



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

February 6, 2013

Carolina Power and Light Company
ATTN: Mr. William R. Gideon
Vice President - Robinson Plant
H.B. Robinson Steam Electric Plant
Unit 2
3581 West Entrance Road
Hartsville, South Carolina 29550

**SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION
REPORT 05000261/2012005**

Dear Mr. Gideon,

On December 31, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your H.B. Robinson Steam Electric Plant, Unit 2. The enclosed inspection report documents the inspection results which were discussed on January 28, 2013, with you and other members of your staff.

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

One NRC identified finding of very low safety significance (Green) was identified during this inspection. The finding was determined to not involve a violation of NRC requirements.

If you contest the finding, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II, the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at H.B. Robinson Steam Electric Plant, Unit 2.

In addition, if you disagree with the cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at H.B. Robinson.

W. Gideon

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agency wide Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Randall A. Musser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No.: 50-261
License No.: DPR-23

Enclosure: Inspection Report 05000261/2012005
w/Attachment: Supplemental Information

cc w/encls: (See page 3)

W. Gideon

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W. Gideon

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Letter to William R. Gideon from Randall A. Musser dated February 6, 2013

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED
INSPECTION REPORT 05000261/2012005

Distribution w/encl:

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No: 50-261

License No: DPR-23

Report No: 005000261/2012005

Facility: H.B. Robinson Steam Electric Plant, Unit 2

Location: 3581 West Entrance Road
Hartsville, SC 29550

Dates: October 1, 2012 – December 31, 2012

Inspectors: J. Hickey, Senior Resident Inspector
C. Scott, Resident Inspector
M. Bates, Senior Operations Engineer (Section 1R11)
M. Meeks, Senior Operations Engineer (Section 1R11)
D. Lanyi, Operations Examiner (Section 1R11)
J. Eargle, Senior Reactor Inspector (Section 4OA5)
S. Walker, Senior Reactor Inspector (Section 4OA5)
A. Alen, Reactor Inspector (Section 4OA5)
J. Laughlin, Emergency Preparedness Inspector (Section 1EP4)

Approved by: R. Musser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000261/2012005, Carolina Power and Light Company; on 10/01/2012-12/31/2012; H.B. Robinson Steam Electric Plant, Unit 2; Other Activities.

The report covered a three month period of inspection by resident inspectors and an announced inspection by reactor inspectors. One finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross-Cutting Areas". Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a Finding for the licensee's failure to perform the 18-month pre-refueling outage (RO) ultrasonic testing (UT) examinations on 47 potential gas accumulation locations required by plant operating manual PLP-085, "Emergency Core Cooling Systems Gas Management Program (GL 2008-01)." Compliance with PLP-085 ensures the capability of the safety injection (SI), residual heat removal (RHR), and containment spray (CS) systems to perform their safety-related functions, and effectively implements the licensee's gas management program as committed to the NRC in response to Generic Letter 2008-01. The licensee entered the issue into the corrective action program (CAP) as nuclear condition report (NCR) 575063, and is evaluating corrective actions.

The failure to perform pre-RO UT examinations on 47 potential gas accumulation locations, as required by PLP-085 was a performance deficiency. The performance deficiency was more than minor because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, if the licensee continued to miss pre-RO UT examinations, conditions that result in the formation of voids in the SI, RHR, and CS systems could go undetected with the potential to adversely affect the systems' capability to perform their functions. The inspectors assessed the finding using IMC 0609 Attachment 4, "Initial Characterization of Findings;" and IMC 0609 Appendix A, "The Significance Determination Process for Findings At-Power," and determined the finding was of very low safety significance (Green) because it was not a design deficiency, it did not represent the loss of a system safety function, did not result in exceeding a Technical Specification allowed outage time, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. The inspectors identified a cross-cutting aspect in the work practices component of the human performance area, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel following procedures. Specifically, on two occasions, the licensee did not perform pre-RO UTs in accordance with their gas management program, as described in PLP-085. [H.4(b)] (Section 4OA5.5)

B. Licensee-Identified Violations

None.

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REPORT DETAILS

Summary of Plant Status: The unit began the inspection period at rated thermal power, and operated at or near full power for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

.1 Impending Adverse Weather

a. Inspection Scope

When freezing conditions were experienced for the site on December 22, 2012 the inspectors reviewed actions taken by the licensee in accordance with Procedure OP-925, Cold Weather Operation, Rev. 51.

b. Findings

No findings were identified.

.2 Winter Seasonal Readiness Preparations

a. Inspection Scope

The inspectors conducted a review of the licensee's preparations for winter conditions to verify that the plant's design features and implementation of procedures were sufficient to protect plant systems from the effects of adverse weather. Documentation for selected risk-significant systems was reviewed to ensure that these systems would remain functional when challenged by inclement weather. During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Cold weather protection systems, such as temporary enclosures and area heaters, were reviewed to verify they were in operation where applicable. The inspectors also reviewed CAP items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures. Specific documents reviewed during this inspection are listed in the Attachment.

The inspectors' reviews focused specifically on the following plant systems due to their risk significance or susceptibility to cold weather issues:

- Fire Water System
- Auxiliary Feedwater System

Documents reviewed are listed in the Attachment.

Enclosure

b. Findings

No findings were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns:

The inspectors performed the following three partial system walkdowns, while the indicated SSCs were out-of-service for maintenance and testing:

- Charging Pump “B” while Charging Pump “A” was out of service for scoop tube adjustment
- Motor Driven Auxiliary Feedwater (MDAFW) Pump “A” while MDAFW Pump “B” was out of service for surveillance testing
- Component Cooling Water (CCW) pump “A” while CCW pump “C” was out of service for maintenance

To evaluate the operability of the selected trains or systems under these conditions, the inspectors compared observed positions of valves, switches, and electrical power breakers to the procedures and drawings listed in the Attachment.

