



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

November 20, 2015

Kevin Mulligan
Site Vice President Operations
Entergy Operations, Inc.
Grand Gulf Nuclear Station
P. O. Box 756
Port Gibson, MS 39150

**SUBJECT: GRAND GULF NUCLEAR STATION – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000416/2015008**

Dear Mr. Mulligan:

On October 8, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution biennial inspection at the Grand Gulf Nuclear Station Unit 1. The NRC inspection team discussed the results of this inspection with you and other members of your staff that attended the exit meeting on October 8, 2015. The inspection team documented the results of this inspection in the enclosed inspection report.

Based on the inspection sample, the inspection team determined that Grand Gulf's corrective action program, and your staff's implementation of the corrective action program, were adequate to support nuclear safety.

In reviewing your corrective action program, the team assessed how well your staff identified problems at a low threshold, your staff's implementation of the station's process for prioritizing and evaluating these problems, and the effectiveness of corrective actions taken by the station to resolve these problems. The team also evaluated other processes your staff used to identify issues for resolution. These included your use of audits and self-assessments to identify latent problems and your incorporation of lessons learned from industry operating experience into station programs, processes, and procedures. The team determined that your station's performance in each of these areas supported nuclear safety.

However, the team identified some weaknesses in the timely identification and evaluation of problems. Specifically, the team noted several condition reports that documented adverse conditions, which were not initiated in a timely manner, not evaluated for operability in a timely manner, or both. Station personnel reviewed these concerns and implemented corrective actions to address timeliness problems prior to the end of the inspection. However, your station should evaluate the reason for delays in evaluating or initiating conditions reports such that longer-term solutions will address the causes for the delays and help foster understanding among station personnel about the importance of promptly initiating and evaluating conditions in the corrective action program.

Finally, the team determined that your station's management maintains a safety-conscious work environment in which your employees are willing to raise nuclear safety concerns through at

least one of the several means available. However, the team identified that your long-term contractor personnel may be reluctant to raise concerns to the contractor's employee concerns program. These concerns were not due to the absence of a safety-conscious work environment within the contract work force, but rather the reduced confidence in the contractor's program to address employee concerns adequately.

The NRC inspectors documented three findings in this report, all of which involved violations of NRC requirements. All of these findings were determined to be of very low safety significance (Green) and were documented as non-cited violations (NCVs) Severity Level IV non-cited violation under the traditional enforcement process.

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

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV; and the NRC resident inspector at the Grand Gulf Nuclear Station.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents 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/

Eric Ruesch, Acting Team Leader
Technical Support Services Team
Division of Reactor Safety

Docket Number: 50-416
License Number: NPF-29

Enclosure: Inspection Report 05000416/2015008
w/Attachment: Supplemental Information

Electronic Distribution to Grand Gulf Nuclear Station

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000416

License: NPF-29

Report: 05000416/2015008

Licensee: Entergy Operations, Inc.

Facility: Grand Gulf Nuclear Station, Unit 1

Location: 7003 Baldhill Road
Port Gibson, MS 39150

Dates: September 21 through October 8, 2015

Team Lead: B. Tharakan, CHP, Regional State Agreements Officer

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Technical Support Services Team
Division of Reactor Safety

SUMMARY

IR 05000416/2015008; 09/21/2015-10/08/2015; Grand Gulf Nuclear Station; Problem Identification and Resolution (Biennial)

The inspection activities described in this report were performed between September 21 and October 8, 2015, by five inspectors from NRC's Region IV office, NRC's Office of Nuclear Reactor Regulation, and the resident inspector at Grand Gulf Nuclear Station. The NRC team documented four findings in this report. All four of these findings involved violations of NRC requirements. Three of the findings were determined to be of very low safety significance (Green) and one of the findings was determined to be a Severity Level IV violation under the traditional enforcement process. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects Within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Assessment of Problem Identification and Resolution

Based on its inspection sample, the team concluded that the licensee maintained a corrective action program in which individuals generally identified issues at an appropriately low threshold. Once entered into the corrective action program, the licensee generally evaluated and addressed these issues appropriately and timely, commensurate with their safety significance. The licensee's corrective actions were generally effective, addressing the causes and extents of condition of problems.

However, the team identified some weaknesses in the timely identification and evaluation of problems. Specifically, the team noted several condition reports that documented adverse conditions, which were not initiated in a timely manner, not evaluated for operability in a timely manner, or both. Station personnel initiated condition reports to review the team's concerns, and implemented corrective actions to address timeliness problems before the end of the inspection.

The licensee appropriately evaluated industry operating experience for relevance to the facility and entered applicable items in the corrective action program. The licensee incorporated industry and internal operating experience in its root cause and apparent cause evaluations. The licensee performed effective and self-critical nuclear oversight audits and self-assessments. The licensee maintained an effective process to ensure significant findings from these audits and self-assessments were addressed.

The licensee maintained a safety-conscious work environment in which personnel were willing to raise nuclear safety concerns without fear of retaliation. However, the team identified that the licensee's long-term contractor personnel may be reluctant to raise concerns to the contractor's employee concerns program. These concerns were not due to the absence of a safety-conscious work environment within the contract work force, but rather the reduced confidence in the contractor's program to address employee concerns adequately.

Cornerstone: Mitigating Systems

- Green. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to identify and correct a condition adverse to quality by entering it into the corrective action program for resolution. Specifically, the licensee failed to identify and correct the potential for safety-related Standby Service Water fans to rotate backwards under certain design conditions, which could affect their ability to perform their safety function when needed. The licensee entered this condition into the corrective action program as CR-GGN-2015-02509.

The failure to enter a condition adverse to quality into the corrective action program as required by station procedure EN-LI-102, "Corrective Action Program," Revision 24, is a performance deficiency. This performance deficiency is more than minor, and therefore a finding, because it is associated with the design control attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, not evaluating an identified nonconformance resulted in the failure to ensure the capability of safety-related Structures, Systems, and Components to respond reliably during anticipated events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," dated July 1, 2012, the team determined that the finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating structure, system, or component, and did not result in a loss of operability or functionality; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of at least a single train for longer than its technical specification allowed outage time, or two separate safety systems out-of-service for longer than their technical specification allowed outage time; and (4) did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety significant in accordance with the licensee's maintenance rule program. The team determined that this finding has a cross-cutting aspect associated with problem identification, specifically, individuals failed to ensure that the issue was reported and documented in the corrective action program at a low threshold [P.1]. (Section 4OA2)

- Green. The team identified five examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct conditions adverse to quality. Specifically, on October 8, 2015, the team identified five conditions adverse to quality where the licensee failed to initiate a condition report in a prompt/timely manner. The five conditions adverse to quality were associated with: (1) the short circuit analysis for the 480V motor control center breakers; (2) emergency diesel generators minimum and maximum frequency; (3) emergency diesel generators fuel consumption rate; (4) Division 3 Emergency Diesel Generator load shedding test; and (5) 120V AC power system calculations. The licensee entered this issue into their corrective action program as Condition Report CR-GGN-2015-05550.

The failure to promptly identify conditions adverse to quality and enter them into the corrective action program by initiating a condition report in a prompt/timely manner as required by Section 5.2[3] of EN-LI-102, "Corrective Action Program," Revision 24, is a performance deficiency. This performance deficiency is more than minor, and therefore a finding, because the five examples are associated with the design control 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, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the team determined that the finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating structure, system, or component, and did not result in a loss of operability or functionality; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of at least a single train for longer than its technical specification allowed outage time, or two separate safety systems out-of-service for longer than their technical specification allowed outage time; and (4) did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program. The team determined that this finding has a cross-cutting aspect associated with training, in that the organization did not provide training or ensure knowledge transfer to maintain a knowledgeable, technically competent workforce and instill nuclear safety values. Specifically, when the NRC identified the five conditions adverse to quality to licensee personnel, the licensee personnel did not recognize these conditions required prompt/timely initiation of a condition report [H.9]. (Section 4OA2)

Cornerstone: Barrier Integrity

- Green. The team identified a non-cited violation of Technical Specification 3.6.4.1 Condition A, for the failure to declare secondary containment inoperable. Specifically, on August 1, 2015, the licensee failed to declare secondary containment inoperable after it failed to achieve the necessary vacuum to pass Surveillance Requirement 3.6.4.1.4. The licensee entered this issue into their corrective action program as Condition Report CR-GGN-2015-05826.

The failure to declare secondary containment inoperable due to failed surveillance test and enter the appropriate action statements as required by the licensee's technical specifications is a performance deficiency. This deficiency is more than minor, and therefore a finding, because it is associated with the Structures, Systems, Components, and Barrier Performance attribute of the Barrier Integrity cornerstone. Specifically, the failure to declare secondary containment inoperable and take actions as required in Technical Specification Limiting Condition for Operation 3.6.4.1, Condition A, within four hours, adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and Inspection Manual Chapter 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," dated July 1, 2012, the team determined that the finding is of very low safety significance (Green) because it only represented a degradation of the radiological barrier function provided for the auxiliary building secondary containment. The team determined that this finding has a cross-cutting aspect associated with avoid complacency, in that individuals did not recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Although the surveillance test was documented as Technical Specification Acceptance Criteria Unacceptable because it did not meet the criteria defined in test procedure 06-OP-1T48-R-0002, "Standby Gas Treatment A Logic and Vacuum Test," Revision 115, the licensee did

not identify it as a failed surveillance test that affected secondary containment operability [H.12]. (Section 4OA2)

Other Findings and Violations

- SL-IV. The team identified two examples of a Severity Level (SL) IV non-cited violation of 10 CFR 50.72(b)(3)(v)(C), for the failure to make an eight-hour report to the NRC for a condition that prevented the fulfillment of the safety function needed to control the release of radioactive material. Specifically, on August 1, 2015, and again on October 1, 2015, after failed secondary containment surveillance tests, the licensee failed to make an eight-hour report to the NRC for the loss of secondary containment barrier safety function needed to control the release of radioactive material. The licensee entered this issue into their corrective action program as Condition Report CR-GGN-2015-05826.

