



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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January 14, 2010

Mr. James R. Douet
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 05000416/2009008

Dear Mr. Douet:

On November 19, 2009, the U. S. Nuclear Regulatory Commission (NRC) completed the onsite portion of a team inspection at your Grand Gulf Nuclear Station. The enclosed report documents the inspection findings discussed with you and members of your staff during a teleconference held on December 3, 2009. A second teleconference was held on January 13, 2010, to discuss the characterization the reactor core isolation cooling system surveillance finding.

The inspection examined activities conducted under your license as they relate to identification and resolution of problems, safety and compliance with the Commission's rules and regulations and with the conditions of your operating license. The team reviewed selected procedures and records, observed activities, and interviewed personnel. The team also interviewed a representative sample of personnel regarding the condition of your safety conscious work environment.

This report documents one NRC-identified violation and one self-revealing violation of very low safety significance (Green). Both of these findings were determined to involve violations of NRC requirements. Additionally, one licensee-identified violation, which was determined to be of very low safety significance is listed in this report. However, because of the very low safety significance of the violations and because they were entered into your corrective action program, the NRC is treating these violations as noncited violations consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest these noncited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 612 E. Lamar Blvd., Suite 400, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at Grand Gulf Nuclear Station. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC Resident Inspector at Grand Gulf Nuclear Station. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web-site at www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Michael C. Hay, Chief
Technical Support Branch
Division of Reactor Safety

Dockets: 50-416
Licenses: NPF-29

Enclosures: Inspection Report 05000416/2009008
Attachment 1, Supplemental Information
Attachment 2, Initial Information Request

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000416
License: NPF-29
Report: 05000416/2009008
Licensee: Entergy Operations, Inc.
Facility: Grand Gulf Nuclear Station
Location: Waterloo Road
Port Gibson, MS
Dates: October 26 through December 3, 2009
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P. Goldberg, Reactor Inspector, Engineering Branch 1, DRS
E. Ruesch, Reactor Inspector, Plant Support Branch 2, DRS
Approved By: Michael C. Hay, Chief
Technical Support Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000416/2009008; November 3, 2007 - November 19, 2009:
Grand Gulf Nuclear Station "Biennial Baseline Inspection of the Identification and Resolution of Problems."

The report covers a 2-week period of inspection by a senior reactor inspector, two reactor inspectors, and a resident inspector. Two Green noncited violations were identified during this inspection. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG 1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Identification and Resolution of Problems

The team reviewed approximately 200 condition reports, work orders, engineering evaluations, root and apparent cause evaluations, and other supporting documentation to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The team reviewed a sample of system health reports, self-assessments, trending reports and metrics, and various other documents related to the corrective action program.

The inspectors concluded that the licensee was, in general, effective in identifying, evaluating, and resolving problems. Grand Gulf personnel were identifying and entering issues into the corrective action program at appropriately low thresholds as evidenced by a large number of condition reports issued; however, the team identified several minor deficiencies during walkdowns that had become masked to the employees due to the general lack of cleanliness in the plant. The team determined that the licensee generally screened issues appropriately for operability and reportability; however, five examples were identified where the licensee failed to perform an adequate operability determination. The team noted that issues were typically identified promptly and prioritized commensurate with their safety significance. Most root and apparent cause analyses appropriately considered extent of condition and previous occurrences. The team concluded that the corrective actions were generally identified and implemented promptly; however, the team noted several instances where corrective actions were not implemented or were cancelled. The team found that the licensee had established and was maintaining an environment at Grand Gulf where employees felt free to raise safety concerns without fear of retaliation.

The licensee appropriately evaluated industry operating experience for relevance to the facility and had entered applicable items in the corrective action program. The licensee used industry operating experience when performing root cause and apparent cause evaluations. The licensee performed effective quality assurance audits and self-assessments, as demonstrated by self-identification of corrective action program areas for improvement.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The team identified a noncited violation of Technical Specification Surveillance Requirement 3.5.3.1 because the licensee failed to establish an adequate procedure to demonstrate compliance with this surveillance requirement. This surveillance requires the licensee to “Verify the RCIC System piping is filled with water from the pump discharge valve to the injection valve,” every 31 days. To implement this requirement, the licensee vents the reactor core isolation cooling (RCIC) pump discharge leg from high point vents. However, the procedure failed to provide adequate qualitative or quantitative acceptance criteria to verify that the piping is maintained filled with water. This problem was previously documented in NRC Inspection Report 05000416/2007005 and entered into the corrective action program; however, the licensee failed to implement effective corrective actions.

The failure of the licensee to effectively implement the surveillance requirement was a performance deficiency. This finding is more than minor because it affects the procedure quality attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance because it did not represent the loss of a system safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather-initiating event. This finding has a crosscutting aspect in the corrective action program component of the problem identification and resolution area because the licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity [P.1(d)] (Section 40A2.5a).

Green. A noncited violation of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action,” was revealed on October 26, 2009, when potentially oil-impregnated insulation on the reactor core isolation cooling pump turbine began smoking during a monthly surveillance run. The reactor core isolation cooling pump turbine was shut down and the damaged insulation was removed and replaced. The maintenance technician indicated that the insulation was old and showed signs of possible oil impregnation; however, the licensee disposed of the insulation without performing an analysis. Oil-soaked insulation with a burn mark had previously been identified at a different location on the reactor core isolation cooling pump turbine on February 2, 2009. The licensee was unable to identify the source of the oil in either of these cases. Further, following a November 2008 fire in oil-soaked insulation on a reactor feed pump turbine, the licensee identified that the reactor core isolation cooling pump turbines were vulnerable to fire from similar causes due to a similar configuration. Corrective actions from the previous burnt insulation event and operating experience from the feed pump turbine both failed to prevent the October 26, 2009, smoke event.

Burning of insulation on turbine-driven pump turbines and the potential for creating a fire is a significant condition adverse to quality. The failure of the licensee to determine the cause and to prevent recurrence of a significant condition adverse to quality was a performance deficiency. This finding is more than minor because it affects the equipment performance attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the performance deficiency to be of very low safety significance (Green) because it did not represent the loss of a system safety function and did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event. This finding has a cross-cutting aspect in the operating experience component of the problem identification and resolution area because the licensee failed to implement and institutionalize operating experience on turbine insulation fires through changes to station processes, procedures, equipment, and training programs [P.2(b)] (Section 4OA2.5b).

