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

August 20, 2009

Mr. Michael Perito
Vice President, Operations
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000458/2009008

Dear Mr. Perito:

On July 10, 2009, the U. S. Nuclear Regulatory Commission (NRC) completed a team inspection of the problem identification and resolution process at River Bend Station. The enclosed report documents the inspection findings which were discussed with you and other members of your staff.

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 finding of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. In addition, a 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 non-cited violations consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, 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 River Bend 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 Inspectors at River Bend 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).

Sincerely,

/RA/

Gregory E. Werner, Chief
Plant Support Branch 2
Division of Reactor Safety

Docket: 50-458
License: NPF-47

Enclosure:
Inspection Report 05000458/2009008
w/Attachments:
1. Supplemental Information
2. Initial Information Request
3. Final Determination of Significance

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ROPreports

S:DRS/REPORTS/FINAL/ ML

SUNSI Rev Compl.	☐ Yes ☐ No	ADAMS	☐ Yes ☐ No	Reviewer Initials	
Publicly Avail	☐ Yes ☐ No	Sensitive	☐ Yes ☐ No	Sens. Type Initials	

RIV:SRI/DRS/PSB2	PE/DRP/E	RI/DRP/B	PE/DRP/B	C:DRS/PSB2
HFreeman	DBollock	CNorton	BRice	GWerner
/RA/	***/RA/***	***/RA/***	***/RA/***	***/RA/***
8/11/09	7/31/09	8/11/09	8/10/09	8/20/09
C:DRP/	C:DRS/PSB2			
GMiller	GWerner			
/RA/	***/RA/***			
8/20/09	8/20/09			

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	05000458
License:	NPF-47
Report:	05000458/2009008
Licensee:	Entergy Operations, Inc.
Facility:	River Bend Station
Location:	24 miles NNW of Baton Rouge, Louisiana
Dates:	June 15 through July 10, 2009
Team Leader:	Harry A. Freeman, Senior Reactor Inspector
Inspectors:	Douglas R. Bollock, Project Engineer Charles H. Norton, Resident Inspector Blake B. Rice, Project Engineer
Approved By:	Gregory E. Werner, Chief Plant Support Branch 2 Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000458/2009008; June 15, 2009 – July 10, 2009; River Bend Station "Biennial Baseline Inspection of the Identification and Resolution of Problems."

The inspection was performed by a regional senior reactor inspector, two regional project engineers, and a resident inspector. One non-cited violation of very low significance was identified during this inspection. Additionally, one licensee-identified finding of very low safety significance is documented in this report. 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 700 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. Overall, the team determined that the licensee's program for identifying, prioritizing, and correcting conditions adverse to quality was effective. While there were deficiencies identified during the inspection period, a majority were the result of management decisions prior to or in the first half of the inspection period. Based upon insights gained through interviews with plant employees, the team concluded that renewed emphasis in and management oversight of the corrective action program in 2007 resulted in the improvement in performance over the inspection period.

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 identification of similar issues by the team.

Based on interviews with approximately 50 individuals from different organizations across the site, observations of plant activities, and reviews of the corrective action and employee concerns programs, the team determined that site personnel were willing to raise safety issues without fear of retaliation. The team noted that employees indicated that they felt comfortable reporting concerns to the corrective action program, to their management, to the employee concerns program, or to the NRC.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green: The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" for twice failing to perform an adequate operability evaluation on the Division II diesel generator after the number 8 cylinder exhaust pipe cracked and later when two of four exhaust flange bolts failed.

The finding is more than minor because it affects the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems responding to initiating events to prevent undesirable consequences. The team determined that a Phase 3 significance determination was required because the finding screened as potentially risk significant due to potential loss of safety function of a single train. Region IV senior risk analysts performed a Phase 3 significance determination and determined that the issue represents a finding of very low safety significance (Green). This violation has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee did not thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary. Specifically the licensee failed to properly prioritize and evaluate for operability a degraded Division II diesel generator Number 8 cylinder exhaust pipe and flange [P.1(c)] (Section 4OA2.5).