The failure to report a condition that could have prevented the fulfillment of a system's safety function as required by 10 CFR 50.72(b)(3)(v)(C) is a performance deficiency. This performance deficiency was screened using Inspection Manual Chapter 0612 and was determined to be minor in the Reactor Oversight Process. However, due to the performance deficiency affecting the NRC's ability to perform its regulatory oversight function, this performance deficiency was evaluated for traditional enforcement in accordance with the NRC Enforcement Policy. This performance deficiency was determined to be a Severity Level IV violation in accordance with Section 6.9.d.9 of the NRC Enforcement Policy, dated February 4, 2015. No cross-cutting aspect was assigned to this violation because no Reactor Oversight Process finding exists. (Section 4OA2)

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on a sample of corrective action documents that were open during the assessment period, which ranged from December 1, 2013, to the end of the on-site portion of this inspection on October 8, 2015.

.1 **Assessment of the Corrective Action Program Effectiveness**

a. Inspection Scope

The team reviewed approximately 250 condition reports (CRs), including associated root cause analyses and apparent cause evaluations, from approximately 15,000 CRs that the licensee had initiated or closed between December 1, 2013, and October 8, 2015. The majority of these condition reports were lower-level condition reports that did not require cause evaluations. The inspection sample focused on higher-significance condition reports for which the licensee evaluated and took actions to address the cause of the condition. In performing its review, the team evaluated whether the licensee had properly identified, characterized, and entered issues into the corrective action program, and whether the licensee had appropriately evaluated and resolved the issues in accordance with established programs, processes, and procedures. The team also reviewed these programs, processes, and procedures to determine if any issues existed that may impair their effectiveness.

The team reviewed a sample of performance metrics, system health reports, operability determinations, self-assessments, trending reports and metrics, and various other documents related to the licensee's corrective action program. The team evaluated the licensee's efforts in determining the scope of problems by reviewing selected logs, work orders, self-assessment results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed daily CRs and attended the licensee's condition review group, corrective action review board, and operational focus meetings to assess the reporting threshold and prioritization efforts, and to observe the corrective action program's interfaces with the operability assessment and work control processes. The team's review included an evaluation of whether the licensee considered the full extent of cause and extent of condition for problems, as well as a review of how the licensee assessed generic implications and previous occurrences of issues. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of problems similar to those the licensee had previously addressed. The team conducted interviews with plant personnel to identify other processes that may exist where problems may be identified and addressed outside the corrective action program.

The team reviewed corrective action documents that addressed past NRC-identified violations to evaluate whether corrective actions addressed the issues described in the inspection reports. The team reviewed a sample of corrective actions closed to other corrective action documents to ensure that the ultimate corrective actions remained appropriate and timely. The team reviewed a sample of 20 condition reports where the

licensee had changed the significance level after initial classification to determine whether the level changes were in accordance with station procedure and that the conditions were appropriately addressed.

The team considered risk insights from both the NRC's and Grand Gulf Nuclear Station's risk models to focus the sample selection and plant tours on risk-significant systems and components. The team focused a portion of its sample on the Standby Service Water (SSW) system and the Reactor Core Isolation Cooling (RCIC) systems.

Standby Service Water (SSW)

The team reviewed a five-year history of the SSW system. The team reviewed system health reports, interviewed the system engineer, and performed walkdowns of the SSW system. The team reviewed 19 apparent cause evaluations and one root cause evaluation associated with SSW during the review period. The team identified one finding associated with SSW where the licensee failed to enter a condition adverse to quality into the corrective action program. The team documented the finding in Section 4OA2.5.a.

Reactor Core Isolation Cooling (RCIC)

The team reviewed a five-year history of the RCIC system. The team reviewed system health reports, interviewed the system engineer, and performed walkdowns of the RCIC system. The team observed that Grand Gulf had generated approximately 568 condition reports, which involved the RCIC system, during the five-year period of review. The conditions identified resulted in the preparation of 4 root cause evaluations, 20 apparent cause evaluations, and places the RCIC system into 10 CFR 50.65(a)(1) monitoring status. The licensee has initiated corrective actions including engineering changes to correct these issues such that the RCIC system will be removed from 10 CFR 50.65(a)(1) monitoring status after the next outage barring any further conditions which degrade the system.

b. Assessments

1. Effectiveness of Problem Identification

From December 1, 2013, through October 8, 2015, the licensee initiated approximately 15,000 condition reports. The team determined that the licensee appropriately entered most conditions into the corrective action program as required by station procedure EN-LI-102, "Corrective Action Program." During interviews with supervisors and staff, the team determined that supervision and management encouraged station personnel to enter problems into the corrective action program at a low threshold by documenting the issue in the licensee's paperless condition reporting system (PCRS).

In September 2014, the licensee implemented a significant change to the corrective action program. The change allowed for the segregation of "adverse" conditions from "non-adverse" conditions as defined by the corrective action program procedure. The procedure provides examples of adverse and non-adverse

conditions. Identification of an adverse required prompt initiation of a condition report; condition reports are optional, but encouraged for non-adverse conditions.

Overall, the team concluded that the licensee generally maintained a low threshold for the formal identification of problems and entry into the corrective action program for evaluation. Most of the personnel interviewed by the team understood the requirements for condition report initiation; most expressed a willingness to enter newly identified issues into the corrective action program at a very low threshold. However, the team identified several examples of adverse conditions where licensee personnel failed to initiate condition reports in a timely manner. The team documented four performance deficiencies in Section 4OA2.5, which are associated with the failure to identify problems at a low threshold, enter them into the corrective action program, and effectively evaluate the conditions to determine the appropriate corrective actions.

2. Effectiveness of Prioritization and Evaluation of Issues

The sample of CRs reviewed by the team focused primarily on issues screened by the licensee as having higher-level significance, including those that received cause evaluations, those classified as significant conditions adverse to quality, and those that required engineering evaluations. The team also reviewed a number of condition reports that included or should have included immediate operability determinations for safety-related structures, systems, and components (SSCs), and assessed the quality, timeliness, and prioritization of these determinations.

Overall, the team determined that the licensee's process for screening and prioritizing issues entered into the corrective action program supported nuclear safety. The licensee's operability determinations were consistent, accurately documented, and completed in accordance with procedures. However, the team identified the following observations and minor performance deficiencies associated with the effectiveness of evaluations and timeliness of operability determinations.

- Entergy Procedure EN-OP-104, "Operability Determination Process," Revision 9, Step 3.0[13] defines Immediate Determination as "The Operability determination performed immediately after confirmation that a Degraded or Nonconforming Condition exists for an SSC required to be operable by Technical Specifications." The team noted that this definition could cause delays in screening condition reports for operability while confirmation of the existence of a degraded or non-confirming condition occurs. Additionally, the team identified that the definition does not include unanalyzed conditions. The omission of unanalyzed conditions from the definition of "Immediate Determination" could lead to the failure to perform immediate operability determinations when the licensee discovers unanalyzed conditions on SSCs. The licensee captured this observation in Condition Report CR-GGN-2015-05790.
- The licensee is required per EN-OP-104, "Operability Determination Process," Revision 9, Section 5.3, to perform an immediate determination of operability without delay and in a controlled manner using the best information available. However, the team identified 13 examples of untimely (delayed) immediate

operability determinations (IODs). The team noted these delays ranged from about 12 hours to about 40 hours. The examples are:

- CR 2015-03728 was initiated June 26, 2015 at 4:25AM. The immediate operability determination was completed June 26, 2015 at 4:06PM.
- CR 2015-04611 was initiated August 11, 2015 at 5:26PM. The immediate operability determination was completed August 12, 2015 at 11:48PM.
- CR 2015-04627 was initiated August 12, 2015 at 1:18PM. The immediate operability determination was completed August 14, 2015 at 12:13AM.
- CR 2015-04710 was initiated August 17, 2015 at 4:34AM. The immediate operability determination was completed August 17, 2015 at 5:23PM.
- CR 2015-04733 was initiated August 18, 2015 at 9:12AM. The immediate operability determination was completed August 20, 2015 at 12:27AM.
- CR 2015-04885 was initiated August 25, 2015 at 10:16AM. The immediate operability determination was completed August 26, 2015 at 12:36AM.
- CR 2015-04934 was initiated August 26, 2015 at 5:30PM. The immediate operability determination was completed August 28, 2015 at 4:21AM.
- CR 2015-04958 was initiated August 27, 2015 at 2:29PM. The immediate operability determination was completed August 29, 2015 at 1:04AM.
- CR 2015-04989 was initiated August 28, 2015 at 10:55AM. The immediate operability determination was completed August 29, 2015 at 4:13AM.
- CR 2015-05003 was initiated August 28, 2015 at 12:01PM. The immediate operability determination was completed August 29, 2015 at 5:06PM.
- CR 2015-05095 was initiated September 2, 2015 at 4:05PM. The immediate operability determination was completed September 3, 2015 at 5:34AM.
- CR 2015-05125 was initiated September 3, 2015 at 2:57PM. The immediate operability determination was completed September 4, 2015 at 6:01AM.
- CR 2015-05130 was initiated September 3, 2015 at 3:38PM. The immediate operability determination was completed September 4, 2015 at 5:45AM.

The team determined that the 13 examples of untimely immediate operability determinations was a performance deficiency. The licensee determined that the SSCs described in each of the condition reports was operable. The team reviewed the licensee's conclusion and verified that the SSCs were operable during the IOD delay. Therefore, the team determined that this was a minor performance deficiency because the SSCs remained operable, and if left uncorrected, the delay would not have become a more significant safety concern or adversely affected a cornerstone objective.

The team noted that the 13 examples of untimely immediate operability determinations were indicative of weaknesses within the licensee's Operations Department to evaluate adverse conditions by performing timely immediate operability determinations. Upon notification of this issue, the licensee implemented immediate corrective actions to ensure that immediate operability determinations are performed without delay. The licensee documented this minor performance deficiency in Condition Report CR-GGN-2015-05551.