Complete System Walkdown:

The inspectors conducted a detailed review of the alignment and condition of the Chemical Volume and Control system to verify that the existing alignment of the system was consistent with the correct alignment. To determine the correct system alignment, the inspectors reviewed the procedures, drawings, and the Updated Final Safety Analysis Report (UFSAR) section listed in the Attachment. The inspectors also walked down the system. During the walkdown, the inspectors reviewed the following:

- Valves were correctly positioned and did not exhibit leakage that would impact the functions of any given valve.
- Electrical power was available as required.
- Major system components were correctly labeled, lubricated, cooled, ventilated, etc.
- Hangers and supports were correctly installed and functional.
- Essential support systems were operational.
- Ancillary equipment or debris did not interfere with system performance.
- Tagging clearances were appropriate.
- Valves were locked as required by the locked valve program.

The inspectors reviewed the documents listed in the Attachment to verify that the ability of the system to perform its functions could not be affected by outstanding design issues, temporary modifications, operator workarounds, adverse conditions, and other system-related issues tracked by the engineering department.

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The inspectors reviewed the following action requests (ARs) associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 560941, Breaker found in the off position on Containment Radiation Monitor R-11/12
- 539402, Instrument Air valve position in error on drawing

b. Findings

No findings were identified.

1R05 Fire Protection

a. Inspection Scope

For the five areas identified below, the inspectors reviewed the control of transient combustible material and ignition sources, fire detection and suppression capabilities, fire barriers, and any related compensatory measures to verify that those items were consistent with UFSAR Section 9.5.1, Fire Protection System, and UFSAR Appendix 9.5.A, Fire Hazards Analysis. The inspectors walked down accessible portions of each area and reviewed results from related surveillance tests to verify that conditions in these areas were consistent with descriptions of the areas in the UFSAR. Documents reviewed are listed in the Attachment.

The following areas were inspected:

- Transformer Yard (fire zone 26)
- Diesel Fuel Oil Storage Tank (fire zone 30)
- Residual Heat Removal (RHR) Heat Exchangers and Waste Holdup Tank Area (fire zone 12)
- Cable Spreading Room (fire zone 19)
- Hagan Room and Component Cooling Water Surge Tank Room (fire zone 23 and 26)

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 535008, Cable disconnected for the engine driven fire pump tachometer and hour meter
- 541388, Fire Door 7 binding when opening

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification

.1 Quarterly Review

a. Inspection Scope

The inspectors observed licensed-operator performance during requalification simulator training for the following three samples to verify that operator performance was consistent with expected operator performance, as described in OPS-NGGC-1000, Fleet Conduct of Operations, Rev. 10.

The first sample was performed by two regional Operations Examiners. The evaluated scenario consisted of the failure of a steam line instrument, leakage of a pressurizer Pressure Operated Relief Valve (PORV), and eventually a Loss of Coolant Accident (LOCA) that required a reactor trip and safety injection. The inspectors ensured that the facility's operations training staff correctly evaluated (among other competencies) the operators' ability to operate components from the control room, direct auxiliary operator actions, and determine the appropriate emergency action level classifications. The inspectors observed crew performance to determine if they were operating the simulator in accordance with all appropriate procedures. Also, the inspectors verified that any minor inconsistencies in the area of operations fundamentals/conduct of operations (communications, procedural place-keeping, etc.) were either noted and corrected by the Shift Manager during the scenario, or discussed by the crew at the post scenario debrief. The inspectors also observed to determine whether the scenario grading was completed per the facility's procedural requirements. The inspectors reviewed the post-exercise critique to verify that the licensee identified deficiencies and discrepancies that occurred during the simulator training.

The second sample performed by two regional Operations Examiners involved training scenarios that were designed to be more challenging to the crews and to get them to more fully grasp the concepts that were being taught in the classroom that week. The scenarios included a higher number of tasks than normal in order to meet training goals. The inspectors observed these scenarios to determine whether the crews adhered to approved procedures and performance standards. In particular, the inspectors observed to determine whether the licensee appropriately identified and corrected performance issues related to directing shift operations and crew coordination during complicated events, close monitoring of parameters, and meeting station expectations for verbal communications such as briefs and updates

The third sample was performed by the resident inspectors and also involved multiple scenarios. This training tested the operators' ability to take immediate actions from memory to operate components from the control room and direct auxiliary operator actions, while responding to various equipment failures such as unexpected rod motion, failure of one pressurizer PORV, an instrument bus 6 failure, "B" steam generator (SG) level deviation and an Anticipated Transient Without Scram (ATWS). The inspectors focused on clarity and formality of communication, the use of procedures, alarm response, control board manipulations, group dynamics, and supervisory oversight.

The inspectors observed the simulator exercise freeze critiques to verify that the licensee identified deficiencies and discrepancies that occurred during the simulator training.

Documents reviewed are listed in the Attachment.

Licensed Operator Performance in the Actual Plant/Main Control Room

The resident inspectors were in the control room to observe and assess licensee operator performance when TCV-1668, Hydrogen Seal Oil Temperature Control Valve was placed in automatic. During this period of heightened risk the inspectors verified that the licensed operator's actions and communication were in accordance with OMM-001, Conduct of Operations, Rev. 38.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 568221, Restoration of seal injection during training was not performed promptly
- 526063, Secondary pump start strategy during startup and simulator modeling

b. Findings

No findings were identified.

.2 Annual Review of Licensee Requalification Examination Results

a. Inspection Scope

On August 9, 2012, the licensee completed the annual requalification operating tests required to be administered to all licensed operators in accordance with 10 CFR 55.59(a)(2). The inspectors performed an in-office review of the overall pass/fail results of the individual operating tests and the crew simulator operating tests. These results were compared to the thresholds established in Manual Chapter 609 Appendix I, Operator Requalification Human Performance Significance Determination Process.

b. Findings

No findings were identified

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the one degraded SSC/function performance problem listed below to verify the appropriate handling of these performance problems or conditions in accordance with 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, and 10 CFR 50.65, Maintenance Rule. Documents reviewed are listed in the Attachment.

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564838, Dedicated Shutdown Diesel Generator (DSDG) Trip on High Coolant Temperature

During the reviews, the inspectors focused on the following:

- Appropriate work practices,
- Identifying and addressing common cause failures,
- Scoping in accordance with 10 CFR 50.65(b),
- Characterizing reliability issues (performance),
- Charging unavailability (performance),
- Trending key parameters (condition monitoring),
- 10 CFR 50.65(a)(1) or (a)(2) classification and reclassification, and
- Appropriateness of performance criteria for SSCs/functions classified (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions classified (a)(1).

