN-LI-114	3 rd Quarter 2010 Unplanned Power Changes per 7,000 Critical Hours	4
EN-LI-114	4 th Quarter 2010 Unplanned Power Changes per 7,000 Critical Hours	4

OTHER

NUMBER

TITLE

January 2010 Core Thermal Power
February 2010 Core Thermal Power
March 2010 Core Thermal Power
April 2010 Core Thermal Power
May 2010 Core Thermal Power
June 2010 Core Thermal Power
July 2010 Core Thermal Power
August 2010 Core Thermal Power
September 2010 Core Thermal Power
October 2010 Core Thermal Power
November 2010 Core Thermal Power
December 2010 Core Thermal Power

Section 40A2: Identification and Resolution of Problems

OTHER

NUMBER

TITLE

DATE

GGNS Position on Riley Temperature Switch Replacement
Maintenance Rule Program Functional Failures-Riley
Temperature Switches
NUS Switch Status February 2,
2011
Riley History Discussion by Lee Eaton
Riley History Presentation to 2009 PInR

CONDITION REPORT

CR-GGN-2009-05879

Section 4OA3: Event Follow-Up

PROCEDURE

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-DC-167	Classification of Structures, Systems, and Components	3
EN-HU-103	Human Performance Error Reviews for CR-GGN-2010-7877	4
EN-DC-115	Engineering Change Process	11

DRAWINGS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
M-1127A	Piping and Instrumentation Diagram Noblechem Monitoring System	0
M-1081B	Control Rod Drive Hydraulic System	28
M-1078A	Reactor Recirculation System Unit 1	33
M-1079	Reactor Water Clean-up System Unit 1	46
M-1069A	Process Sampling System Unit 1	24

OTHER

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Root Cause Evaluation Report-Control Room Air Conditioner B Trip (Event Date 10-14-2010)	October 16, 2010
GNRO-2010/00077	LER 2010-002-00Control Room Air Conditioning	December 13, 2010
	Root Cause Evaluation Report Mitigation Monitor Durability Monitor Pump Failure	November 8, 2010
	MMS Skid Piping/Component Design Basis	
	Compliance with NRC Regulatory Guide 1.26	

CONDITION REPORT

CR-GGN-2010-07315 CR-GGN-2010-08580 CR-GGN-2010-07852

ENGINEERING CHANGE

EC13135

EC13132

EC13138

Section 40A5 Temporary Instruction 2515/179

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-143	Source Control	7

MISCELLANEOUS DOCUMENTS

<u>TITLE</u>	<u>DATE</u>
National Source Tracking System Annual Inventory Reconciliation Report	2010
National Source Tracking System Annual Inventory Reconciliation Report	2011

Section 40A7: Licensee-Identified Violations

CONDITION REPORT

CR-GGN-2011-00851