B. Licensee-Identified Violation

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

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on the sample of corrective action documents that were initiated in the assessment period, which ranged from November 2, 2007, to the end of the on-site portion of this inspection on November 20, 2009.

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

a. Inspection Scope

The team reviewed approximately 200 condition reports, including associated root cause, apparent cause, and direct cause evaluations, from approximately 14,000 that had been issued between November 2, 2007, to November 20, 2009, to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The team reviewed a sample of system health reports, operability determinations, self-assessments, trending reports and metrics, and various other documents related to the corrective action program. The team evaluated the licensee's efforts in establishing the scope of problems by reviewing selected logs, work requests, self-assessments results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed work requests and attended the licensee's daily corrective action review board and management review committee meetings to assess the reporting threshold, prioritization efforts, and significance determination process, as well as observing the interfaces with the operability assessment and work control processes when applicable. The team's review included verifying the licensee considered the full extent of cause and extent of condition for problems, as well as how the licensee assessed generic implications and previous occurrences. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of similar problems. 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 also reviewed corrective action documents that addressed past NRC-identified violations to ensure that the corrective action addressed the issues as described in the inspection reports. The inspectors reviewed a sample of corrective actions closed to other corrective action documents to ensure that corrective actions were still appropriate and timely.

The team considered risk insights from both the NRC and Grand Gulf Nuclear Station risk assessments to focus the sample selection and plant tours on risk

significant systems and components. Based on this review, the team selected to focus on the reactor core isolation cooling system. The samples reviewed by the team focused on, but were not limited to, this system. The team also expanded their review to include five years of evaluations involving the reactor core isolation cooling system to determine whether problems were being effectively addressed. The team conducted a walkdown of this system to assess whether problems were identified and entered into the corrective action program.

b. Assessments

1. Assessment - Effectiveness of Problem Identification

In general, the team found that the licensee has been identifying problems and entering them into their corrective action program at appropriately low thresholds in accordance with the licensee's corrective action program guidance and NRC requirements. The team identified three examples that characterized failures of the licensee to document conditions into the corrective action program and missed opportunities for the licensee to identify problems and adverse trends. In addition, the NRC identified three other issues over the 2-year inspection period that were attributed to the licensee's failure to identify a condition adverse to quality. The licensee had written approximately 14,000 corrective action documents during the two-year period of review.

- The team found that plant personnel failed to identify an adverse trend in MOV over-thrusting events as required by the corrective action program procedure. The plant has had five valve overthrust events in the last 3 years on both safety and non-safety related valves (Condition Report CR-GGN-2009-05733).
- The team found that plant personnel failed to identify an adverse trend of high dew points in the Division I standby diesel generator starting air system as required by the corrective action program procedure. The plant has had eight condition reports documenting air samples that had exceeded the dew point limit in the inspection period (Condition Report CR-GGN-2008-06895).
- During a tour of important to safety pump rooms the team identified numerous minor deficiencies that had not been identified by the licensee. The deficiencies included debris and oil around the pumps in the reactor core isolation cooling room, water and oil under the Train A residual heat removal pump jockey pump, a field copy of a procedure, gloves located by the high pressure core spray room cooler, a piece of rope located in a radiologically controlled area, a rag found in a cable tray, and debris found under a sample sink. The team noted that the general housekeeping and cleanliness of the plant was poor. The licensee documented these deficiencies in Condition Report CR-GGN-2009-05717.

- The team identified flashing that had been pulled back from a reactor core isolation cooling pipe. Upon examination, the team identified corrosion on the schedule 120 piping that the licensee had not identified or evaluated. The licensee promptly documented the issue in Condition Report CR-GGN-2009-05699. Subsequent inspection and evaluation by the licensee concluded that the operability of the system was not impacted by the corrosion.
- The team reviewed a noncited violation for failure to properly inspect and repair door seals that protect safety-related equipment from probable maximum precipitation issued in February 2008. The finding documented that the licensee failed to identify the degraded door seals during their surveillance inspection (05000416/2008002-01).
- The team reviewed a noncited violation of License Condition 2.C.(41), "Fire Protection Program," related to making a plant change that negatively impacted the effectiveness of the approved Fire Protection Program. The licensee had permanently blocked the door to the abandoned Unit 2 portion of the joint control room without performing a fire protection impact evaluation. The only remaining access path was a small hatch that would have made it difficult for fire fighters to gain access with protective clothing and equipment. A fire in this area could threaten operations in the Unit 1 control room if not promptly suppressed. Fire protection personnel had recognized that a new access door was needed in 2006, but no substantial action had been taken to install one (05000416/2008006-03).
- The team reviewed a noncited violation of 10 CFR Part 50 Appendix B, Criterion V, involving the failure to properly clean and inspect the rooftop and associated water drainage systems of the safety-related diesel generator building. The inspectors identified loose, flexible roofing material that could have covered roof drains and result in loss of functionality for all of the standby diesel generators during a design basis heavy rainfall event (05000416/2009002-01).
- The team reviewed a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for failure to identify and correct a condition adverse to quality related to the seismic qualification of the Division III High Pressure Core Spray safety-related battery. Specifically, the licensee failed to identify an incorrectly installed end bracket after replacement of the Division III safety-related battery in 2002 using procedures, work instructions, and drawings that were supposed to have been corrected after this same issue was identified during a 1997 battery replacement activity (05000416/2009006-04).

2. Assessment - Effectiveness of Prioritization and Evaluation of Issues

The team concluded that the licensee continues to have weaknesses when performing and/or documenting evaluations of conditions adverse to quality during this assessment period. The team reviewed 37 condition reports that involved operability reviews to assess the quality, timeliness, and prioritization of operability assessments. The team identified weaknesses in the operability determinations in 18 percent of the condition reports and weaknesses in cause evaluations in approximately 15 percent of condition reports reviewed. In addition, five examples of inadequate operability determinations were identified over the two-year inspection period. While most initial operability determinations by operations were appropriate, the team identified several examples of poor or inadequate engineering follow-up to these initial determinations.