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 559796, Oil leakage from the neutral grounding transformer in the switchyard
- 558953, No spare reactor trip breaker to support maintenance

b. Findings

(Opened) Unresolved item (URI): Adequacy of Preventative Maintenance on the Dedicated Shutdown Diesel Generator Cooling System

Introduction: An Unresolved Item was identified regarding the trip of the DSDG, on October 2, 2012, during monthly surveillance testing. The URI is being opened to provide for additional inspection of the preventative maintenance performed prior to the failure and to review the licensee's root cause report.

Description: On October 2, 2012, during monthly testing of the DSDG in accordance with OST-910, Dedicated Shutdown Diesel Generator Monthly, the control room received a "DSDG Trouble" alarm. Shortly after the alarm was received, the DSDG tripped. The licensee determined that the DSDG automatically tripped due to an engine jacket water over temperature condition. After the trip, licensee personnel inspected the engine and discovered that the drive belts for the belt driven radiator fan had come off the pulleys which prevented proper heat removal from the engine cooling system. All three drive belts were found to have varying degrees of wear and degradation. The last visual inspection of the fan belts was performed on September 12, 2011 and the last satisfactory surveillance run was performed on August 28, 2012. The DSDG is required to supply back-up power during a 10 CFR 50.65 "Station Blackout" condition and Appendix R conditions. Following the discovery of the thrown belts, the licensee replaced all three belts and performed a root cause evaluation. The root cause team determined that the cause of the failure was the lack of a time based replacement of the fan belts. The belts were last replaced in 2003. The inspectors reviewed the licensee's

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root cause and asked additional questions regarding the expected service life of the fan belts. Additional inspection is required to review the licensee's response to the inspector's questions and determine if a performance deficiency exists. This issue will be identified as URI 05000261/2012005-01, Adequacy of Preventative Maintenance on the Dedicated Shutdown Diesel Generator Cooling System.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

For the four samples listed below, the inspectors reviewed risk assessments and related activities to verify that the licensee performed adequate risk assessments and implemented appropriate risk-management actions when required by 10 CFR 50.65(a)(4). For emergent work, the inspectors also verified that any increase in risk was promptly assessed, and that appropriate risk-management actions were promptly implemented. Documents reviewed are listed in the Attachment. Those periods included the following:

- October 20 through October 21, "A" Service Water Booster Pump out of service for oil flush and "D" Deepwell Service Water Pump maintenance.
- November 2, 2012, Yellow Risk Condition due to the Motor Driven Fire Pump being out of service for maintenance.
- November 19 through November 25, "B" Instrument Air Compressor inspection, "B" Boric Acid Transfer Pump torque check, MST-022, Safeguard Relay Rack "A" surveillance
- December 26, emergent risk assessment when a tornado watch was issued during "B" Emergency Diesel surveillance testing.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 558627, Emergency Diesel Generator surveillance schedule duration not revised
- 532834, Integrated Risk Screening missing supervisor signatures

b. Findings

No findings were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the four operability determinations associated with the ARs listed below. The inspectors assessed the accuracy of the evaluations, the use and control of any necessary compensatory measures, and compliance with the Technical Specification (TS). The inspectors verified that the operability determinations were made as specified by Procedure OPS-NGGC-1305, Operability Determinations, Rev. 7.

The inspectors utilized the guidance contained in Operating Experience Smart Sample 2012/02, Technical Specification Interpretation and Operability Determination to assist in the performance of this inspection. The inspectors compared the justifications provided in the determinations to the requirements from the TS, the UFSAR, associated design-basis documents, to verify that operability was properly justified and the subject components or systems remained available, such that no unrecognized increase in risk occurred:

- 568231, The Oiler for the Service Water Booster Pump (SWBP) "A" is dark and cloudy with visible sediment
- 566645, Non-Safety Related Electrical Splices found on Containment Spray Pump "A" Discharge Motor Operated Valve, SI 880A
- 566094, Failure of Undervoltage Relay for SI-880C "B" Containment Spray Pump Discharge Valve
- 579076, Emergency Diesel Generator fuel oil sampling without tank recirculation

Documents reviewed are listed in the Attachment.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 513386, Low oil level in the "B" Spent Fuel Cooling Pump
- 521462, Gray sediment visible in the "A" Station Battery

b. Findings

No findings were identified.

1R18 Plant Modifications

.1 Temporary Modification

a. Inspection Scope

The inspectors reviewed the temporary modification described in Engineering Change (EC) 88056, Installation of a temporary flow instrument for FIC-658, CCW to Safety Injection Pump Seal Indication, to verify that the modification did not affect the safety functions of important safety systems, and to verify that the modification satisfied the requirements of Procedure EGR-NGGC-005, Engineering Change, and 10 CFR 50, Appendix B, Criterion III, Design Control.

Documents reviewed are listed in the Attachment.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 445718, Replacement emergency diesel generator coolant recirculation pump mounting holes do not align with the existing mount
- 496770, "B" Emergency Diesel Generator Room Supply Fan engineering change not turned over in a timely manner

b. Findings

No findings were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the six post-maintenance tests listed below, the inspectors witnessed the test and/or reviewed the test data to verify that test results adequately demonstrated restoration of the affected safety functions described in the UFSAR and TS. Documents reviewed are listed in the Attachment.

The following tests were witnessed/reviewed:

- WO 1969020, Replace Charging Pump "A" Speed Control Actuator, Post Maintenance Test (PMT) in accordance with (IAW) OST-101-1, Chemical Volume and Control Component Test Charging Pump "A"
- WO 2149330-01, Replace Non- Safety Related Wire Connections on SI-844A-MO, Containment Spray Pump "A" Suction, PMT IAW OST-35-2-3, Comprehensive Flow Test for Containment Spray Pump "A".
- WO 2151837-01, Replacement of PC-476, signal comparator for SG "A" Steam Pressure, PMT IAW MST-014, Steam Generator Pressure Protection Channel Testing, Rev. 37
- EC 82844, Replace "B" Emergency Diesel Generator (EDG) Recirculation Damper, PMT IAW WO 1999508 Exercise HVS-5 Recirculation Damper to Demonstrate Opening and Closing
- WO 1876073, Replace Breaker 52/33B (Service Water Pump "D" Alternative Power), PMT IAW OP-602, Service Water System, Rev.66
- WO 1169457, Replace Solenoid Valve for TCV-1903B, MDAFW Pump "B" Temperature Control Valve, PMT IAW OST-201-2, MDAFW System Component Test- Train B, Rev. 30

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 519633, Incorrect equalize charge time for the "A" Station Battery
- 458338, "C" Component Cooling Water Pump high axial vibrations

b. Findings

No findings were identified.