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and Condition Report CR-RB5-2009-00296 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 June 15, 2007, to the end of the on-site portion of the inspection on July 10, 2009.

.1 Assessment of the Corrective Action Program Effectiveness

a. Inspection Scope

The team reviewed approximately 700 condition reports, including associated root cause, apparent cause, and direct cause evaluations, from approximately 13,000 that had been issued between June 15, 2007, through July 10, 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 periodic Condition Review Group and the 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's and River Bend Station risk assessments to focus the sample selection and plant tours on risk significant systems and components. The team selected the following risk significant systems: emergency diesel generators, and control building chillers. The samples reviewed by the team

focused on, but were not limited to these systems. The team also expanded their review to include five years of evaluations involving the emergency diesel generators and control building chillers to determine whether problems were being effectively addressed. The team conducted a walkdown of these systems to assess whether problems were identified and entered into the corrective action program.

b. Assessments

1. Assessment - Effectiveness of Problem Identification

The team concluded that the licensee correctly identified deficiencies that were conditions adverse to quality and did enter them into their corrective action program in accordance with the licensee's corrective action program guidance and NRC requirements. The team determined that the licensee was identifying problems at a low threshold. The team did not identify any conditions adverse to quality that were not placed in the corrective action program.

2. Assessment - Effectiveness of Prioritization and Evaluation of Issues

The licensee generally performed adequate assessments of conditions adverse to quality during this assessment period. The team reviewed approximately 40 corrective action documents that involved operability reviews to assess the quality, timeliness, and prioritization of operability assessments. The team noted that the immediate and prompt operability assessments reviewed were completed in a timely manner. The team did identify that two of the operability evaluations were performed either using inaccurate information or that had incompletely characterized the basis for the determination. None of these errors affected the operability of the equipment. A total of six examples associated with ineffective or inadequate evaluations were identified during the inspection period and indicate an area where the licensee should focus attention.

- The NRC identified a violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" for twice failing to perform an adequate operability evaluation on the Division II diesel generator after the number eight cylinder exhaust pipe cracked and when two of four exhaust flange bolts failed. As a result there is reasonable doubt on the operability of the of the Division II diesel generator from April 26, 2008, until May 15, 2009. (See Section 40A2.5)

- The licensee based the operability of the standby gas treatment rooms under flooding conditions using incorrect data to calculate the volume of the rooms and incorrect characterization of the flooding source (Condition Reports CR-RBS-2009-0075 and CR-RBS-2009-03037).

- The licensee incorrectly documented the basis for operability of a motor-operated-valve that may have been over-torqued by an out-of-calibration torque wrench based upon the "ultimate" shear strength of the material when they actually used a conservative value for the "allowable" shear strength (Condition Report CR-RBS 2008-05883).

- A self-revealing violation of Technical Specification 5.4.1.a was identified involving the failure to follow procedure (non-cited Violation 05000458/2007003-03). Specifically, during control rod withdrawal a reactor engineer noted that reactor power, as calculated by a heat balance, was inconsistent with predicted power. Although this inconsistency was identified, the reactor engineers and operators failed to fully evaluate this condition, as required by procedure, and continued with power ascension resulting in an automatic rod withdrawal block.

- The NRC identified a finding of very low safety significance involving a violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedures to evaluate conditions adverse to quality for impacts on the operability of safety-related equipment (non-cited Violation 05000458/2008006-06). Specifically, the licensee did not assess the impact on operability of previous steam leaks and motor-stall events on the corrosion of magnesium-rotors in safety-related motor-operated valves.

- The NRC identified a violation of 10 CFR 50.65(a)(4) when operators failed to perform an adequate risk assessment associated with a reactor start-up while performing troubleshooting, and during maintenance activities on the main turbine electro hydraulic control system (non-cited Violation 05000458/2008003-01). This resulted in unanticipated oscillations in reactor power and pressure.