While the priorities assigned to identified issues was generally appropriate, the team determined that the licensee's categorization of issues was not always consistent. For example, a condition report which identified smoke coming from insulation on the reactor core isolation cooling pump turbine during a surveillance run was classified as a Category D and closed to actions completed. A similar condition which resulted in fire had previously been classified as a Category A and oil-soaked insulation found on the reactor core isolation cooling turbine which did not lead to smoke had been classified as Category B. This example is further discussed in Section 4OA2.5b of this report.

The team determined that the evaluation of issues was generally appropriate for the priority assigned. Evaluations were generally performed by an appropriate organization within the time period required by the licensee's corrective action program. For those evaluations which could not be performed in the required time periods, the licensee generally used appropriate procedures to extend deadlines with appropriate levels of management involvement.

Examples of Inadequate Evaluations

- The team reviewed a condition report that documented two particulate samples that showed high particulates levels in the automatic depressurization system air supply. The licensee performed an apparent cause investigation which concluded that aging and deteriorating dessicant in the plant air dryer system was passing through the system filters. However, the service air system has less restrictive filtration, and service air particulate samples showed no particulates. The team concluded that the licensee did not apply the appropriate rigor in the evaluation of apparent cause (Condition Report CR-GGN-2008-06985 and CR-GGN-2009-03720).
- The team found that the licensee failed to complete a procedurally required human performance error review for a wiring error that caused two motor-operated valves in the feedwater system to be overthrust (Condition Report CR-GGN-2009-05733).

- The team reviewed a condition report that described a control rod drive pump tripping on low suction pressure during a mode switch surveillance. The apparent cause evaluation identified the strainer as the apparent cause, however corrective actions to inspect the strainer showed no deficiencies in the strainer. No action was taken to revisit the initial cause determination evaluation (Condition Report CR-GGN-2008-04790).

Examples of Inadequate Operability Determinations

- The team found three examples of operability decisions that should have been classified as “OPERABLE - JUDGMENT” instead of “OPERABLE”: heat exchanger fouling of the auxiliary building room coolers (Condition Report CR-GGN-2007-04606), degraded standby service water flow to high pressure core spray room cooler (Condition Report CR-GGN-2008-02262), and damaged roofing material on the standby diesel generator building (Condition Report CR-GGN-2009-00429).
- The team reviewed a noncited violation of 10 CFR Part 50 Appendix B, Criterion V involving two examples of a failure to follow procedures which resulted in inadequate operability evaluations. The first example involved an inadequate evaluation of foreign material in the condensate storage tank. The evaluation relied on an assumption that the high-pressure core spray and reactor core isolation cooling pumps would not be damaged by metal debris entrained in the pumps suction. The second example involved an inadequate evaluation of the structural integrity of the standby service water cooling towers that only considered the loss of structural support from a single beam (05000416/2008005-03).
- The team reviewed a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, involving a failure to perform an adequate operability evaluation. The inspectors identified non-conservatisms in the evaluation with regards to standby service water cooling tower drift rate, a failure to consider external events design basis impacts, and a failure to properly classify the condition as a substantially degraded, non-conforming condition, because it was subsequently determined that the deficiency could increase drift losses by a factor of ten (05000416/2009002-02).
- The team reviewed a noncited violation of 10 CFR Part 50 Appendix B, Criterion V involving a failure to follow procedures which resulted in an inadequate operability evaluation. During the week of May 18, 2009, the site conducted debris removal in the condensate storage tank. This debris removal was necessary because of a failure to remove all debris in the condensate storage tank during their spring 2007 cleanup project. The licensee performed an operability evaluation for objects left in the condensate storage tank which stated that the high pressure core spray system and reactor core isolation cooling would remain operable for all postulated events.

Upon review, the operability evaluation did not address several issues including objects left in the condensate storage tank and condensate system return flow to the condensate storage tank following a plant shutdown/scram (05000416/2009003-02).

- The team reviewed a finding involving the failure to perform an operability determination after a new failure mechanism was discovered for standby service water Fan B. The fan had tripped on start up from the control room on December 31, 2007. The licensee had initially determined the trip was due to a faulty solid state trip device. Subsequent testing failed to identify a problem with the trip device, and the apparent cause of the fan trip was attributed to reverse rotation of the fan. Operations personnel were not informed of this new information as required by the corrective action program procedure (05000416/2009003-04).

3. Assessment – Effectiveness of Corrective Action Program

The team assessed a sample of condition reports to determine whether conditions adverse to quality were effectively being corrected. The attributes that were assessed included timely identification, appropriateness of corrective actions, corrective actions being implemented in a timely manner, and the effectiveness of the corrective actions to resolve the condition. The team concluded that actions to correct conditions adverse to quality were generally effective; however, greater attention was warranted particularly for the attributes of the appropriateness and implementation of corrective actions where over twenty percent of condition reports reviewed by the team had one or more deficiencies. Some examples included:

- The team reviewed multiple condition reports documenting problems with corrective actions closed to work orders, where the work orders were subsequently closed without work being performed. The team found that the inappropriate work order closures continue to occur although the licensee now has a barrier in place to identify them on a weekly basis by management database reviews. The licensee has been addressing these on a case-by-case basis.
- The team reviewed corrective actions from a condition report that documented improper closure of work orders. The corrective actions required all individuals qualified to close work orders to have training on items to verify prior to work order closure. No formal training was documented and the inspectors were unable to verify that the training had been performed. Interviews also showed that some of the individuals had not received the training (Condition Report CR-GGN-2009-00295).
- The team reviewed a corrective action from the licensee's review of SER 2-05, "Gas Intrusion in Safety Systems," which required an investigation as to whether the condensate storage tank to reactor core isolation cooling system

and high pressure core spray system lines should be vented at the base of the condensate storage tank. This corrective action was closed to a new corrective action in the rollup condition report for operations procedure changes. The corrective action was then closed without changes to operations procedures, and with an answer that stated operations procedures already fill and vent the system. No investigation was documented (Condition Report CR-GGN-2008-00605).