1R22 Surveillance Testinga. Inspection Scope

For the two surveillance tests listed below, the inspectors witnessed testing and/or reviewed the test data to verify that the SSCs involved in these tests satisfied the requirements described in the TS, the UFSAR, and applicable licensee procedures, and that the tests demonstrated that the SSCs were capable of performing their intended safety functions. Documents reviewed are listed in the Attachment.

Routine Surveillance

- MST-021, Reactor Protection Logic Train "B" at Power, Rev. 33

In-service Testing Surveillance

- OST-303-4, Comprehensive Flow Test For Service Water Booster Pump B, Rev. 17

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 566689, Error in scheduled overdue date for service water pump comprehensive flow test
- 536088, Lake temperature monitoring instruments are unreliable

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changesa. Inspection Scope

The Office of Nuclear Security and Incident Response (NSIR) headquarters staff performed an in-office review of the latest revisions of various Emergency Plan Implementing Procedures (EPIPs) and the Emergency Plan located under ADAMS accession numbers ML12180A514 and ML12194A240, as listed in the Attachment.

The licensee determined that in accordance with 10 CFR 50.54(q), the changes made in the revisions resulted in no reduction in the effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to

10 CFR Part 50. The NRC review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, these revisions are subject to future inspection. The specific documents reviewed during this inspection are listed in the Attachment. This inspection activity satisfied one inspection sample for the emergency action level and emergency plan changes on an annual basis.

b. Findings

No findings were identified.

1EP6 Drill Evaluation

a. Inspection Scope

On November 14, the inspectors observed an emergency preparedness drill to verify licensee self-assessment of classification, notification, and protective action recommendation development in accordance with 10 CFR 50, Appendix E. The inspectors also attended the post-drill critique to verify that the licensee properly identified failures in classification, notification and protective action recommendation development activities. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors verified the accuracy of the PI for the indicator listed below. The inspectors compared the actual data inputs for the indicator to the inputs provided to the NRC, as described below. The inspectors also compared the licensee's basis in reporting each data element to the PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline". In addition, the inspectors interviewed licensee personnel associated with collecting, evaluating, and distributing these data.

Mitigating Systems Cornerstone

- Mitigating Systems, High Pressure Safety Injection

For the period from the fourth quarter of 2011 through the third quarter of 2012, the inspectors reviewed Licensee Event Reports (LERs), records of inoperable equipment, and Maintenance Rule records to verify that the licensee had accurately accounted for unavailability hours that the subject systems had experienced during the subject period. The inspectors also reviewed the number of hours those systems were required to be available and the licensee's basis for identifying unavailability hours.

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The inspectors reviewed the following AR associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- 559326, Noted adverse trend in emergency response drill/exercise performance indicator

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems

.1 Routine Review of ARs

To aid in the identification of repetitive equipment failures or specific human performance issues for followup, the inspectors performed frequent screenings of items entered into the CAP. The review was accomplished by reviewing daily AR reports.

.2 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspector's review focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in Section 4OA2.1, licensee trending efforts, and licensee human performance results. The inspector's review nominally considered the six month period of July, 2012, through December, 2012, although some examples may expand beyond those dates when the scope of the trend warranted. The reviews included issues documented outside the normal CAP in major equipment problem lists, repetitive and rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self assessment reports, and Maintenance Rule assessments. The inspectors compared and contrasted their results with the results contained in the latest monthly and quarterly trend reports. Corrective actions associated with a sample of the issues identified in the trend reports were reviewed for adequacy. The specific documents reviewed are listed in the Attachment.

The inspectors also evaluated the trend reports against the requirements of the CAP as specified in 10 CFR 50, Appendix B, Criterion XVI, and in Procedures CAP-NGGC-0200, Corrective Action Program, and CAP-NGGC-0206, Corrective Action Program Trending and Analysis.

b. Assessment and Observations

No findings were identified. The inspectors evaluated trending methodology and observed that the licensee had performed a detailed review. The licensee routinely reviewed cause codes, involved organizations, key words, and system links to identify potential trends in their CAP data. The inspectors compared the licensee process results with the results of the inspectors' daily screening, and did not identify any discrepancies or potential trends in the CAP data that the licensee had failed to identify.

4OA3 Event Follow-up

.1 (Closed) LER 2012-001-01, "Technical Specification Required Plant Shutdown Due To Missed Surveillance and Operation Prohibited by Technical Specifications"

On January 17, 2011, the licensee determined that the surveillance test for the Station "B" Battery had become overdue. Improved Technical Specification (ITS) Surveillance Requirement (SR) 3.8.4.6 requires that the operability of Station Batteries be verified every 60 months by conducting a performance capacity test. The last performance of SR 3.8.4.6 was on October 12, 2005 and should have been conducted no later than January 12, 2012 with 25 percent grace period. As a result of the missed surveillance, on January 18th, the plant completed a TS required shutdown for the failure to meet limiting condition of operation (LCO) 3.8.4.6. Following the shutdown the licensee successfully completed the required surveillance testing. The cause of the event was due to Robinson not having an accurate means of monitoring ITS SR due dates and over due dates to support scheduling and completion of SRs required to ensure ITS compliance. The licensee entered this issue into their CAP as NCR 511315 and established interim measures to track the performance or required surveillances. Revision 1 was issued to clarify the timeline of events. The enforcement aspects of this LER were document in IR 05000261/2012003, Section 4OA3.1, Follow-up of Events. Revision 1 of the LER was reviewed and no additional findings were identified and no additional violation of NRC requirements occurred. This LER is closed.