Additionally, the team identified the following two examples of incomplete or ineffective evaluation of problems, which also resulted in minor performance deficiencies.

- Condition Report CR-GGN-2013-7734 documented two reported safety system functional failures for reactor core isolation cooling and primary containment. The team reviewed this CR and identified that neither of these safety system functional failures were included in the Safety System Functional Failure Performance Indicator (PI) reported for the fourth quarter of 2013. The industry guidance for reporting performance indicators is described in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7. The team determined that the failure to report the safety system functional failures in the performance indicator report was a minor performance deficiency because the failures did not result in a change in the PI threshold. The licensee documented this minor performance deficiency in Condition Report CR-GGN-2015-05828.
- Condition Report CR-GGN-2015-5441 documents a condition describing minimum room temperature for SSW pumps. The IOD stated there was no minimum temperature for the room. The team reviewed the CR and questioned the IOD. The team asked why there was no minimum room temperature for operability. Based on discussions with operations and engineering staff, the licensee determined that the design minimum room temperature was 40 degrees Fahrenheit. The team determined that the failure to provide reasonable expectation of operability for SSW system in accordance with procedure EN-OP-104, "Operability Determination Process," Revision 10, was a performance deficiency. However, it was minor performance deficiency because the system remained operable, temperatures in the pump room did not drop below design temperature, and the condition did not adversely affect the mitigating systems cornerstone. The licensee documented this minor performance deficiency in Condition Report CR-GGN-2015-05529.

3. Effectiveness of Corrective Actions

Overall, the team concluded that the licensee generally identified effective corrective actions for the problems evaluated in the corrective action program. The licensee generally implemented these corrective actions in a timely manner, commensurate with their safety significance, and reviewed the effectiveness of the corrective actions appropriately.

The team reviewed the effectiveness of corrective actions for individual condition reports, root and apparent cause evaluations, and organizational program changes. In addition, the team reviewed the effectiveness of corrective actions for previous non-cited violations, and those identified, tracked, and implemented by the following licensee programs.

Operations Department Monitoring (Operator Burdens)

The team reviewed conditions that challenged or burdened operator performance. As of October 8, 2015, the licensee was tracking 26 control room deficiencies, 15 inoperable control room annunciators, 6 operable but degraded/nonconforming SSCs, 7 operational decision-making issues, 3 potential leaking fuel rods, 1 operator burden item, and no operator workarounds. The licensee is adequately managing

these issues and seeks timely corrective actions to close these issues within the first outage following discovery.

Aging SSC Management Program

The team reviewed issues related to the age of certain SSCs. The team noted that Grand Gulf's license renewal application is under review by the NRC. The plant is approximately 10 years from when the extended period of operation would begin; therefore, the licensee has begun to implement aging management programs. The licensee is adequately identifying and addressing aging management issues once discovered. However, the team noted there were two recent NRC findings with causes related to aging components. The first one led to a plant scram in March 2014 that was linked to inadequate corrective actions for replacing aging components in the turbine load reject relay; FIN 05000416/2014004-02. The second one resulted in ventilation damper failures; NCV 05000416/2015001-01.

Examples of Previous Findings Reviewed for Corrective Action Effectiveness

- FIN 05000416/2014004-02, "Failure to Implement Corrective Actions Leads to Automatic Plant Scram," Condition Report CR-GGN-2014-03131. A capacitor in a multiplier module of the main turbine overspeed protection circuit failed. The licensee had identified a single point vulnerability with the multiplier module in 2007; however, the corrective action to repair or replace the multiplier module was not completed in the prescribed timeframe, and eventually resulted in the module failure and plant scram.
- NCV 05000416/2015001-01, "Failure to Take Timely Corrective Actions Associated with Division 1 and 2 Standby Service Water Pump House Ventilation System Due to Degraded Relays," Condition Report CR-GGN-2015-00739. In 2011, the licensee identified that relays associated with the SSW system pump house ventilation system failed due to age/environmental degradation. However, the licensee did not implement timely corrective actions for replacing these relays, which resulted in the unplanned inoperability of the Division 1 SSW system in December 2014, and again in January 2015.
- NCV 05000416/2013005-02, "Failure to Provide Adequate Procedures Results in Loss of Safety Function," (Condition Reports CR-GGN-2013-07720; 07733; and 07374). The RCIC steam supply pressure low functional test procedure contained an error that resulted in the loss of primary containment isolation capability and the RCIC system being inoperable.
- NCV 05000416/2014005-01, "Failure to Assure Quality Installation on RCIC Steam Line," Condition Report CR-GGN-2014-06792. The licensee failed to assure that rated performance limits of the ferrule connection, installed at the tee between the steam line and the pressure transmitter tube line, were met during initial installation. This failure resulted in an unplanned inoperability of the RCIC system.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The team examined the licensee's program for reviewing industry operating experience, including reviewing the governing procedures. The team reviewed a sample of 14 industry operating experience communications and the associated site evaluations to assess whether the licensee had appropriately assessed the communications for relevance to the facility. The team also reviewed assigned actions to determine whether they were appropriate.

b. Assessment

Overall, the team determined that the licensee appropriately evaluated industry operating experience for its relevance to the facility. Operating experience information was incorporated into plant procedures and processes as appropriate.

The team further determined that the licensee appropriately evaluated industry operating experience when performing root cause analyses and apparent cause evaluations. The licensee appropriately incorporated both internal and external operating experience into lessons learned for training and pre-job briefs.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The team reviewed a sample of licensee self-assessments and audits to assess whether the licensee was regularly identifying performance trends and effectively addressing them. The team also reviewed audit reports to assess the effectiveness of assessments in specific areas. The specific self-assessment documents and audits reviewed are listed in Attachment 1.

b. Assessment

Overall, the team concluded that the licensee had an effective self-assessment and audit process. The team determined that self-assessments were self-critical and thorough enough to identify deficiencies. The team confirmed that self-assessment and audit findings were entered into the licensee's corrective action program for resolution.

The team identified that the licensee's quality assurance audit procedures did not contain objective performance criteria for the number of program elements that had to be found satisfactory before the program being audited could be found effective, marginally effective, or ineffective. For example, one department may have 3 out of 10 unsatisfactory program elements and be found effective, whereas another department could have the same 3 out of 10 unsatisfactory program elements and be found marginally effective. The team noted that this could lead to potential inconsistencies in trending data obtained from quality assurance audits, as well as diverting resources to address problems in the marginally effective department when the effective department may have the same problems.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The team interviewed a total 60 individuals: 41 in four focus groups, and 19 in one-on-one interviews. The purpose of these interviews was (1) to evaluate the willingness of licensee staff to raise nuclear safety issues, either by initiating a condition report or by another method, (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems, and (3) to evaluate the licensee's safety-conscious work environment (SCWE). The focus group participants included personnel from Operations, Radiation Protection, Instrumentation and Controls, and the licensee's maintenance contractor. The team selected the focus groups based upon organizational charts provided by the licensee. The individual interviews included personnel from the departments mentioned above plus Chemistry, Engineering, Maintenance, and Security. At the team's request, the licensee's regulatory affairs staff selected the participants from these work groups, based partially on availability. To supplement these discussions, the team interviewed the Employee Concerns Program (ECP) Coordinator to assess her perception of the site employees' willingness to raise nuclear safety concerns. The team reviewed the ECP case log and select case files. The team also reviewed Entergy self-assessments of the Grand Gulf ECP and site safety culture.

b. Assessment

1. Willingness to Raise Nuclear Safety Issues

All individuals interviewed indicated that they would raise safety concerns. All individuals felt that their management was receptive to receiving safety concerns (nuclear, radiological, and industrial) and generally addressed them promptly commensurate with the significance of the concern. The interviewees indicated that if they were not satisfied with the response from their immediate supervisor, they had the ability to escalate the concern to a higher organizational level without negative repercussions. Options for elevating the concerns include writing a condition report, discussing the concern with another supervisor, using the chain of command (open door policy), using the ECP, and contacting the NRC. Most individuals expressed that they generally have had positive experiences after raising issues to their supervisors and had not needed to take additional actions to address their concerns. All interviewees indicated that they were trained on initiating condition reports.

2. Employee Concerns Program (ECP)

All interviewees were aware of the licensee's ECP. Most explained that they had heard about the ECP through various means, such as posters, training, presentations, and discussion by supervisors or management at meetings. All interviewees stated that they would use the ECP, if they felt it was necessary. All interviewees expressed confidence that their confidentiality would be maintained if they brought issues to licensee's ECP. However, some of the individuals from the station's long-term maintenance contractor expressed reservations about using the contractor's Employee Concerns Program. These reservations appear to be partially due to the location of the ECP office and partially due to a belief that the contractor's ECP lacked confidentiality and impartiality. All contractor interviewees stated that

this would not prevent them from bringing safety concerns to the licensee's attention and they did not fear retaliation for bringing up safety concerns.

Issues received by the licensee's ECP, or Entergy safety hotline, which involve contractor personnel are usually forwarded to the contractor's ECP for resolution. The licensee provides the concerned individual with a case number that can be used by the concerned individual to monitor the case status. The team noted that the contractor's ECP has not consistently provided the results of their review to the licensee's ECP such that the licensee can provide a response to the individuals who raised the concern.

3. Preventing or Mitigating Perceptions of Retaliation

When asked if there have been any instances where individuals experienced retaliation or other negative reaction for raising issues, all individuals interviewed stated that they had neither experienced nor heard of an instance of retaliation, harassment, intimidation or discrimination at the site. The team determined that processes in place to mitigate these issues were being successfully implemented.

.5 Findings

Failure to enter a condition adverse to quality into the Corrective Action Program

Introduction. The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify and correct a condition adverse to quality by entering it into the corrective action program for resolution. Specifically, the licensee failed to identify and correct the potential for safety-related Standby Service Water fans to rotate backwards under certain design conditions, which could affect their ability to perform their safety function when needed.