- The team reviewed an operating experience evaluation of IN-07-028, "Potential Common Cause Vulnerabilities in Essential Service Water Systems Due to Inadequate Chemistry Controls." The team found that the station's Chemistry department had failed to implement corrective actions to improve the standby service water basin water quality and to develop methodologies to remove sludge from the standby service water basins as recommended by Puckorius & Associates. These included adding an enhanced corrosion monitoring system for the basins and to add gluteraldehyde to the basins on an annual basis (Condition Report CR-GGN-2009-06175).
- The team found that the plant continues to have issues with poor water quality from the plant service water radial wells. The team reviewed a condition report that described fouling of auxiliary building room coolers. Corrective actions from this condition report to address the plant service water quality have not addressed a specific cause or developed effective corrective actions to remedy the problem (Condition Report CR-GGN-2007-04635).
- The team reviewed a noncited violation for failure to evaluate, monitor and repair cracks in safety-related concrete structures. The finding documented the licensee's failure to take adequate corrective action to prevent further degradation of the standby service water pump house structure due to improper implementation of the crack-monitoring program (05000416/2008002-05).
- The team reviewed a finding of a failure to implement effective corrective actions to remove resin from the electro-hydraulic control system. The finding documented the licensee's closure of a long-range recovery plan without any action to remove the resin, which had been released by a failed ion-exchanger filter in 2003 (05000416/2008002-06).
- The team reviewed a finding associated with the licensee's failure to implement effective corrective actions to prevent animals from causing plant transients. Specifically, the licensee's failure to implement effective corrective actions has resulted in three plant transients since 2002 (05000416/2008003-01).
- The team reviewed a noncited violation for failure to perform an adequate inspection of probable maximum precipitation door seals protecting safety-

related equipment issued in October 2008. The licensee had previously been issued a noncited violation for inadequate inspections of probable maximum precipitation door seals in February 2008. The extent of condition review for the February finding failed to identify a degraded door seal on the Train B standby service water pump house and seven additional degraded door seals (05000416/2008004-03).

- The team reviewed a noncited violation of 10 CFR Part 50 Appendix B, Criterion XVI, involving the failure to correct leaking reactor water cleanup system primary containment isolation valves. Testing determined that these primary containment isolation valves exceeded the allowable leakage rate by greater than 10 times the leakage limits. For four consecutive operating cycles, the site had failed to take corrective actions to correct the excessive leakage through these valves (05000416/2008005-04).
- The team reviewed a finding involving a recirculation pump trip during pump up-shift to fast speed due to ineffective corrective actions. The plant had replaced the recirculation motor on Pump A during and during investigation determined that the instantaneous over-current trip for the breaker had drifted low. The reactor recirculation Pump B had tripped following motor replacement for the same reason in September 2007 (05000416/2008005-05).
- The team reviewed a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, involving a failure to take corrective actions to prevent recurrence of severe corrosion in piping hangers, piping supports, and piping in the standby service water basin cooling towers. Significant corrosion of the standby service water supports in October 2008 had been previously identified by plant personnel during a ten-year in-service inspection on October 3, 1993. At that time, plant personnel determined this to be a significant degraded condition of a safety related system, requiring replacement of the piping and associated supports (05000416/2008005-06).
- The team reviewed a noncited violation of 10 CFR Part 50 Appendix B, Criterion XVI, involving the failure to take timely corrective actions for corrosion on distribution beam structural support posts in the standby service water basin cooling towers (05000416/2008005-07).
- The team reviewed a noncited violation of Technical Specification 5.4.1(a), for failure to ensure that operators can respond in timely manner to safe shutdown panels in the auxiliary building with a fire in the main control room. Based upon questions from the resident inspectors, the licensee determined a time critical task would not have been completed due to the safe shutdown operator being outside the protected area with Mississippi river at flood stage. This finding had a crosscutting aspect in the area of problem identification and resolution associated with corrective action program in that the licensee failed to perform an appropriate extent of condition when implementing

corrective action associated with fire brigade response issue in 2008 (05000416/2009004-01).

.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 procedure and self-assessments. A sample of operating experience notification documents that had been issued during the assessment period were reviewed to assess whether the licensee had appropriately evaluated the notification for relevance to the facility. The team also examined whether the licensee had entered those items into their corrective action program and assigned actions to address the issues. The team reviewed a sample of root cause evaluations and significant condition reports to verify if the licensee had appropriately included industry operating experience.

b. Assessment

Overall, the team determined that the licensee had appropriately evaluated industry operating experience for relevance to the facility, and had entered applicable items in the corrective action program. In addition the team noted that many of the operating experience reports were performed in Entergy Headquarters with designated representatives from headquarters and from each site. The team concluded that the licensee was also evaluating industry operating experience when performing root cause and apparent cause evaluations. Both internal and external operating experience was being incorporated into lessons learned for training and pre-job briefs.

The team noted that root and apparent cause evaluations were being required for Category A and B condition reports to evaluate whether internal or external operating experience was available associated with the event or failure being examined, and whether the evaluation and actions to address those items had been effective.

Some examples of evaluation problems found by the team are included below:

- The team identified a self-revealing violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," on October 26, 2009, when potentially oil-impregnated insulation on the reactor core isolation cooling pump turbine began smoking during a monthly surveillance run of the pump. Oil-soaked insulation with a burn mark had previously been identified at a different location on the reactor core isolation cooling turbine on February 2, 2009. The licensee was unable to identify the source of the oil in either of these cases. Further, following a November 2008 fire in oil-soaked insulation on a reactor feed pump turbine, the licensee identified that the reactor core isolation cooling pump turbines were vulnerable to fire from similar causes

due to a similar configuration. Corrective actions from the previous RCIC burnt insulation event and operating experience from the feed pump turbine both failed to prevent the October 26, 2009, smoke event. This is further discussed in section 4OA2.5.b of this report.

- The team reviewed the licensee's response to Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," as documented in condition report CR-GGN-2008-00605. The team found that there is an issue with failing to separately evaluate an identified deficiency in RHR piping. A potential voiding issue was identified, however operations was not informed of this potential. Had operations been informed, an operability evaluation would have driven a check of that system for voids, and potentially would have quantified the air observed. Also, corrective actions had been initiated to investigate changing venting locations for the CST to HPCS and RCIC line; no investigation was documented.
- The team noted that the review of Information Notice 2008-04 on counterfeit components supplied to nuclear power plants did not include a review as to whether either of the two components specified in the information notice had been installed in the plant or were maintained in the warehouse. Additionally, the evaluation did not provide any indication that those individuals associated with receipt inspections were reminded of the importance of the duties or advised of the industry problem.
- The team reviewed the licensee's evaluation of Information Notice 2008-09 on turbine-driven auxiliary feedwater pump bearings issues that could lead to operability problems not identified during monthly short duration surveillance runs. The evaluation appropriately concluded that the RCIC pump was sufficiently similar in nature to warrant an evaluation; however, the evaluation concluded that longer duration RCIC pump runs would identify any operability issues. The evaluation did not review the maintenance procedures to ensure that appropriate criteria were included during maintenance activities.