.2 (Closed) LER 2012-003-01, "Plant Modification Interfered with the Operation of Containment Wide Range Level Indicator"

On January 19, 2012 with the unit in Mode 5, the inspectors identified a chain used to secure a high radiation boundary gate interfered with and prevented the "B" train of the post accident containment vessel sump level transmitter from moving through its complete range of motion. The licensee determined the level transmitter was inoperable because the chain would interfere with sump level readings above 375 inches. The condition had existed since October of 2005 when the chain was installed. The licensee corrected the condition by moving the chain on March 7, 2012 prior to entering a mode where the sump level indication was required to be operable. Revision 1 was issued to provide an update to the cause for the condition described in LER 2012-003-00. The enforcement aspects of this LER were document in IR 05000261/2012003, Section 4OA3.3, Follow-up of Events. Revision 1 of the LER was reviewed and no additional findings were identified and no additional violation of NRC requirements occurred. This LER is closed.

Enclosure

.3 (Closed) LER 2012-002-01, "Unplanned Limiting Condition of Operation (LCO) 3.5.4 Entry Due to Refueling Water Storage Tank (RWST) Alignment to Purification"

On March 16, 2012, the licensee discovered that the refueling water purification pump was placed into operation to support make up of level to the RWST. The plant was in Mode 4 and alignment of the RWST to the refueling water purification pump rendered the RWST inoperable due to the purification piping being non-seismically qualified. Once this condition was discovered, the licensee immediately removed the RWST from purification. This condition existed for approximately 2 hours and 22 minutes. The cause of this event was determined to be a result of ineffective implementation of previous corrective actions from an event reported in LER 05000261/2011-001-00. Revision 1 was submitted to include the loss of safety function of the RWST as a result of being cross connected with the non-seismically qualified purification loop. The enforcement aspects of this LER were documented in IR 05000261/2012003, Section 4OA1.1, Performance Indicator (PI) Verification, as a Green FIN 05000261/2012003-03. Revision 1 of the LER was reviewed and no additional findings were identified and no additional violation of NRC requirements occurred. This LER is closed.

.4 (Closed) LER 2011-001-01, "Condition Prohibited by Technical Specifications When Non-Seismic System was Aligned to Refueling Water Storage Tank due to Regulatory Requirements not Adequately Incorporated in Plant Documentation"

On May 4, 2011, the licensee determined that over the last 40 years, the plant periodically performed cleanup of the Refueling Water Storage Tank (RWST) by aligning the non-seismically qualified refueling water purification system to the safety-related and seismically qualified RWST without recognizing that the action rendered the RWST inoperable. As a result, on multiple occasions the RWST was inoperable for a period longer than allowed by Technical Specifications. The cause of this event was that regulatory requirements for the separation of seismically qualified and non-seismically qualified SSCs were not adequately incorporated into the Design Basis Document and the UFSAR. The inspectors reviewed the corrective actions and determined that they were adequate. Revision 1 was submitted to include the loss of safety function of the RWST as a result of being cross connected with the non-seismically qualified purification loop. The system alignment enforcement aspects of this LER were documented in IR 05000261/2011003, Section 1R15.2 Operability Evaluations, as a Green NCV 05000261/2011003-03. The performance indicator enforcement aspects of this LER were documented in IR 05000261/2012003, Section 4OA1.1, Performance Indicator (PI) Verification, as a Green FIN 05000261/2012003-03. Revision 1 of the LER was reviewed and no additional findings were identified and no additional violation of NRC requirements occurred. This LER is closed.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors observed Security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings were identified.

.2 Operation of an Independent Spent Fuel Storage Installation (ISFSI) (IP 60855.1)

a. Inspection Scope

The inspectors performed a walkdown and external inspection of the two ISFSIs on site (reference docket 72-3 and 72-60). The inspectors observed the general condition of the structures and passive cooling passages.

b. Findings

No findings were identified.

.3 (Closed) NRC Temporary Instruction (TI) 2515/188, Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns

a. Inspection Scope

The inspectors accompanied the licensee on their seismic walkdowns of the following components:

- "C" CCW Pump on July 16 in the Auxiliary Building
- FT-613, CCW Supply Flow Transmitter on July 16 in the Auxiliary Building
- LT-948, RWST Level Transmitter on July 16 near the RWST
- "A" Spent Fuel Cooling Pump on July 17 in the Spent Fuel Cooling Pump Area

The inspectors verified that the licensee confirmed that the following seismic features associated with the component listed above were free of potential adverse seismic conditions.

- Anchorage was free of bent, broken, missing or loose hardware
- Anchorage was free of corrosion that is more than mild surface oxidation
- Anchorage was free of visible cracks in the concrete near the anchors
- Anchorage configuration was consistent with plant documentation.
- SSCs will not be damaged from impact by nearby equipment or structures.
- Overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls are secure and not likely to collapse onto the equipment.
- Attached lines have adequate flexibility to avoid damage.
- The area appears to be free of potentially adverse seismic interactions that could cause flooding or spray in the area.
- The area appears to be free of potentially adverse seismic interactions that could cause a fire in the area.
- The area appears to be free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding).

The inspectors independently performed their walkdown and verified that the following components seismic features were per design:

- “B” Station Battery Charger on July 17 in the Station Battery Room
- “A” Emergency Diesel Generator on July 17 in the “A” Emergency Diesel Generator Room

Observations made during the walkdown that could not be determined to be acceptable were entered into the licensee’s corrective action program for evaluation.

Additionally, inspectors verified that items that could allow the spent fuel pool to drain down rapidly were added to the seismic walkdown equipment list (SWEL) and these items were walked down by the licensee.

b. Findings

No findings were identified.

.4 (Discussed) NRC Temporary Instruction (TI) 2515/187, Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns

a. Inspection Scope

Inspectors conducted independent walkdowns to verify that the licensee completed the actions associated with the flood protection feature specified in paragraph 03.02.a.2 of this TI. Inspectors are performing walkdowns at all sites in response to a letter from the NRC to licensees, entitled “Request for Information Pursuant to Title 10 of the *Code of*

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Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident,” dated March 12, 2012 (ADAMS Accession No. ML12053A340).