Description. In 2011, as part of a pre-NRC Component Design Basis Inspection assessment (LO-GLO-2011-0176), the licensee initiated an action to "determine if the SSW fans have been evaluated for trips on reverse rotation from tornado winds." The SSW fans are large safety-related cooling tower fans that are credited in the licensee's current licensing basis for cooling the ultimate heat sink during design basis events, including tornados. The licensee identified a possible oversight in the design basis in that the fans did not have anti-rotation devices installed on them. This could result in reverse rotation of the fans during a tornado event, which may cause the fans to trip on overcurrent during startup due to the excessive starting current needed to overcome the reverse rotation.

In May of 2012, the licensee documented a response stating that no evaluations for this issue existed. Under that same assessment, the licensee initiated a new action to "provide an evaluation of the reverse rotation for the SSW cooling tower fans." The evaluation was completed in January 2015, with the response stating, "The analysis was unsuccessful at justifying reverse rotation on the SSW cooling tower fans." The only action taken was to initiate Site Integrated Planning Database (SIPD) 3127 request for funds to install anti-rotation devices on the fans. That SIPD states, "This will address the design basis tornado issue for cooling tower fan reverse rotation."

Licensee procedure EN-LI-102 "Corrective Action Program," Revision 24, Step 5.2[1](d)(3), states that individuals must promptly document adverse conditions on a condition report. In that same procedure, Step 3.0[2] defines adverse conditions to include conditions adverse to quality, Step 3.0[6] states that a condition adverse to quality includes nonconformance that have the potential to affect the safety-related functions of SSCs. Despite acknowledging this nonconformance with the design basis, the licensee failed to initiate a condition report for the adverse condition or perform an operability determination.

In September 2015, the team discovered that no actions to implement an anti-rotation device on the SSW fans had been taken and questioned the licensee about what actions were planned to ensure the system remained operable during a tornado event. The team further discovered that this adverse condition, which was also a condition adverse to quality, had not been entered into the licensee's corrective action program. Based on discussions with the team, the licensee initiated a condition report and entered this condition into the corrective action program. The team determined that the failure to enter a condition adverse to quality into the corrective action program was a performance deficiency.

The licensee performed a new analysis utilizing additional data not used in the January 2015 analysis. The new analysis showed that the maximum amount of reverse rotation for the SSW fans was approximately one revolution per minute during a design basis tornado event. This amount of reverse rotation was not enough to cause an overcurrent trip of the fan during startup.

Analysis. The failure to enter a condition adverse to quality into the corrective action program as required by EN-LI-102, "Corrective Action Program," Revision 24, is a performance deficiency. This performance deficiency is more than minor because it is associated with the design control attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, not evaluating an identified nonconformance resulted in the failure to ensure the capability of a safety-related SSC to respond reliably during anticipated events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the team determined that the finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating structure, system, or component, and did not result in a loss of operability or functionality; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of at least a single train for longer than its technical specification allowed outage time, or two separate safety systems out-of-service for longer than their technical specification allowed outage time; and (4) did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety significant in accordance with the licensee's maintenance rule program. The team determined that this finding has a cross-cutting aspect associated with problem identification, specifically, individuals failed to ensure that the issue was reported and documented in the corrective action program at a low threshold [P.1].

Enforcement. Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance are promptly identified and corrected. Contrary to the above, from January 2015 to October 2015, the licensee failed to promptly identify and correct a condition adverse to quality. Specifically, licensee engineers determined that the safety-related Standby Service Water cooling tower fans were susceptible to reverse rotation due to high winds from a tornado, a nonconforming condition, and failed to enter it into their corrective action program or take action to correct the condition. Because this finding was determined to be of very low safety significance and has been entered into the licensee's corrective action program as Condition Report CR-GGN-2015-05509, this violation is being treated as a non-cited violation (NCV) consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000416/2015008-01, "Failure to Enter a Condition Adverse to Quality into the Corrective Action Program."

b. Failure to Promptly Initiate Condition Reports

Introduction. The team identified five examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly identify and correct conditions adverse to quality. Specifically, on October 8, 2015, the team identified five conditions adverse to quality where the licensee failed to initiate a condition report in a prompt/timely manner. The five conditions adverse to quality were associated with: (1) the short circuit analysis for the 480V motor control center breakers; (2) emergency diesel generators minimum and maximum frequency; (3) emergency diesel generators fuel consumption rate; (4) Division 3 Emergency Diesel Generator load shedding test; and (5) 120V AC power system calculations.

Description. Per the requirements in 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action Program," the licensee established measures to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance are promptly identified and corrected in station procedure EN-LI-102, "Corrective Action Program," Revision 24. This procedure provides instructions for the administration of the Entergy [licensee] Corrective Action Program, including the identification, reporting, evaluation, and correction of a broad range of problems, areas for improvement, and standard performance deficiencies. Issues addressed in the Corrective Action Program must include Adverse Conditions and Conditions Adverse to Quality. Station personnel that identify adverse conditions including conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance are required to promptly/timely initiate condition reports.

The team identified five examples in which station personnel failed to promptly/timely initiate condition reports following discovery of a condition adverse to quality:

- During the NRC's Component Design Basis Inspection (CDBI) (see inspection report IR 05000416/2015007), conducted July through October 2015, the NRC identified an issue of concern to the licensee on August 10, 2015, associated with short circuit analysis on the 480V MCC breakers. The licensee did not initiate Condition Report CR-GGN-2015-04607 until August 11, 2015.

Furthermore, Condition Report CR-GGN-2015-04607 did not completely address the concern. The licensee initiated another Condition Report CR-GGN-2015-04934 on August 26, 2015, to document the entire NRC-identified issue of concern. The team determined that from August 10, 2015, until August 26, 2015, the licensee failed to write an appropriate condition report to describe an adverse condition that affects safety related plant equipment, which is a condition adverse to quality.

- During the CDBI, the NRC identified an issue of concern to the licensee on July 30, 2015, associated with Grand Gulf diesel generators minimum and maximum frequencies. The licensee did not initiate Condition Report CR-GGN-2015-04609 until August 11, 2015. The team determined that from July 30, 2015 until August 11, 2015, the licensee failed to write an appropriate condition report to describe an adverse condition that affects safety related plant equipment, which is a condition adverse to quality.
- During the CDBI, the NRC identified an issue of concern to the licensee on August 10, 2015, associated with Grand Gulf diesel generators fuel consumption rate due to inaccurate pump power/load data (licensee documents did not accurately capture loads on the diesel generator busses). The licensee did not initiate Condition Report CR-GGN-2015-04611 until August 11, 2015. The team determined that for one day the licensee failed to write an appropriate condition report to describe an adverse condition that affects safety related plant equipment, which is a condition adverse to quality.
- During the CDBI, the NRC identified an issue of concern to the licensee on August 10, 2015, associated with the Division 3 Emergency Diesel Generator load-shedding test as required per surveillance requirement 3.8.1.9. The licensee did not initiate Condition Report CR-GGN-2015-04627 until August 12, 2015. The team determined that for two days the licensee failed to write an appropriate condition report to describe an adverse condition that affects safety related plant equipment, which is a condition adverse to quality.
- During the CDBI, the NRC identified an issue of concern to the licensee on August 10, 2015, associated with the 120V AC power system calculations. The licensee initiated Condition Report CR-GGN-2015-04647 on August 10, 2015, however the condition report did not adequately address the entire NRC concern. Therefore, the licensee amended Condition Report CR-GGN-2015-04647 using administrator rights to address the entire NRC issue of concern on August 14, 2015. The team determined that from August 10, 2015, until August 14, 2015, the licensee failed to write an appropriate condition report to describe an adverse condition that affects safety related plant equipment, which is a condition adverse to quality.

The team also identified one example in which station personnel failed to promptly/timely initiate a condition report following the discovery of an adverse condition:

- During the CDBI, the NRC identified an issue of concern to the licensee on August 14, 2015, associated with the total available Condensate Storage Tank volume available during a station blackout condition. The licensee did not initiate

Condition Report CR-GGN-2015-04733 until August 18, 2015. The team determined that from August 14, 2015, until August 18, 2015, the licensee failed to write an appropriate condition report to describe an adverse condition affecting plant equipment and design calculations. The condensate storage tank is not a safety-related component at Grand Gulf Nuclear Station; therefore, this condition was not a condition adverse to quality.

Analysis. The failure to promptly identify conditions adverse to quality and enter them into the corrective action program by initiating a condition report in a prompt/timely manner as required by Section 5.2[3] of EN-LI-102, "Corrective Action Program," Revision 24, is a performance deficiency. This performance deficiency is more than minor, and therefore a finding, because the examples are associated with the design control 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. Specifically, not entering adverse conditions on safety-related structures systems and components (a condition adverse to quality) into the licensee's corrective action program by a prompt/timely initiation of a condition report once an Adverse Condition has been identified, was not done in a prompt/timely manner as required per Section 5.2[3] of EN-LI-102, Revision 24. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and Inspection Manual Chapter 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the team determined that the finding is of very low safety significance (Green) because it: (1) was not a deficiency affecting the design or qualification of a mitigating structure, system, or component, and did not result in a loss of operability or functionality; (2) did not represent a loss of system and/or function; (3) did not represent an actual loss of function of at least a single train for longer than its technical specification allowed outage time, or two separate safety systems out-of-service for longer than their technical specification allowed outage time; and (4) did not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program. The team determined that this finding has a cross-cutting aspect of training, in that the organization did not provide training or ensure knowledge transfer to maintain a knowledgeable, technically competent workforce and instill nuclear safety values. Specifically, when the NRC identified the five conditions adverse to quality to licensee personnel, the licensee personnel did not recognize these conditions required prompt/timely initiation of a condition report [H.9].