.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 the Attachment.

b. Assessment

The team concluded that the licensee had a good self-assessment process. Grand Gulf Nuclear Station senior management was very involved in developing the topics and objectives of self-assessments. Particular attention was given to assigning team members with the proper skills and experience to do an effective self-assessment and to include people from outside organizations.

A multi-tiered approach was used which applied a graded level of effort based on the subject. The licensee was effective in utilizing outside experts, both within Entergy Operations, Inc. and from outside the company, to help assess performance. Tier 1 assessments required external assessments such as INPO assist visits. Tier 2 assessments required independent assessments performed or organized by the Corporate Assessment Group. The team noted that most of these assessments utilized the correct group of auditors and provided meaningful assessments and worthwhile recommendations for improvement.

Tier 3 assessments were directed by the site senior management team to address site priorities and issues. Tier 4 assessments were performed at the direction of individual managers to meet work group needs. These were typically performed by one individual from the organization being assessed. These were generally limited to compliance reviews, with little assessment or recommendations for improvement. The team concluded that Tier 4 assessments were of limited value.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The inspection team conducted three focus group sessions consisting of approximately 8 individuals each. The participants represented various functional organizations. These sessions were designed to elicit a qualitative assessment of the degree to which the participants believed the licensee had established and maintained a safety-conscious work environment at Grand Gulf Nuclear Station and were based upon the NRC's definition of a safety-conscious work environment:

An environment in which employees feel free to raise safety concerns, both to their management and to the NRC, without fear of retaliation and where such concerns are promptly reviewed, given the proper priority based on their potential safety significance, and appropriately resolved with timely feedback to employees.

The team also conducted individual interviews as part of their interaction with plant staff. Finally, the team reviewed the results of the licensee's 2009 Nuclear Safety Culture and Safety Conscious Work Environment Survey results.

b. Assessment

The team determined that the licensee maintained a safety-conscious work environment. Based upon the responses received during the focus group sessions and individual interviews, the team concluded that the licensee had established and was maintaining an environment where workers felt free to raise safety concerns both to their management and to the NRC without fear of retaliation. Most employees indicated that they typically raise safety concerns to their immediate supervisor and write a condition report. Most individuals indicated that they would use the chain-of-command or would raise concerns to the NRC's attention if they believed that their concern was not appropriately resolved or did not receive the appropriate level of attention.

While most individuals believed that management promptly reviewed all of the concerns and appropriately prioritized the concerns, about a third of the individuals indicated that at times, the licensee did not completely address issues that were not considered "big picture" issues. The NRC team found examples where the licensee addressed the results of an issue but did not address cause such as adjusting the cooling water flow balance to room coolers but failing to address the water quality problems that resulted in degradation of the coolers.

.5 Specific Issues Identified During This Inspection

a. Inadequate Procedure Used to Vent the Reactor Core Isolation Cooling System

Introduction. The team identified a violation of Technical Specification Surveillance Requirement 3.5.3.1, which requires that every 31 days the licensee verify the reactor core isolation cooling (RCIC) pump discharge piping is full of water. The procedure used by the licensee failed to provide adequate acceptance criteria to ensure that any volume of air vented was less than the maximum acceptable void volume.

Description. Technical Specification Surveillance Requirement 3.5.3.1 requires that every 31 days, the licensee "Verify the RCIC System piping is filled with water from the pump discharge valve to the injection valve." To implement this requirement, the licensee vents the pump discharge leg from high point vents using surveillance procedure 06-OP-1E51-M-0001, "RCIC System Operability Verification," Revision 104. This procedure directs the venting of the pump discharge leg piping by opening two high point vent valves for two minutes. However, the team determined that there was no technical basis established for the two minute venting requirement and there was no means for the operator performing the procedure to verify that a solid stream of water is being issued from the vent piping. Therefore, the team determined that the procedure was inadequate to verify that the as-found condition of the pump discharge piping is "filled with water," as required by the surveillance requirement.

This deficiency was previously documented in NCV 05000416/2007005-01 as a noncited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," and entered in the licensee's corrective action program as CR-GGN-2007-03818. As one of the corrective actions in this condition report, the licensee initiated Engineering Change Request 3411 to modify the system piping design such that operators could visually verify that a solid stream of water was being issued from the high-point vent path. After being questioned by the team, the licensee determined that ECR 3411 was in the approval queue of an engineering manager who was no longer employed by the licensee. The change request had been initiated in January 2008 and had been awaiting approval for approximately 19 months; no action had been taken to review or implement the change request.

Also as a corrective action for CR-GGN-2007-03818, the licensee implemented Revision 103 to surveillance procedure 06-OP-1E51-M-0001 to include a requirement that the RCIC pump discharge leg be vented for two minutes; Revision 102 had included no time requirement. The licensee further determined that a calculation did not exist to bound the lack of acceptance criteria for the venting procedure. The licensee then initiated action to perform a calculation to determine the impact on the ability of the system to perform its design function assuming the maximum amount of air accumulation in the injection line. However, a calculation was not performed. Instead, the licensee used engineering judgment to determine that as long as the pump discharge pressure indicates 5 psig or greater, there can be no air in the injection line. The licensee failed to address the lack of qualitative or quantitative acceptance criteria in the surveillance procedure.

Therefore, the team determined that procedure 06-OP-1E51-M-0001, Revision 104, remained inadequate to accomplish Technical Specification Surveillance Requirement 3.5.3.1.

Analysis. The failure of the licensee to maintain an adequate surveillance procedure was a performance deficiency. This finding is more than minor because it affects the procedure quality attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," the team determined the finding to be of very low safety significance (Green) because it did not represent the loss of a system safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the corrective action program component of the problem identification and resolution area because the licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity [P.1(d)].