Enclosure 4 of the letter requested licensees to perform external flooding walkdowns using an NRC-endorsed walkdown methodology (ADAMS Accession No. ML12056A050). Nuclear Energy Industry (NEI) document 12-07 titled, “Guidelines for Performing Verification Walkdowns of Plant Protection Features,” (ADAMS Accession No. ML12173A215) provided the NRC-endorsed methodology for assessing external flood protection and mitigation capabilities to verify that plant features, credited in the CLB for protection and mitigation from external flood events, and are available, functional, and properly maintained.

b. Findings

Findings or violations associated with the flooding, if any, will be documented in the 1st quarter integrated inspection report of 2013.

.5 (Closed) NRC Temporary Instruction (TI) 2515/177, “Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (NRC Generic Letter (GL) 2008-01)”

a. Inspection Scope

The inspectors reviewed the implementation of the licensee’s actions in response to GL 2008-01, “Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Systems.” The subject systems included the safety injection (SI) system, residual heat removal (RHR) system, and the containment spray (CS) system.

The following areas were reviewed during the inspection:

- The licensing basis of the facility to verify that actions to address gas accumulation were consistent with the operability requirements of the subject systems.
- The design of the subject systems to verify that actions taken to address gas accumulation were appropriate given the specifics of the functions, configurations, and capabilities of these systems.
- The design and operation of the RHR system to determine if flashing in RHR suction lines would challenge system operability.
- Selected analyses performed by the licensee to verify that methodologies for predicting gas void accumulation, movement, and impact were appropriate.
- Performed walkdowns of selected subject systems to verify that the reviews and

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design verifications conducted by the licensee had drawn appropriate conclusions with respect to piping configurations and pipe slope which could result in gas accumulation susceptibility.

- Testing implemented by the licensee to address gas accumulation in subject systems. A selection of test procedures and completed test results were reviewed to verify that test procedures were appropriate to detect gas accumulations that could challenge subject systems.
- The specified testing frequencies to verify that the testing intervals had appropriately taken historical gas accumulation events as well as susceptibility to gas accumulation into account.
- The test programs and processes to verify that they were sensitive to pre-cursors to gas accumulation.
- The corrective actions associated with gas accumulation in subject systems to verify that identified issues were being appropriately identified and corrected. This review included modifications made to the plant including the installation of additional vent valves.
- The locations of selected vent valve installations to verify that the locations selected were appropriate based on piping configuration and pipe slopes.

b. Findings and Observations

1. Failure to Effectively Implement Gas Intrusion Program

Introduction: The inspectors identified a Green Finding for the licensee's failure to perform the 18-month pre-refueling outage (RO) ultrasonic testing (UT) examinations on 47 potential gas accumulation locations required by plant operating manual PLP-085, "Emergency Core Cooling Systems Gas Management Program (GL 2008-01)." Compliance with PLP-085 ensures the capability of the safety injection (SI), residual heat removal (RHR), and containment spray (CS) systems to perform their safety-related functions, and effectively implements the licensee's gas management program, as committed to the NRC in response to Generic Letter 2008-01. The licensee entered the issue into the corrective action program (CAP) as nuclear condition report (NCR) 575063 and is evaluating corrective actions.

Description: On January 11, 2008, the NRC requested each addressee of GL 2008-01, "Managing Gas Accumulation In Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," to evaluate the licensing basis, design, testing, and corrective actions to ensure gas accumulation was maintained less than the amount that would challenge the operability of these systems, and take appropriate actions when conditions adverse to quality were identified. In their GL 2008-01 response to the NRC in 2008, the licensee stated that they had identified 67 potential gas accumulation locations and committed to implement a program to detect gas intrusion in the SI, RHR,

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and CS systems. In response to a request for additional information (March 22, 2010), the licensee provided more details regarding the inspection frequencies it had established for their new gas management program. Specifically, all 67 locations would be monitored in two UT examination intervals. Twenty of these would be monitored on a quarterly frequency while the rest (47) would be monitored every 18-months. The licensee developed and documented their gas management program in plant operating manual PLP-085, "Emergency Core Cooling Systems Gas Management Program (GL 2008-01)," currently in its 3rd revision.

The inspectors reviewed PLP-085 and noted that it required, in part, that the specified 47 locations be inspected prior to RO activities to establish as-found conditions. Additionally, the inspectors reviewed a series of completed work order packages (UT examination results) to verify the licensee's implementation of the new program. The inspectors identified that since implementation of the program in 2009, the licensee had not performed the 18-month pre-RO (as-found) UT examinations. The pre-RO examinations were necessary to identify gas accumulation and detect potential gas intrusion mechanisms during the previous time of operation. Failure to detect gas intrusion mechanisms would preclude trending, monitoring, and appropriate corrective actions to arrest the gas source and ensure the capability of the affected systems to perform their functions. Plant operating manual PLP-085 also required post-RO (as-left) UT examinations to ensure the systems were properly filled and vented before being placed in operation following the outage; however, these examinations do not provide indication of conditions that could result in formation of voids during unit operation, which was a key element to effectively implement the licensee's gas management program.

The licensee staff told the inspectors that unplanned reactor shutdowns prevented them from performing the pre-RO UT examinations. Specifically, on March 18, 2010, the unit tripped due to a 4kV non-vital bus feeder cable fire (LER 2010-002-00); and on January 17, 2012, the unit was manually tripped after learning that safety-related station batteries had not been tested in accordance with the Technical Specifications. The inspectors determined that the licensee, on these two occasions, failed to perform pre-RO UTs, as required by PLP-085, and as a result, failed to effectively implement the gas management program as committed to the NRC in response to GL 2008-01. The licensee entered this issue into their CAP as NCR 575063 and indicated that all of the 47 locations in question were tested pre-RO conditions in 2008 (during the initial UT examinations performed in support of the site's evaluation of the GL) and found to be completely filled. Additionally, all post-RO UT examinations were performed following each of the unplanned reactor shutdowns and verified the systems were adequately filled and vented before returning the unit to full power operations.