Enforcement. Title 10 Code of Federal Regulations Part 50, Appendix B, Criterion XVI, "Corrective Action," requires that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance are promptly identified and corrected. The licensee established procedure EN-LI-102, "Corrective Action Program," Revision 24, which required prompt/timely initiation of a CR once an adverse condition has been identified. Adverse conditions include conditions adverse to quality. Contrary to the above, five examples of conditions adverse to quality described in Condition Report CR-2015-4607/4934, 4609, 4611, 4627, and 4647, and one example of an adverse condition described in Condition Report CR 2015-4733, were not promptly identified and entered into the corrective action program by initiating a condition report in a prompt/timely manner. Because this finding is determined to be of very low safety

significance and has been entered into the licensee's corrective action program as Condition Report CR-GGN-2015-5550, this violation is being treated as a non-cited violation consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000416/2015008-02, "Failure to Promptly Initiate Condition Reports."

c. Failure to Declare Secondary Containment Inoperable Based on Failed Surveillance Testing

Introduction. The team identified a non-cited violation of Technical Specification 3.6.4.1 Condition A, for the failure to declare secondary containment inoperable. Specifically, on August 1, 2015, the licensee failed to declare secondary containment inoperable after it failed to achieve the necessary vacuum to pass Surveillance Requirement 3.6.4.1.4.

Description. On August 1, 2015, the licensee tested secondary containment using Attachment II of Procedure 06-OP-1T48-R-0002, "Standby Gas Treatment System A," Revision 115, as required per Surveillance Requirement 3.6.4.1.3 and 3.6.4.1.4. The test started at 9:45 PM. Per Surveillance Requirements 3.6.4.1.3 and 3.6.4.1.4, secondary containment must reach at least 0.311 inch of vacuum water gage within 180 seconds and maintain the vacuum of 0.311 inch for one hour. [NOTE: The surveillance requirement has 0.25 inch of vacuum water gage criteria; however, .311 inch of vacuum water gage is required to account for the absence of the assumed failures in 2 inch or smaller non-qualified lines and other analyzed failures under test conditions.]

During the test, the secondary containment system was not able to maintain the 0.311 inch of water gage during the entire test (at 10:46 PM, the measured vacuum was 0.305 inch of vacuum water gage). Although the data package documents included in the completed attachment for surveillance procedure 06-OP-1T48-R-0002, Revision 115, concluded the technical specification acceptance criteria was unacceptable, the licensee failed to declare secondary containment inoperable, as required per surveillance requirement 3.0.1, and immediately take actions as required in Technical Specification 3.6.4.1. The Attachment II test configuration is with the 1A319A door (Railroad Bay to Outside) open, and the 1A310 and 1A312 (Auxiliary Building to Railroad Bay) doors closed.

The licensee was able to restore secondary containment to operable status, within the 4-hour action time, when they were able to close the 1A319 door at 0016 on August 2 2015 after the failed surveillance test. Therefore, the total amount of secondary containment inoperability time was 1.5 hours (from 10:46 PM on August 1, 2015, until 12:16 AM on August 2, 2015).

The licensee entered this issue into their corrective action program by initiating Condition Report CR-GGN-2015-05826.

Analysis. The failure to declare secondary containment inoperable due to failed surveillance test and enter the appropriate action statements as required by the licensee's technical specifications is a performance deficiency. This deficiency is more than minor, and therefore a finding, because it is associated with the SSC and barrier performance attribute of the Barrier Integrity cornerstone. Specifically, the failure to declare secondary containment inoperable and take actions as required in Technical Specification Limiting Condition for Operation 3.6.4.1, Condition A, within four hours,

adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," and Inspection Manual Chapter 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," dated July 1, 2012, the team determined that the finding is of very low safety significance (Green) because it only represented a degradation of the radiological barrier function provided for the auxiliary building secondary containment. The team determined that this finding has a cross-cutting aspect associated with avoid complacency, in that individuals did not recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Although the surveillance test was documented as Technical Specification Acceptance Criteria Unacceptable because it did not meet the criteria defined in test procedure 06-OP-1T48-R-0002, "Standby Gas Treatment A Logic and Vacuum Test," Revision 115, the licensee did not identify it as a failed surveillance test that affected secondary containment operability [H.12].

Enforcement. Technical Specification Limited Condition of Operation 3.6.4.1, Condition A is required to be entered per Surveillance Requirement 3.0.1 for failed secondary containment surveillance testing. Contrary to the above on August 1, 2015, the licensee failed secondary containment surveillance testing, and failed to declare secondary containment inoperable and enter Technical Specification Limited Condition of Operation 3.6.4.1 condition A. Because this finding is determined to be of very low safety significance and has been entered into the licensee's corrective action program as Condition Report CR-GGN-2015-05826, this violation is being treated as a non-cited violation consistent with Section 2.3.2.a, of the NRC Enforcement Policy: NCV 05000416/2015008-03, "Failure to Declare Secondary Containment Inoperable Based on Failed Surveillance Testing."

d. Failure to Make Required Event Notification

Introduction. The team identified two examples of a Severity Level (SL) IV non-cited violation of 10 CFR 50.72(b)(3)(v)(C), for the failure to make an eight-hour report to the NRC for a condition that prevented the fulfillment of the safety function needed to control the release of radioactive material. Specifically, on August 1, 2015, and again on October 1, 2015, after failed secondary containment surveillance tests, the licensee failed to make an eight-hour report to the NRC for the loss of secondary containment barrier safety function needed to control the release of radioactive material.

Description. On August 1, 2015, the licensee tested secondary containment using Attachment II of Procedure 06-OP-1T48-R-0002, "Standby Gas Treatment System A," Revision 115 as required per Surveillance Requirement 3.6.4.1.3 and 3.6.4.1.4. Per Surveillance Requirements 3.6.4.1.3 and 3.6.1.4, secondary containment must reach at least 0.311 inch of vacuum water gage within 180 seconds and maintain the vacuum of 0.311 inch for one hour. The test started at 9:45 PM. During the test, the secondary containment system was not able to maintain the 0.311 inch of vacuum water gage during the entire test (at 10:46 PM the measured vacuum was 0.305 inch of vacuum water gage). Although the data package documents included in the completed attachment for surveillance procedure 06-OP-1T48-R-0002, Revision 115, concluded the technical specification acceptance criteria was unacceptable, the licensee failed to declare secondary containment inoperable, as required per Surveillance Requirement

3.0.1, and immediately take actions as required in Technical Specification 3.6.4.1 (see previous violation above). The attachment II test configuration is with the 1A319A door (Railroad Bay to Outside) open, and the 1A310 and 1A312 (Auxiliary Building to Railroad Bay) doors closed. The licensee was able to restore secondary containment to operable status, within the 4-hour action time, when they closed the 1A319 door at 12:16 AM on August 2, 2015 after the failed surveillance test. Therefore, the total amount of secondary containment inoperability time was 1.5 hours, from 10:46 PM on August 1, 2015, until 12:16 AM on August 2, 2015.

On October 1, 2015, the licensee tested secondary containment using Attachment III of Procedure 06-OP-1T48-R-0003, "Standby Gas Treatment B Logic and Vacuum Test," Revision 116, as required in Surveillance Requirement 3.6.4.1.3 and 3.6.4.1.4. The test started at 2:00 AM. During the test, the secondary containment system was not able to maintain the 0.311 inch of vacuum water gage during the entire test. At 2:54 AM, the measured vacuum was 0.25 inch of vacuum water gage and at 3:54 AM, the measured vacuum was 0.30 inch of vacuum water gage. Immediately following the completed surveillance test, the licensee declared secondary containment inoperable, as required per Surveillance Requirement 3.0.1, and immediately took actions as required in Technical Specification 3.6.4.1. The attachment III test configuration is with the 1A319A door (Railroad Bay to Outside) closed, and the 1A310 and 1A312 (Auxiliary Building to Railroad Bay) doors open. The licensee was able to restore secondary containment to operable status, within the 4-hour action time, when they were able to close the 1A310 and 1A312 doors at 4:40 AM on October 1, 2015. Therefore, the total amount of secondary containment inoperability time was about 1.75 hours, from 2:54 AM until 4:40 AM on October 1, 2015.

The team determined that the licensee failed to recognize that the two failed surveillance tests resulted in the loss of the secondary containment safety function. Therefore, each occurrence was an event or condition that could have prevented fulfillment of a safety function. Specifically, the inoperable secondary containment resulted in the loss of the containment barrier safety function needed to control the release of radioactive material. Therefore, the licensee was required to make an eight-hour report to the NRC in accordance with 10 CFR 50.72(b)(3)(v)(C).

Analysis. The failure to report a condition that could have prevented the fulfillment of a system's safety function as required by 10 CFR 50.72(b)(3)(v)(C) is a performance deficiency. This performance deficiency was screened using Inspection Manual Chapter 0612 and was determined to be minor in the Reactor Oversight Process. However, due to the performance deficiency affecting the NRC's ability to perform its regulatory oversight function, this performance deficiency was evaluated for traditional enforcement in accordance with the NRC Enforcement Policy. This performance deficiency was determined to be a Severity Level IV violation in accordance with Section 6.9.d.9 of the NRC Enforcement Policy, dated February 4, 2015. No cross-cutting aspect was assigned to this violation because no Reactor Oversight Process finding exists.

Enforcement. Title 10 of the Code of Federal Regulations Part 50.72(b)(3)(v)(C), requires, in part, that licensees shall notify the NRC within eight hours of the occurrence of an event or condition that at the time of discovery could have prevented the fulfillment of the safety function of systems that are needed to control the release of radioactive material. Contrary to this requirement, on August 2, 2015 and October 1, 2015, the

licensee failed to report to the NRC a condition that could have at the time of discovery, prevented secondary containment from fulfilling its safety function. This deficiency was identified by the NRC and presented to the licensee on October 7, 2015. The licensee made Event Notification 51459 on October 7, 2015. Because this violation was placed into the licensee's corrective action program as Condition Reports 2015-5826, 5840, and 5862, safety system function was restored within a reasonable amount of time, the violation was not repetitive, or willful, this Severity Level IV violation is being treated as a non-cited violation, consistent with Section 2.3.2.a of the Enforcement Policy: NCV 05000416/2015008-04, "Failure to Make Required Event Notification."