Enforcement. Technical Specification Surveillance Requirement 3.5.3.1 requires that every 31 days, the licensee “Verify the RCIC System piping is filled with water from the pump discharge valve to the injection valve.” Contrary to this requirement, from July 1985 through December 2009, the licensee failed to verify that the RCIC system piping was filled with water. Because this violation was of very low safety significance and was entered into the licensee’s corrective action program as CR-GGN-2009-06249, it is being treated as a non-cited violation in accordance with the NRC Enforcement Policy: NCV 05000416/2009008-01, Inadequate Procedure Used to Vent the Reactor Core Isolation Cooling System.

b. Failure to Identify and Correct Oil-Impregnated Insulation on Pump Turbines

Introduction. A violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” was revealed on October 26, 2009, when potentially oil-impregnated insulation on the reactor core isolation cooling pump turbine began smoking during a monthly surveillance run of the pump. The team determined that the licensee’s corrective actions for two previous events involving oil-impregnated insulation on pump turbines had been inadequate to prevent the October 26, 2009, smoke event.

Description. On October 26, 2009, insulation on the reactor core isolation cooling pump turbine began smoking during a monthly surveillance run of the pump. The smoke was initially reported by operators in the room; an area smoke detector subsequently alarmed. The turbine was shut down and the damaged insulation was removed and replaced. The maintenance technician who performed the insulation removal indicated that the damaged insulation was old and showed signs of possible oil impregnation; however, the licensee disposed of the insulation without performing an analysis. Oil-soaked insulation with a burn mark had previously been identified at a different location on the reactor core isolation cooling turbine on February 2, 2009. The licensee was unable to identify the source of the oil in either of these cases. Further, following a November 2008 fire of oil-soaked insulation on a reactor feed pump turbine, the licensee identified that the reactor core isolation cooling pump turbines were vulnerable to fire from similar causes due to a similar configuration. Corrective actions from the previous reactor core isolation cooling burnt insulation event and operating experience from the feed pump turbine both failed to prevent the October 26, 2009, smoke event.

Analysis. Burning of insulation on turbine-driven pump turbines is a significant condition adverse to quality. The failure of the licensee to determine and document the cause and to prevent recurrence of a significant condition adverse to quality was a performance deficiency. This finding is more than minor because it affects the equipment performance attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” the inspectors determined that the performance

deficiency to be of very low safety significance (Green) because it did not represent the loss of a system safety function and did not screen as potentially risk significant due to a seismic, flooding or severe weather initiating event.

This finding has a cross-cutting aspect in the operating experience component of the problem identification and resolution area because the licensee failed to implement and institutionalize operating experience on turbine insulation fires through changes to station processes, procedures, equipment, and training programs [P.2(b)].

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires that measures be established to assure that conditions adverse to quality are promptly identified and corrected. For significant conditions adverse to quality these measures are required to assure that the cause of the condition is determined and action is taken to preclude repetition. Contrary to this requirement, from November 2008 through October 26, 2009, the licensee failed to determine the cause and take action to preclude repetition of a significant condition adverse to quality. Specifically, the licensee failed to determine the cause of oil-soaked insulation on the reactor core isolation cooling pump turbine and to preclude repetition of insulation burning as the result of oil-impregnated insulation on pump turbines. Because this violation was of very low safety significance and was entered into the licensee's corrective action program as Condition Report CR-GGN-2009-06250, it is being treated as a noncited violation in accordance with the NRC Enforcement Policy: NCV 05000416/2009008-02, Failure to Identify and Correct Oil-Impregnated Insulation on Pump Turbines.

40A6 Meetings

Exit Meeting Summary

On December 3, 2009, the team presented the inspection results to Mr. James R. Douet, Vice President, Operations, and other members of the licensee staff. The team held a second exit meeting telephonically on January 13, 2010. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

40A7 Licensee-Identified Violations

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

- Title 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires that licensees promptly identify and correct conditions adverse to quality. Contrary to this requirement, the licensee identified in its 2009 Corrective Action Program audit that it had failed to correct a condition adverse to quality. Specifically, the

licensee had previously identified a trend of condition reports being closed to work orders and work orders subsequently being cancelled without appropriate actions taken. The corrective actions to correct this condition had been inadequate. The licensee identified this deficiency in Condition Report CR-GGN-2009-02664.

ATTACHMENTS: SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Burford, Acting Manager, Licensing
M. Causey, Engineer, Maintenance Rule
D. Coulter, Sr. Licensing Specialist
R. Douet, Vice President, Operations
R. Fuller, Senior Engineer
J. Giles, Manager, Corrective Action and Assessment
E. Harkness, SRC Subcommittee Chairperson
D. James, Manager, Design Engineering
C. Perino, Acting Director, Nuclear Safety Assurance
D. Wilson, Supervisor, Design Engineering

NRC personnel

M. Hay, Chief, Technical Support Branch
D. Loveless, Senior Reactor Analyst

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000416/2009008-01	NCV	Inadequate Procedure Used to Vent the Reactor Core Isolation Cooling System (Section 40A2.5a)
05000416/2009008-02	NCV	Failure to Identify and Correct Oil-Impregnated Insulation on Pump Turbines (Section 40A2.5b)

Discussed

None

LIST OF DOCUMENTS REVIEWED

Drawings

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
E-1185-006	E51 Reactor Core Isolation Cooling System Steam to Turbine MOV F045-A	13
E-1185-034	E51 Reactor Core Is In Cooling System Logic Circuit A & B	11
J-1270-019	Logic Diagram: RCIC Turbine Exhaust Drain Isolation and Trap Bypass Valves HV-F005 & HV-F054	2
M-1083A	Reactor Core Isolation Cooling System – Unit 1	33
M-1083B	Reactor Core Isolation Cooling System – Unit 1	36
M-1400	Yard Piping Condensate Storage Tank and Refueling Water Storage Tank Area – Unit 1	16
M-1401	Yard Piping Condensate Storage Tank and Refueling Water Storage Tank Area – Unit 1	17
M-1402	Yard Piping Condensate Storage Tank and Refueling Water Storage Tank Area – Unit 1	16
M-KF1404	Yard Piping Hypochlorite Plant and Acid Storage Tank	8

Calculations

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
NPE-E12F394	Supplement to Powell Seismic Calculations S-67763	15
NPE-C11F322	Supplement to Powell Seismic Calculations S-69845	5