Analysis: The failure to perform pre-RO UT examinations on 47 potential gas accumulation locations, as required by plant operating manual PLP-085 was a performance deficiency. The performance deficiency was more than minor because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, if the licensee continued to miss pre-RO UT examinations, conditions that result in the formation of voids in the SI, RHR, and CS system could go undetected with the potential to adversely affect the systems' capabilities to perform their functions.

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The inspectors assessed the finding using IMC 0609 Attachment 4, "Initial Characterization of Findings;" and IMC 0609 Appendix A, "The Significance Determination Process for Findings At-Power," and determined the finding was of very low safety significance (Green) because it was not a design deficiency, it did not represent the loss of a system safety function, did not result in exceeding a Technical Specification allowed outage time, and did not screen as potentially risk-significant, due to a seismic, flooding, or severe weather initiating event. The inspectors identified a cross-cutting aspect in the work practices component of the human performance area, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel following procedures. Specifically, on two occasions, the licensee did not perform pre-RO UTs in accordance with their gas management program, as described in PLP-085. [H.4(b)]

Enforcement: This finding does not involve enforcement action because no regulatory requirement violation was identified. This issue was entered into the CAP as NCR 575063. Because this finding does not involve a violation and has very low safety significance, it is identified as a finding. FIN 05000261/2012005-02; Failure to Effectively Implement Gas Intrusion Program (GL 2008-01)

2. (Opened) URI: Questions Regarding Whether GOTHIC is Sufficiently Qualified for Use in Operability Determinations"

Introduction: The inspectors identified an URI regarding the licensee's use of the GOTHIC computer software to support operability determinations.

Description: Information Notice 2011-17, issued July 26, 2011, informed addressees of recent instances of gas accumulation in safety-related systems in which the resulting operability determination of the as-found condition relied on computer models (i.e., GOTHIC) that were not demonstrated to be technically appropriate for the intended application. Specifically, the computer models had not been sufficiently qualified by benchmarking against test or plant data.

The inspectors reviewed information related to the licensee's response to GL 2008-01 and determined that the licensee had found voids in the SI system, RHR system, and CS piping. In most instances, the licensee had used GOTHIC to evaluate the past operability of the subject systems with voids, and then vented the gas prior to returning the subject systems back to service. The licensee had also evaluated the continued operability of the subject systems with a void left in place until corrective actions were implemented. Specifically, in 2008, the licensee evaluated eight gas voids found following filling and venting of the subject systems that could not be successfully removed during RO-25. The inspectors observed that the licensee used the GOTHIC as part of these evaluations to perform analysis of gas movement to predict how a void volume in piping is translated into a transient void fraction at the entrance of the pumps. The evaluations were the basis for the continued operability until corrective actions could be taken to remove the voids during the following RO-26, approximately 19 months later.

While acknowledging the NRC's concerns that the GOTHIC models may not be sufficiently qualified by benchmarking against test or plant data for the particular gas transport scenario and piping configuration being analyzed, the licensee prepared engineering change document EC 86423 to document their justifications for continued use of the GOTHIC models to support operability determinations.

The inspectors determined that this issue will remain unresolved pending additional inspection and consultation with a GOTHIC subject matter expert at NRC headquarters to evaluate the licensee's use of GOTHIC to support operability determinations. This issue will be identified as URI 05000261/2012005-03, "Questions Regarding Whether GOTHIC is Sufficiently Qualified for Use in Operability Determinations."

3. (Opened) URI: Questions Regarding the Adequacy of the Fill and Vent Procedure for the RHR Heat Exchangers

Introduction: The inspectors identified a URI regarding the adequacy of the licensee's fill and vent procedure for the RHR heat exchangers (HXs).

Description: Procedure OP-201-1, "RHR System Venting" directs system venting by a series of static and dynamic venting evolutions. The inspectors noted that the procedure did not specify the minimum flowrates necessary to ensure an adequate dynamic flush of the HXs. Specifically, the inspectors identified that dynamic venting of the system is performed by establishing flow via both the RHR HXs and its bypass line, which reduces the effective flow available to dynamically vent the HXs. The licensee indicated that following the fill and vent procedure, operations performs a post maintenance test (per OST-253, "Comprehensive Flow Test for the RHR Pumps"), before returning the system to service, that establishes full flow through the HXs and would completely vent the HXs if the initial fill and vent was not successful. The inspectors were concerned because establishing full flow through the HXs with a large enough void size inside the HXs could potentially result in a water hammer condition that exceeds the structural design limitations of the system. The licensee is performing an evaluation to determine if any voids could be left in the HXs after fill and vent, and what the potential effects on the system could be.

The inspectors determined that this issue will remain unresolved pending additional inspection to evaluate the licensee's evaluation. This issue will be identified as URI 05000261/2012005-04, "Questions Regarding The Adequacy of the Fill and Vent Procedure for the Residual Heat Removal Heat Exchangers"

4OA6 Meetings, Including Exit

On January 28, 2013, the resident inspectors presented the inspection results to Mr. William Gideon and other members of his staff.

Attachment: Supplemental Information

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

C. Freligh, Nuclear Oversight Manager
T. Cosgrove, Plant General Manager
H. Curry, Training Manager
R. Gideon, Vice President
M. Glover, Director – Site Operations
R. Hightower, Licensing/Reg. Programs Supervisor
K. Holbrook, Operations Manager
B. Houston, Radiation Protection Superintendent
L. Martin, Engineering Director
D. Douglas, Maintenance Manager
K. Moser, Outage & Scheduling Manager
J. Rotchford Jr., Environmental & Chemistry Superintendent
S. Wheeler, Support Services Manager

NRC personnel

R. Musser, Chief, Reactor Projects Branch 4

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000261/2012005-02	FIN	Failure to Effectively Implement Gas Intrusion Program (GL 2008-01)] (Section 40A5.5.1)
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Opened

05000261/2012005-01	URI	Adequacy of Preventative Maintenance for the Dedicated Shutdown Diesel Generator Cooling System (Section 1R12)
05000261/2012005-03	URI	Questions Regarding Whether GOTHIC is Sufficiently Qualified for Use in Operability Determinations (Section 40A5.5.2)
05000261/2012005-04	URI	Questions Regarding the Adequacy of the Fill and Vent Procedure for the Residual Heat Removal Heat Exchangers (Section 40A5.5.3)