40A6 Meetings, Including Exit

Exit Meeting Summary

On October 8, 2015, the team presented the inspection results to Mr. Kevin Mulligan, Site Vice President Operations, and other members of the licensee's staff. The licensee acknowledged the findings presented. The licensee confirmed the return of any proprietary information reviewed by the team.

ATTACHMENTS:

1. Supplemental Information
2. Information Request

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Booth, Employee Concerns Coordinator
H. Cannon, Corrective Actions Specialist, Performance Improvement
T. Coutu, Director, Regulatory Assurance and Performance Improvement
J. Hallenbeck, Manager, Design Engineering
R. Meister, Licensing Specialist, Regulatory Assurance
R. Meyer, Assistant Manager, Operations
R. Miller, Manager, Radiation Protection
J. Nadeau, Manager, Regulatory Assurance Manager
K. Price, Performance Improvement Specialist
P. Salgado, Manager, Performance Improvement

NRC Personnel

M. Young, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

| | | |
|---------------------|-----|---|
| 05000416/2015008-01 | NCV | Failure to Enter a Condition Adverse to Quality into the Corrective Action Program (Section 4OA2.5.a) |
| 05000416-2015008-02 | NCV | Failure to Promptly Initiate Condition Reports (Section 4OA2.5.b) |
| 05000416-2015008-03 | NCV | Failure to Declare Secondary Containment Inoperable Based on Failed Surveillance Testing (Section 4OA2.5.c) |
| 05000416-2015008-04 | NCV | Failure to Make Required Event Notification (Section 4OA2.5.d) |

LIST OF DOCUMENTS REVIEWED

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision</u> |
|----------------------|--|------------------------|
| 01-S-07-47 | Maintenance Program Management and Health Reporting | 0 |
| 04-1-01-P41-1 | System Operating Instruction, Standby Service Water System | 139 |
| 05-S-02-VI-3 | Earthquake | 114 |
| 06-OP-1E51-Q-0003-01 | RCIC System Quarterly Pump Operability Verification | 136 |

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision</u> |
|-------------------|--|-----------------|
| 06-OP-1P41-Q-0004 | Standby Service Water Loop A Valve and Pump Operability Test | 122 |
| 06-OP-1P41-Q-0005 | Standby Service Water Loop B Valve and Pump Operability Test | 122 |
| 06-OP-1P41-Q-0006 | HPCS Service Water System Valve and Pump Operability Test | 114 |
| 06-OP-1T48-R0002 | Standby Gas Treatment A Logic and Vacuum Test | 115 |
| 06-OP-1T48-R0003 | Standby Gas Treatment B Logic and Vacuum Test | 116 |
| 10-S-01-38 | EAL Contingency Planning | 4 |
| 10-S-01-39 | Grand Gulf Equipment Important to Emergency Response | 4 |
| EN-EC-100 | Guidelines for Implementation of the Employee Concerns Program | 8 |
| EN-DC-136 | Temporary Modifications | 12 |
| EN-DC-143 | Engineering Health Reports | 18 |
| EN-DC-143 | Engineering Health Reports | 18 |
| EN-DC-143-01 | System and Component Health Report Supplemental Guidance | 12 |
| EN-DC-143-02 | Program Health Report Supplemental Guidance | 4 |
| EN-DC-148 | Vendor Manuals and the Vendor Re-Contact Process | 5 |
| EN-DC-149 | Acceptance of Vendor Documents | 10 |
| EN-DC-206 | Maintenance Rule (a)(1) Process | 3 |
| EN-DC-316 | Heat Exchanger Performance and Condition Monitoring | 7 |
| EN-DC-340 | Microbiologically Influenced Corrosion (MIC) Monitoring Plan | 3 |
| EN-DC-343 | Underground Piping and Tanks Inspection and Monitoring Plan | 9 |
| EN-FAP-QV-300 | Vulnerability Review Process | 0 |
| EN-LI-102 | Corrective Action Program | 24 |
| EN-LI-104 | Self-Assessment and Benchmark Process | 11 |
| EN-LI-118 | Cause Evaluation Process | 21 |
| EN-LI-119 | Apparent Cause Evaluation Process | 17 |
| EN-MA-105 | Control of Measuring and Test Equipment (M&TE) | 11 |

Procedures

| <u>Number</u> | <u>Title</u> | <u>Revision</u> |
|---------------|---|-----------------|
| EN-OE-100 | Operating Experience Program | 24 |
| EN-OE-100-01 | IER Level 1 and Level 2 Evaluations and Effectiveness Reviews | 1 |
| EN-OE-100-02 | Operating Experience Evaluations | 1 |
| EN-OP-104 | Operability Determination Process | 9 |
| EN-OP-115 | Conduct of Operations | 15 |
| EN-PL-187 | Safety-Conscious Work Environment Policy | 2 |
| EN-PL-190 | Maintaining a Strong Safety Culture | 3 |
| EN-QV-108 | QA Surveillance Process | 10 |
| EN-QV-109 | Audit Process | 30 |
| EN-QV-136 | Nuclear Safety Culture Monitoring | 5 |
| EN-WM-100 | Work Request (WR) Generation, Screening and Classification | 10 |
| SEP-UIP-GGN | Underground Components Inspection Plan | 3 |

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------------|---|----------------------|
| | 2015 GGNS Audits | 7 |
| | 2016 Entergy Audits | 0 |
| AR 155462 | Based on PMOS PM Task Basis, 1E51K603IPWSUP should be replaced on a 12-year frequency to prevent age related failures. Based on site OE (CR-GGN-2012-6661), the 12-year (A31) replacement frequency is not adequate to prevent age related failures. The frequency of PMRQ should be changed to 10 year (A27) to prevent similar age related failures reported in CR-GGN-2012-6661. | |
| DCP 8810034 | Corrosion Monitoring of Standby Service Water "A" and "B" | 0 |
| E-1081-002 | MCC Tabulation 480V ESW MCC 15B11 Aux. Building | 35 |
| EC 839 | Permanent Installation of the SSW Corrosion Monitoring Coupon Installation | 1 |
| ER-GG-2001-0339-000 | Evaluation of a Replacement 250VA Inverter for E51K603 RCIC | 0 |

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|----------------------|---|----------------------|
| GIN 97-01830 | Loose Item Evaluation for Corrosion Rack and Deposit Monitor in SSW Valve Rooms A & B | September 23, 1997 |
| PAD | EC 839 | 0 |
| PM Basis Template | EN-Turbine-Terry-Solid Wheel with Mech/Hydr Controls | June 8, 2009 |
| SDC-E51 | Reactor Core Isolation Cooling System | 3 |
| System Health Report | E51 - Reactor Core Isolation Cooling | Q2-2015 |
| VMA 99/0019 | Terry Steam Turbine, RCIC Section 9 | March 1, 1976 |
| GGNS-ME-08-AMM09 | Aging Management Review of the Reactor Core Isolation System | 1 |
| SWEL1-007 | Seismic Walkdown Checklist: SSW Motor A & SSW Pump A | September 24, 2012 |
| SIPD-3127 | Install fan anti-rotation devices on the SSW Cooling tower fans | January 26, 2015 |
| EC 10152 | SSW Cooling Tower Fan 1P41C003B | 0 |
| LO-GLO-2011-0176 | 2011-ES Pre-NRC CDBI Inspection Assessment | November 17, 2011 |
| Q2-2015 | System Health Report: Standby Service Water | June 30, 2015 |
| | Key Vendor List | |
| | Quality Assurance Program Manual | 29 |
| | [Maintenance System] Expert Panel Meeting Agenda | August 20, 2015 |
| | Potential Technical Specification PTS-13-0083 | |
| | Operations Logs | August 1,2015 |
| | Operations Logs | October 1, 2015 |
| | Operations Logs | October 2, 2015 |
| | Remote Shutdown System (a)(1) Action Plan | |
| | Reactor Core Isolation Cooling System (a)(1) Action Plan | |
| | Plant Air System (a)(1) Action Plan | |
| | Main Transformer System (a)(1) Action Plan | |
| | Main Generator (a)(1) Action Plan | |
| | Containment Isolation System (a)(1) Action Plan | |

Miscellaneous

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|---|----------------------|
| | Reactor Core Isolation Cooling Second Quarter 2015 System Health Report | |
| | Plant Air System Second Quarter 2015 System Health Report | |
| | Main Transformer System Second Quarter 2015 System Health Report | |
| | Main Generator Second Quarter 2015 System Health Report | |
| | Containment Isolation Second Quarter 2015 System Health Report | |

Root Cause Evaluations (RCEs)

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|-------------------|--|----------------------|
| CR-GGN-2012-10454 | GGNS Not Effectively Managing Integrated Risk | October 9, 2012 |
| CR-GGN-2013-07734 | Reactor Core Isolated Cooling System Inadvertent Loss of Safety Function | December 17, 2013 |
| CR-GGN-2014-00273 | Security event | February 21, 2014 |
| CR-GGN-2014-02219 | Uncontrolled Highly Irradiated Material | October 24, 2014 |
| CR-GGN-2014-03131 | Unintended Reactor SCRAM due to Load Reject Relay Fault | June 1, 2014 |
| CR-GGN-2014-05332 | Fatigue Management Program | August 26, 2014 |
| CR-GGN-2014-05887 | Leader and Organizational Performance Improvement | August 28, 2015 |
| CR-GGN-2015-00801 | Transformer Differential Relay Actuation SCRAM | February 17, 2015 |

Apparent Cause Evaluations (ACEs)