Procedures

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-OP-1E51-M-0001	RCIC System Operability Verification	102
06-OP-1E51-M-0001	RCIC System Operability Verification	103
06-OP-1E51-M-0001	RCIC System Operability Verification	104

06-OP-1E51-Q-0003	RCIC System Quarterly Pump Operability Verification	127
07-S-14-338	Valve Stem Packing Replacement and Adjustment	8
EN-AD-103	Document Control and Records Management Program	10
EN-DC-132	Control of Engineering Documents	2
EN-DC-151	PSA Maintenance and Update	1
EN-LI-102	Corrective Action Process	8
EN-LI-102	Corrective Action Process	13
EN-LI-104	Self-Assessment and Benchmark Process	5
EN-LI-118	Root Cause Analysis Process	11
EN-LI-119	Apparent Cause Evaluation (ACE) Process	8
EN-LI-119	Apparent Cause Evaluation Process	7
EN-MA-118	Foreign Material Exclusion	4
EN-OE-100	Operating Experience Program	8
EN-OP-111	Operational Decision-Making Issue (ODMI) Process	4
EN-QV-109	Audit Process	16
EN-WM-100	Work Request (WR) Generation, Screening and Classification	3
EN-WM-101	On-line Work Management Process	5
01-S-07-37	Control of Work for Painting, Snubbers, Insulation and Control Room Envelope Breaches	106
04-1-01-E51-1	Reactor Core Isolation Cooling	128
08-S-03-21	Sampling Instrument Air, Emergency Diesel Starting Air and ADS Air Systems	6

Condition Reports

CR-ECH-2007-00233	CR-GGN-2001-00198	CR-GGN-2004-04432
CR-GGN-2005-00061	CR-GGN-2005-00199	CR-GGN-2005-00289
CR-GGN-2005-01429	CR-GGN-2005-02091	CR-GGN-2005-02355
CR-GGN-2005-03442	CR-GGN-2005-03444	CR-GGN-2006-01036
CR-GGN-2006-01050	CR-GGN-2006-01096	CR-GGN-2006-03681
CR-GGN-2007-01032	CR-GGN-2007-01662	CR-GGN-2007-02112
CR-GGN-2007-02227	CR-GGN-2007-02608	CR-GGN-2007-02663
CR-GGN-2007-02963	CR-GGN-2007-02990	CR-GGN-2007-03072
CR-GGN-2007-03189	CR-GGN-2007-03547	CR-GGN-2007-03773
CR-GGN-2007-03776	CR-GGN-2007-03818	CR-GGN-2007-04515
CR-GGN-2007-04542	CR-GGN-2007-04576	CR-GGN-2007-04606
CR-GGN-2007-04706	CR-GGN-2007-04709	CR-GGN-2007-04955
CR-GGN-2007-05037	CR-GGN-2007-05488	CR-GGN-2007-05492
CR-GGN-2007-05513	CR-GGN-2008-00096	CR-GGN-2008-00136
CR-GGN-2008-00412	CR-GGN-2008-00644	CR-GGN-2008-00899
CR-GGN-2008-01409	CR-GGN-2008-01944	CR-GGN-2008-01985
CR-GGN-2008-02169	CR-GGN-2008-02224	CR-GGN-2008-02262
CR-GGN-2008-02614	CR-GGN-2008-02768	CR-GGN-2008-03724
CR-GGN-2008-03751	CR-GGN-2008-04274	CR-GGN-2008-04587
CR-GGN-2008-04603	CR-GGN-2008-04790	CR-GGN-2008-04807
CR-GGN-2008-04873	CR-GGN-2008-05123	CR-GGN-2008-05294
CR-GGN-2008-05592	CR-GGN-2008-05685	CR-GGN-2008-05718
CR-GGN-2008-06044	CR-GGN-2008-06113	CR-GGN-2008-06602
CR-GGN-2008-06726	CR-GGN-2008-06772	CR-GGN-2008-06832
CR-GGN-2008-06927	CR-GGN-2009-00021	CR-GGN-2009-00073
CR-GGN-2009-00172	CR-GGN-2009-00194	CR-GGN-2009-00295
CR-GGN-2009-00339	CR-GGN-2009-00404	CR-GGN-2009-00429
CR-GGN-2009-00478	CR-GGN-2009-00933	CR-GGN-2009-01042
CR-GGN-2009-01054	CR-GGN-2009-01299	CR-GGN-2009-01708
CR-GGN-2009-02232	CR-GGN-2009-02619	CR-GGN-2009-02650
CR-GGN-2009-02655	CR-GGN-2009-02659	CR-GGN-2009-02664
CR-GGN-2009-02757	CR-GGN-2009-02835	CR-GGN-2009-02836
CR-GGN-2009-03033	CR-GGN-2009-03039	CR-GGN-2009-03040
CR-GGN-2009-03082	CR-GGN-2009-03167	CR-GGN-2009-03270
CR-GGN-2009-03458	CR-GGN-2009-03725	CR-GGN-2009-03725
CR-GGN-2009-03747	CR-GGN-2009-03748	CR-GGN-2009-03864
CR-GGN-2009-04049	CR-GGN-2009-04817	CR-GGN-2009-04929
CR-GGN-2009-05000	CR-GGN-2009-05183	CR-GGN-2009-05217
CR-GGN-2009-05251	CR-GGN-2009-05348	CR-GGN-2009-05379
CR-GGN-2009-05392	CR-GGN-2009-05639	CR-GGN-2009-05699
CR-GGN-2009-05711	CR-GGN-2009-05733	CR-GGN-2009-06002
CR-NOE-2008-00084	CR-NOE-2008-00150	LO-NOE-2007-00157
LO-NOE-2007-00234	LO-NOE-2008-00238	LO-NOE-2009-00362

Work Orders

WO00059360	WO00067875	WO00089130-01
WO00089441-01	WO00089442-01	WO00164643 01
WO00177368	WO00184174	WO00202656
WO00212081	WO114461	WO135203
WO149147	WO170404	WO40695
WO51088521	WO77462	WO85751
WO86877		