Closed

05000261/2012-001-01	LER	Technical Specification Required Plant Shutdown Due To Missed Surveillance and Operation Prohibited by Technical Specifications (Section 40A3.1)
05000261/2012-003-01	LER	Plant Modification Interfered with the Operation of Containment Wide Range Level Indicator (Section 40A3.2)
05000261/2012-002-01	LER	Unplanned Limiting Condition of Operation (LCO) 3.5.4 Entry Due to Refueling Water Storage Tank (RWST) Alignment to Purification (Section 40A3.3)
05000261/2011-001-01	LER	Condition Prohibited by Technical Specifications When Non-Seismic System was Aligned to Refueling Water Storage Tank due to Regulatory Requirements not Adequately Incorporated in Plant Documentation (Section 40A3.4)

Temporary Instruction 2515/188	TI	Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns (Section 4OA5.3)
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Temporary Instruction 2515/177	TI	TI Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (NRC Generic Letter 2008-01) (Section 4OA5.5).
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Discussed

Temporary Instruction 2515/187	TI	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns (Section 4OA5.4)
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LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

For cold weather:

Procedures

AP-015, Portable Heaters/ Heating Devices, Rev. 17
OP-925, Cold Weather Operation, Rev. 51
EDP-009, Freeze Protection Panels

Work Orders

1866602, FPP-21, Replace All Circuit Indicating Light Sockets
1943160, Transformer for CKT 39S Has Degraded Insulation on Wiring
2015559, Heat Trace Panel Indicator HTI-6-BT Needs Replacement
1796968, FPP-21(C-24) Found Reading) Amps

Action Requests

572148, Freeze Protection Circuits Out of Service

Section 1R04: Equipment Alignment

Partial System Walkdown

Procedures

OP-306, Component Cooling System, Rev. 71
OP-301, Chemical Volume and Control System, Rev. 104
OP-402, Auxiliary Feedwater System, Rev. 80

Complete System Walkdown

Procedures

OP-301, Chemical and Volume Control System, Rev. 104
FRP-S-1, Response to Nuclear Power Generation /ATWS, Rev. 19

Action Requests

573521, CVC Valves not Controlled by Valve Lineup
574956, MR Scoping of FI-110 BA Bypass Flow

Section 1R05: Fire Protection

UFSAR Sections of Appendix 9.5.1A

3.1.5.8 Fire Zone 23 – Hagan Room
3.1.5.9 Fire Zone 36 – CCW Surge Tank Room
3.8.1 Fire Zone 30 - Diesel Oil Storage Tank
3.1.8.3 Fire Zone 12 – Waste Hold Tank, RHR Heat Exchangers
3.1.5.4 Fire Zone 19 – Unit 2 Cable Spreading Room
3.7.8 Fire Zone 26 - Yard Transformers

Procedures

FP-003, Control of Transient Combustibles, Rev. 28
OMM-003, Fire Pre-Plan, Rev. 59

Drawings

HBR2-11937, Fire Pre-Plan Diesel Oil Storage Tank Area, Sheet 56, Rev. 0
HBR2-11937, Fire Pre-Plan Transformer Yard, Sheet 57, Rev. 0
HBR2-11937, Fire Pre-Plan Waste Holdup Tank, RHR Heat Exchangers, Rev. 0
HBR2-11937, Unit 2 Cable Spreading Room, Rev. 0
HBR2-11937, Fire Pre-Plan Hagan Room/ CCW Surge Tank Room, Rev. 0

Other documents

NCR 564977, Spill Boom was placed in a transient free zone

Section 1R11: Licensed Operator Requalification

Procedures

OP-903, Service Water System, Rev. 127
WCP-NGGC-0500, Work Activity Integrated Risk Management Program, Rev. 02
OPS-NGGC-1000, Conduct of Operations, Rev. 7

Action Requests

564757, The Packing on TCV-1669 Installed Incorrect
565045, TCV-1669 Trim Replacement Did Not Resolve Control Issue

Section 1R12: Maintenance Effectiveness

Procedures

CM-608, Alignment and Adjustment of Belt Driven Equipment, Rev. 015
OST-910, Dedicated Shutdown Diesel Generator (Monthly), Rev. 52
PM-108, Dedicated Shutdown Diesel Tent Four Month Inspection, Rev. 32
APP-025, Dedicated Shutdown Diesel Generator Annunciator Panel, Rev. 10
ADM-NGGC-0203, Preventive Maintenance and Surveillance Testing Program, Rev. 18

Work Orders

384415, Replace Belts on DS Diesel Radiator

Action Requests

RCE 564838, DSDG Trip on High Engine Coolant Temperature
574123, RCE AR 564838 Extended Beyond 45 Days
209184, Unanticipated LCO 3.7.9 Entry Due to Degraded Belt on HVA-1B

Other documents

ME00197R12, Material Evaluation-Shelf Life Requirements, Nov. 6, 2008
Gates Belt Drive Preventive Maintenance and Safety Manual, 2004
ESI-EMD Owners Group, Recommended Maintenance Program-Mechanical, Revision 6, May 2011

Gates Facts Technical Information Library, Tips on Selecting and Applying Drive Belts, March, 1993

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

Procedures

OMM-048, Work Coordination and Risk Assessment, Rev. 49

Other documents

RNP Risk Profile for 12W42, 10/15-10/22 "A" Train Work Week, Rev. 3

RNP Risk Profile for 12W44, 10/29-11/05 "B" Train Work Week, Rev. 6

Action Requests

570095, Single Point Failure for the Motor Driven Fire Pump

570098, Remove WO 192185-01 (CS MTR-FIRE-PMP) from 12W44

570094, Additional Clearance Need for CS (LOC) Fire-PMP

Section 1R15: Operability Evaluations

Procedures

CM-303, Installation of Environmentally Qualified or Safety Related Taped Slices, Rev. 27

OST-352-3, Comprehensive Flow Test for Containment Spray Pump A, Rev. 19

OST-352-1, Containment Spray Component Test- Train A, Rev. 33

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