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|-------------------|---|----------------------|
| CR-GGN-2010-06850 | On 9/21/2010, while performing 06-OP-1E51-Q-0003, Reactor Core Isolation Cooling (RCIC) failed to achieve 800 gpm at pressure greater than reactor pressure, and was declared inoperable. | March 24, 2012 |
| CR-GGN-2012-05577 | 1E51F063 Failed LLRT due to pressure seal leak | May 8, 2012 |
| CR-GGN-2012-06661 | RCIC Inverter Failure | March 27, 2013 |
| CR-GGN-2013-04427 | Reactor Core Isolation Cooling System | August 12, 2013 |

Suppression Pool Suction Valve Closure During
I&C Surveillance

CR-GGN-2014-06792 1E31N083B Sensing Lines Failure January 5, 2015

Quality Assurance Audit Reports (QAARs)

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|------------------|---|----------------------|
| QA-1-2014-HQN-1 | Access Authorization/Fitness for Duty | September 16, 2014 |
| QA-4-2014-GGN-1 | Design Engineering | April 14, 2014 |
| QA-5-2014-HQN-1 | Document Control and Records | November 13, 2014 |
| QA-7-2014-GGN-1 | Emergency Plan | May 29, 2014 |
| QA-9-2014-GGN-1 | Fire Protection | February 26, 2014 |
| QA-20-2014-GGN-1 | Independent Spent Fuel Storage Installation (ISFSI) | September 12, 2014 |
| QA-16-2014-HQN-1 | Security Programs and Cyber Security | February 18, 2015 |
| QA-19-2014-GGN-1 | Training | April 3, 2014 |
| QA-10-2014-GGN-1 | Maintenance Audit | June 30, 2014 |
| QA-11-2014-HQN-1 | Materials, Purchasing & Contracts (Including Procurement) | June 17, 2014 |
| QA-3-2015-GGN-1 | Corrective Action Program | July 9, 2015 |
| QA-7-2015-GGN-1 | Emergency Preparedness | May 11, 2015 |
| QA-8-2015-GGN-1 | Engineering Programs | April 6, 2015 |

Quality Assurance Surveillance Reports (QASRs)

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|-----------------|--|----------------------|
| QS-2013-GGN-034 | Nuclear Oversight Follow-Up Surveillance of Narrative log QAF CF-GGN-2013-05181 | December 9, 2013 |
| QA-2013-GGN-035 | QA Follow-up Surveillance of Escalation to GMPO CR CR-GGN-2013-03101 | December 12, 2013 |
| QS-2014-GGN-002 | QA Follow-up Surveillance of Escalation to Site VP CR-GGN-2013-05397 | January 21, 2014 |
| QS-2014-GGN-003 | Nuclear Oversight Follow-up Surveillance of CR-GGN-2012-0623, QAF on Heavy Lifts (3rd Follow-Up) | March 5, 2014 |
| QS-2014-GGN-004 | Nuclear Oversight Follow-up Surveillance of QAF CR-GGN-201 3-00527 | March 25, 2014 |

Quality Assurance Surveillance Reports (QASRs)

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|-----------------|--|----------------------|
| QS-2014-GGN-005 | Nuclear Oversight Follow-up Surveillance of rainwater intrusions into the Auxiliary Building QAF CR-GGN-2013-05352 | March 26, 2014 |
| QS-2014-GGN-006 | Nuclear Oversight Follow-up Surveillance of CR-GGN-2011-8227 and CR-GGN-2013-5813, QAF on the issue of improper machine guarding of rotating equipment | May 13, 2014 |
| QS-2014-GGN-007 | Nuclear Oversight (NOS) performed this surveillance to document the effectiveness of actions taken to address the 2013 INPO AFI's | April 30, 2014 |
| QS-2014-GGN-008 | Nuclear Oversight Follow-up Surveillance of Chemistry personnel are not writing condition reports to document some issues and trends QAF CR-GGN-2013-07690 | April 16, 2014 |
| QS-2014-GGN-010 | QA Follow-up Surveillance of Immediate Actions and Corrective Actions for CR-GGN-2012-10454 for Unplanned Plant Risk Condition EOOS Orange | May 13, 2014 |
| QS-2014-GGN-012 | Nuclear Oversight Follow-up Surveillance of CR-GGN-201 4-02186 (Hiring Managers were not ensuring that ANSI 3.1 qualifications were documented) | September 16, 2014 |
| QS-2014-GGN-013 | Nuclear Oversight Follow-up Surveillance of QAF CR-GGN-2014-4727 "The procedures and processes for tagging, segregating, and identifying non-conforming items are not always being implemented by Maintenance personnel" | October 6, 2014 |
| QS-2014-GGN-016 | Nuclear Oversight Follow-up Surveillance of Training Audit QAF CR-GGN-2014-3025 | November 20, 2014 |
| QS-2015-GGN-001 | Nuclear Oversight Follow-Up Surveillance for CR-GGN-2014-6955 (NOS Identified QAF) Work documents are not being transmitted to records as required by EN-WM-102 and 10 CFR 50 Appendix B Criterion XVII. | March 2, 2015 |
| QS-2015-GGN-003 | Nuclear Independent Oversight Follow-up Surveillance for CR-GGN-2014-5332 (NOS Identified OAF) work schedules and hours for covered employees are not being appropriately monitored and deficiencies are not identified and corrected to ensure proper implementation of the Fatigue Rule. | March 25, 2015 |

Quality Assurance Surveillance Reports (QASRs)

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|-----------------|--|----------------------|
| QS-2015-GGN-004 | Follow-Up Surveillance for CR-GGN-2014-5666 M&TE program failures AQAF from the 2014 Maintenance Audit. This AQAF was a repeat issue (ref CR-GGN-201 1-5239) | June 16, 2015 |
| QS-2015-GGN-005 | Nuclear Oversight Follow-Up Surveillance for CR-GGN-201 4-5887 (Mid Cycle AFI) Station leadership has missed opportunities to improve the station's performance through the use of performance improvement processes and programs. | March 25, 2015 |
| QS-2015-GGN-006 | Nuclear Oversight Follow-Up Surveillance for CR-GGN-2014-6916 the station is not implementing the requirements for vendor re-contact as described in EN-DC-148, "Vendor Manuals and the Vendor Re-Contact Process". | March 31, 2015 |
| QS-2015-GGN-007 | Nuclear Independent Oversight (NIOS) performed this surveillance to document the NIOS assessment of the effectiveness of actions taken to address | February 24, 2015 |

Condition Reports (CRs)

| | | | | |
|------------|------------|------------|------------|------------|
| 1999-00909 | 2013-07731 | 2014-07167 | 2015-03157 | 2015-04841 |
| 2007-05914 | 2013-07733 | 2014-07222 | 2015-03158 | 2015-04876 |
| 2009-01726 | 2013-07734 | 2014-07224 | 2015-03160 | 2015-04885 |
| 2010-01338 | 2013-07919 | 2014-07248 | 2015-03161 | 2015-04911 |
| 2010-01376 | 2014-00004 | 2014-07576 | 2015-03162 | 2015-04934 |
| 2010-02936 | 2014-00146 | 2014-07900 | 2015-03163 | 2015-04958 |
| 2010-04488 | 2014-00273 | 2014-07979 | 2015-03164 | 2015-04989 |
| 2010-06850 | 2014-01912 | 2014-08015 | 2015-03165 | 2015-05003 |
| 2010-06941 | 2014-02219 | 2014-08288 | 2015-03166 | 2015-05057 |
| 2011-00936 | 2014-02221 | 2014-08371 | 2015-03167 | 2015-05095 |
| 2011-01932 | 2014-02224 | 2014-08441 | 2015-03168 | 2015-05102 |
| 2011-03730 | 2014-02704 | 2015-00367 | 2015-03176 | 2015-05103 |
| 2011-03902 | 2014-02824 | 2015-00397 | 2015-03179 | 2015-05104 |
| 2011-04155 | 2014-02913 | 2015-00428 | 2015-03189 | 2015-05105 |
| 2011-05894 | 2014-02933 | 2015-00603 | 2015-03219 | 2015-05120 |

| | | | | |
|------------|------------|------------|------------|------------|
| 2011-06224 | 2014-02934 | 2015-00642 | 2015-03262 | 2015-05125 |
| 2011-07687 | 2014-02970 | 2015-00652 | 2015-03416 | 2015-05130 |
| 2011-09033 | 2014-03001 | 2015-00713 | 2015-03524 | 2015-05215 |
| 2011-09116 | 2014-03065 | 2015-00739 | 2015-03618 | 2015-05300 |
| 2011-09340 | 2014-03131 | 2015-00801 | 2015-03625 | 2015-05395 |
| 2011-09349 | 2014-03318 | 2015-00837 | 2015-03648 | 2015-05438 |
| 2012-00623 | 2014-03472 | 2015-00867 | 2015-03676 | 2015-05441 |
| 2012-04484 | 2014-03670 | 2015-01236 | 2015-03688 | 2015-05472 |
| 2012-05577 | 2014-04066 | 2015-01532 | 2015-03696 | 2015-05529 |
| 2012-06661 | 2014-04125 | 2015-01688 | 2015-03728 | 2015-05661 |
| 2012-08175 | 2014-04277 | 2015-01772 | 2015-03741 | 2015-05666 |
| 2012-09561 | 2014-04354 | 2015-01787 | 2015-03818 | 2015-05701 |
| 2012-10008 | 2014-04727 | 2015-01789 | 2015-03872 | 2015-05717 |
| 2012-10047 | 2014-04914 | 2015-01832 | 2015-03950 | 2015-05732 |
| 2012-10082 | 2014-05085 | 2015-01835 | 2015-03980 | 2015-05734 |
| 2012-10454 | 2014-05115 | 2015-01938 | 2015-04123 | 2015-05792 |
| 2012-12265 | 2014-05133 | 2015-02083 | 2015-04125 | 2015-05826 |
| 2013-00450 | 2014-05215 | 2015-02326 | 2015-04279 | 2015-05840 |
| 2013-00689 | 2014-05319 | 2015-02365 | 2015-04299 | 2015-05862 |
| 2013-00765 | 2014-05332 | 2015-02514 | 2015-04339 | 2015-05958 |
| 2013-01795 | 2014-05666 | 2015-02560 | 2015-04349 | |
| 2013-01979 | 2014-05740 | 2015-02591 | 2015-04403 | |
| 2013-02357 | 2014-05758 | 2015-02721 | 2015-04423 | |
| 2013-04427 | 2014-05887 | 2015-02725 | 2015-04475 | |
| 2013-04943 | 2014-05902 | 2015-02808 | 2015-04595 | |
| 2013-05416 | 2014-06369 | 2015-02867 | 2015-04607 | |
| 2013-05611 | 2014-06627 | 2015-02955 | 2015-04609 | |
| 2013-05902 | 2014-06650 | 2015-02956 | 2015-04611 | |
| 2013-07021 | 2014-06792 | 2015-02991 | 2015-04627 | |
| 2013-07032 | 2014-06873 | 2015-03040 | 2015-04647 | |
| 2013-07374 | 2014-06900 | 2015-03099 | 2015-04652 | |
| 2013-07508 | 2014-06908 | 2015-03139 | 2015-04710 | |