Audit Reports and Self Assessments

NUMBER	TITLE	DATE
QA-3-2009-GGNS-1	Corrective Action Program	June 23, 2009
QA-13-2009-GGNS-1	2009 Grand Gulf Nuclear Station Quality assurance NIEP Evaluation Report	June 08, 2009
QA-12/18-2009-GGNS-1	2009 Operations / Technical Specifications Audit	May 12 - 18, 2009

Miscellaneous

Scaffolding Request 16-9783

Scaffolding Request 10-2544/2550

Engineering Request ER-GG-1999-0342-000

ER-GG-2006-00209, "ER Response Engineering Evaluation SSW Flow Balance w/o FPCCU," Revision 0

ER-GG-2005-00061, "Division 2 EDG Lube Oil Leak," Revision 0

CEP-IST-1, "Inservice Testing Bases Document, Entergy Nuclear South, Central Engineering Programs," Revision 311 (with GGNS Appendix, Revision 4)

Trend Data, RCIC Turbine Speed, 1-Apr-2009 through 29-Oct-2009

GGNS-DCS-01, "Design Change Standard for Valve Stem Packing," Revision 4

Vendor Specifications: "Mobil DTE 700 Series Premium Turbine Oils," undated

Information Request
August 26, 2009
Grand Gulf Nuclear Station
Problem Identification and Resolution Inspection Document Request
(IP 71152B; Inspection Report 05000416/2009008)

To the extent possible, please provide the information in electronic media. The agency's text editing software is MS Word 2003 version, Excel 2003 version, Power Point 2003 version, and Adobe Acrobat (.pdf) text files. However, we have limited document viewing capability for Corel WordPerfect 10, Presentations, and Quattro Pro.

Please provide the following on a compact disk to Harry Freeman by September 14, 2009:

U.S. Nuclear Regulatory Commission
Attn: Harry Freeman
Region IV
612 E. Lamar Blvd, Suite 400
Arlington, TX 76011-4125

Note: For requested summary lists, please include a description of problem, significance level, status, initiation date, and owner organization.

1. Summary list and complete copy of all condition reports and associated documents related to significant conditions adverse to quality that were opened or closed during the period, including a complete copy of any evaluations (Root Cause Evaluation or Apparent Cause Evaluation). Please include the condition report number, a description of the issue, date identified, and significance of the condition report in the summary.
2. Summary list of all condition reports related to conditions adverse to quality that were opened or closed during the period
3. Summary list of all condition reports that were up-graded or down-graded during the period. Include a description of the issue, condition report number, date identified, and significance of the condition report.
4. Summary list of all condition reports that subsume or "roll-up" one or more smaller issues for the period
5. Summary lists of operator work arounds, engineering review requests and/or operability evaluations, temporary modifications, and control room and safety system deficiencies opened or closed during the period
6. List of root-cause analyses completed during the period
7. List of root-cause analyses planned, but not complete at end of the period

8. List of all apparent cause analysis completed during the period
9. List of plant safety issues raised or addressed by the employee concerns program during the period
10. List of action items generated or addressed by the plant safety review committees during the period
11. Copy of all quality assurance audits and surveillances of corrective action activities completed during the period
12. Summary list of all quality assurance audits and surveillances scheduled for completion during the period but which were not completed
13. Copy of corrective action activity reports, functional area self-assessments, and non-NRC third party assessments completed during the period (Do not include INPO assessments)
14. Copy of corrective action performance trending/tracking information generated during the period and broken down by functional organization
15. Copy of current revisions of governing procedures/policies/guidelines for:
 - a. Corrective Action Program/Condition reporting
 - b. Apparent and root cause evaluation/determination
 - c. Employee Concerns Program
 - d. Temporary modifications
 - e. Operating experience evaluation
 - f. Work requests
 - g. Procedure change requests
 - h. Deficiency reporting and resolution
 - i. Operator work arounds
 - j. Safety culture policy/procedures
16. List of external events and operating experience (OE) evaluated for applicability at Grand Gulf during the period
17. Copy of Condition reports or other actions generated for each of the items below during the period:
 - a. Part 21 Reports
 - b. NRC Information Notices and Bulletins
 - c. LERs issued by Grand Gulf (also include a copy of the LERs)
 - d. Vendor Safety Information Letters or equivalent
 - e. Non cited violations and Violations issued to Grand Gulf during this period

18. Copy of security event logs during the period (redacted to remove any safeguards information)
18. Copy of radiation protection event logs during the period
19. Copy of condition reports generated as a result of emergency planning drills and tabletop exercises during this period
20. List of emergency planning drills and tabletop exercises conducted during this period
21. Summary list and copy of current system health reports or similar information [Listed under Request 33 in IMS]
22. Copy of condition reports associated with maintenance preventable functional failures during this period
23. [Disregard]
24. Summary list and copy of condition reports associated with adverse trends during the period
25. Copy of corrective action effectiveness review reports generated during the period
26. List of risk significant components and systems
27. List of corrective actions closed to other programs, such as maintenance action requests/work orders, engineering requests, etc
28. List of degraded conditions and nonconformances under Generic Letter 91-18, which were not corrected in the last outage
29. Copies of corrective action documents associated with the onsite and offsite safety committee action items provided
30. Quality assurance audit reports generated during this period
31. Employee Concern Program Files/ Reports - summary list only, files to be reviewed onsite and NOT retained by inspectors
32. List of Training deficiencies, requests for training improvements, and simulator deficiencies for the period
33. [Subsequent request] Summary list and copy of current system health reports or similar information
34. [Subsequent request] Listing of structures, systems, and components that are being monitored under category (a)1 of the maintenance rule.

35. [Subsequent request] Copy of organization charts.
36. [Subsequent request] Five-year vertical slice review the reactor core isolation cooling system. Would you please provide the team with a summary list of all condition reports associated with RCIC from November 2004 to present.
37. [Subsequent request] A list containing the number of each category CR (A, B, C, D) originated by month for each month since 9/1/2007.
38. [Subsequent request] A list of Bravo category CRs for the last six months that contains CR number, Causal Evaluation Methodology, and indicates whether or not an HPER was performed.
39. [Subsequent request] Condition reports associated with NCV 2007003-02, NCV 2007005-01, NCV 2008002-05, NCV 2008002-01, NCV 2008005-03, NCV 2008006-04, NCV 2009002-01, NCV 2009006-02, NCV 2007008-01 and NCV 2007008-03.