| | | | |
|------------|------------|------------|------------|
| 2013-07569 | 2014-07164 | 2015-03154 | 2015-04733 |
| 2013-07623 | 2014-07165 | 2015-03155 | 2015-04740 |
| 2013-07720 | 2014-07166 | 2015-03156 | 2015-04759 |

Condition Reports (CRs) – Generated During Inspection

| | | | | |
|------------|------------|------------|------------|---------------|
| 2015-05472 | 2015-05529 | 2015-05555 | 2015-05789 | 2015-05864 |
| 2015-05497 | 2015-05530 | 2015-05556 | 2015-05790 | 2015-05878 |
| 2015-05498 | 2015-05535 | 2015-05559 | 2015-05826 | 2015-05879 |
| 2015-05505 | 2015-05536 | 2015-05611 | 2015-05828 | 2015-06430 |
| 2015-05507 | 2015-05550 | 2015-05655 | 2015-05831 | HQN-2015-1082 |
| 2015-05509 | 2015-05551 | 2015-05705 | 2015-05834 | |
| 2015-05522 | 2015-05552 | 2015-05754 | 2015-05856 | |
| 2015-05526 | 2015-05553 | 2015-05788 | 2015-05862 | |

Work Orders/Work Requests

| | | | | |
|----------|----------|----------|----------|----------|
| 00206359 | 00206358 | 00252170 | 00327427 | 00323794 |
| 00340725 | 00402824 | 52574987 | 52592761 | 52623811 |

Drawings

| <u>Number</u> | <u>Title</u> | <u>Revision/Date</u> |
|---------------|---|----------------------|
| M-1061D | P&ID Diagram Standby Service Water System | 40 |
| M-1061C | P&ID Diagram Standby Service Water System | 38 |
| M-1061B | P&ID Diagram Standby Service Water System | 51 |

Information Request
Biennial Problem Identification and Resolution Inspection
Grand Gulf Nuclear
July 20, 2015

Inspection Report: 50-416/2015008
On-site Inspection Dates: September 21-25 & October 5-9, 2015

This inspection will cover the period from December 1, 2013, through October 9, 2015. All requested information is limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in word-searchable Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site; do not provide any sensitive or proprietary information electronically.

Lists of documents ("summary lists") should be provided in Microsoft Excel or a similar sortable format. Please be prepared to provide any significant updates to this information during the team's first week of on-site inspection. As used in this request, "corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to Grand Gulf Nuclear Station.

Please provide the following information no later than September 8, 2015:

1. ***Document Lists***

Note: For these summary lists, please include the document/reference number, the document title, initiation date, current status, and long-text description of the issue.

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary lists of all corrective action documents that were upgraded or downgraded in priority/significance during the period (these may be limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- d. Summary list of all corrective action documents initiated during the period that "roll up" multiple similar or related issues, or that identify a trend
- e. Summary lists of operator workarounds, operator burdens, temporary modifications, and control room deficiencies (1) currently open and (2) that were evaluated and/or closed during the period
- f. Summary list of safety system deficiencies that required prompt operability determinations (or other engineering evaluations) to provide reasonable assurance of operability
- g. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent) (sensitive information should be made available during the team's first week on site—do not provide electronically)

- h. Summary list of all Apparent Cause Evaluations completed during the period

2. ***Full Documents with Attachments***

- a. Root Cause Evaluations completed during the period; include a list of any planned or in progress
- b. Quality Assurance audits performed during the period
- c. Audits/surveillances performed during the period on the Corrective Action Program, of individual corrective actions, or of cause evaluations
- d. Functional area self-assessments and non-NRC third-party assessments (e.g., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- e. Any assessments of the safety-conscious work environment at Grand Gulf Nuclear Station
- f. Corrective action documents generated during the period associated with the following:
 - i. NRC findings and/or violations issued to Grand Gulf Nuclear Station
 - ii. Licensee Event Reports issued by Grand Gulf Nuclear Station
- g. Corrective action documents generated for the following, if they were determined to be applicable to Grand Gulf Nuclear Station (for those that were evaluated but determined not to be applicable, provide a summary list):
 - i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
 - ii. Part 21 reports issued or evaluated during the period
 - iii. Vendor safety information letters (or equivalent) issued or evaluated during the period
 - iv. Other external events and/or Operating Experience evaluated for applicability during the period
- h. Corrective action documents generated for the following:
 - i. Emergency planning drills and tabletop exercises performed during the period
 - ii. Maintenance preventable functional failures which occurred or were evaluated during the period

- iii. Adverse trends in equipment, processes, procedures, or programs that were evaluated during the period
- iv. Action items generated or addressed by offsite review committees during the period

3. ***Logs and Reports***

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization (if this information is fully included in item 3.c, it need not be provided separately)
- b. Corrective action effectiveness review reports generated during the period
- c. Current system health reports, Management Review Meeting package, or similar information; provide past reports as necessary to include ≥ 12 months of metric/trending data
- d. Radiation protection event logs during the period
- e. Security event logs and security incidents during the period (sensitive information should be made available during the team's first week on site—do not provide electronically)
- f. Employee Concern Program (or equivalent) logs (sensitive information should be made available during the team's first week on site—do not provide electronically)
- g. List of training deficiencies, requests for training improvements, and simulator deficiencies for the period

Note: For items 3.d–3.g, if there is no log or report maintained separate from the corrective action program, please provide a summary list of corrective action program items for the category described.

4. ***Procedures***

Note: For these procedures, please include all revisions that were in effect at any time during the period.

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures that implement the corrective action program at Grand Gulf Nuclear Station
- b. Quality Assurance program procedures (specific audit procedures are not necessary)
- c. Employee Concerns Program (or equivalent) procedures
- d. Procedures which implement/maintain a Safety Conscious Work Environment

5. **Other**

- a. List of risk-significant components and systems, ranked by risk worth
- b. Organization charts for plant staff and long-term/permanent contractors
- c. Matrix showing number of CRs initiated each month by significance classification
- d. Electronic copies of the UFSAR (or equivalent), technical specifications, and technical specification bases, if available
- e. For each day the team is on site,
 - i. Planned work/maintenance schedule for the station
 - ii. Schedule of management or corrective action review meetings (e.g. operations focus meetings, condition report screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)
 - iii. Agendas for these meetings

Note: The items listed in 5.d may be provided on a weekly or daily basis after the team arrives on site.

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector at Grand Gulf Nuclear Station; three additional copies should be provided to the team lead, to arrive no later than September 8, 2014:

Eric A. Ruesch
U.S. NRC Region IV 1600
East Lamar Blvd.
Arlington, TX 76011-4511

Finally, the team determined that your station's management maintains a safety-conscious work environment in which your employees are willing to raise nuclear safety concerns through at least one of the several means available. However, the team did identify that your long-term contractor personnel may be reluctant to raise concerns to the contractor's employee concerns program. These concerns were not due to the absence of a safety-conscious work environment within the contract work force, but rather the reduced confidence in the contractor's program to address employee concerns adequately.

The NRC inspectors documented four findings in this report. All four of these findings involved violations of NRC requirements. Three of the findings were determined to be of very low safety significance (Green) and one of the findings was determined to be a Severity Level IV violation under the traditional enforcement process.

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

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV; and the NRC resident inspector at the Grand Gulf Nuclear Station.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents 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/

Eric Ruesch, Acting Team Leader
Technical Support Services Team
Division of Reactor Safety

Docket Number: 50-416
License Number: NPF-29

Enclosure: Inspection Report 05000416/2015008
w/Attachment: Supplemental Information

ADAMS ACCESSION NUMBER: ML15324A432

| | | | | | | | |
|---|---|---------|---|-------------|---|-----------|---------------------|
| <input checked="" type="checkbox"/> SUNSI Review by: BKT | ADAMS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | <input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive | | <input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available | | Keyword: NRC-002 |
| OFFICE | SAO/DNMS | RI/DRP | RI/DRS | OE/DIRS/NRR | SRI/DRS | C:PBC/DRP | TL/TSS |
| NAME | BTharakan | NDay | JBraisted | ZHollcraft | HFreeman | GWarnick | ERuesch |
| SIGNATURE | /RA/ | email | email | email | email | /RA/ | /RA/ |
| DATE | 11/10/15 | 11/6/15 | 11/2/15 | 11/4/15 | 11/10/15 | 11/19/15 | 11/20/15 |

OFFICIAL RECORD COPY

Letter to Kevin Mulligan from Eric Ruesch dated, November 20, 2015

SUBJECT: GRAND GULF NUCLEAR STATION – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000416/2015008

Distribution

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DRP Deputy Director (Ryan.Lantz@nrc.gov)
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