3. Assessment – Effectiveness of Corrective Action Program

Overall, the team concluded that the licensee generally developed appropriate corrective actions to address problems. However, the team identified five examples of conditions adverse to quality where the licensee failed to identify or take appropriate corrective action during the inspection period that indicates an area where the licensee should focus attention.

- The NRC identified a finding of very low safety significance involving a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” in that, design control measures for verifying the adequacy of design were not implemented (non-cited Violation 05000458/2008006-02). Specifically, the licensee did not recalculate suppression pool peak temperature response when a more severe single failure condition was identified.

- A self-revealing finding was identified for the failure to properly repair condensate Demineralizer 1E tank liner prior to returning it to service (Finding 05000458/2008002-02).

- The NRC identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the failure to implement required actions to ensure that conditions were promptly corrected (non-cited Violation 05000458/2009006-01). Specifically, the corrective actions for condition report CR-RBS-2007-03034 were

inadequate to correct a condition in which an instrument was not treated as measuring and test equipment. The corrective action was proposed, but not implemented, and the condition report was closed.

- A self-revealing violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” was identified for the licensee’s failure to take adequate corrective actions in response to a condition adverse to quality resulting in repetitive failures of the standby service water switchgear room ventilation fans (non-cited Violation 05000458/2008004-02). Following failure of the switchgear fans in July 2008, the licensee found that inappropriate flow switch settings on the fans had been identified in a condition report in October 1999, but no actions had been taken to correct the condition. Subsequently, more failures of the standby service water switchgear room ventilation fans occurred, including nineteen in the past three and one-half years, many of which were attributed to flow switch issues.

- The NRC identified a finding of very low safety significance involving a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to promptly identify magnesium-rotor motor-operated valve degradation (non-cited Violation 05000458/2008006-06). Specifically, the licensee did not identify magnesium-rotor degradation in May 2007 after failure of reactor inlet heater A outboard motor operated isolation valve, until after failure of main steam shutoff valve, in September 2007.

.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 size of 17 operating experience notifications 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 then examined whether the licensee had entered those items into their corrective action program and assigned actions to address the issues. The team also reviewed a sample of root cause evaluations and corrective action documents to verify if the licensee had appropriately included industry-operating experience.

b. Assessment

Overall, the team determined that the licensee was adequately evaluating industry operating experience for relevance to the facility. The team has determined that the licensee had adequately identified related industry operating experience and implemented corrective actions accordingly. Lessons learned for training and pre-job briefs were incorporating both internal and external operating experience. However, two specific findings were identified that occurred during the first half of the inspection period indicating that there were weaknesses in the program. No findings were identified that occurred during the second half of the inspection period.

The NRC identified a violation of Technical Specification 5.4.1.a for an inadequate procedure for securing a reactor feedwater pump (non-cited Violation 05000458/2008002-01). Specifically, the licensee failed to incorporate internal operating experience into the procedure to prevent recurrence of reactor recirculation flow control valve runback.

- A self-revealing violation of 10 CFR 50.65(A)(3) was identified for failure to incorporate internal and external operating experience into preventive maintenance activities to prevent industry known electrical circuit breaker deficiencies (non-cited Violation 05000458/2007005-05). Specifically, inadequate breaker maintenance, leading to grease hardening degradation, resulted in inadequate electrical fault protection on November 7, 2007.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The team reviewed a sample size of 13 licensee self-assessments, trend reports, and audits to assess whether the licensee was regularly identifying performance trends and effectively addressing them. The team reviewed audit reports to assess the effectiveness of assessments in specific areas. The team evaluated the use of self- and third party assessments, the role of the quality assurance department, and the role of the performance improvement group related to licensee performance. The specific self-assessment documents reviewed are listed in the attachment.

b. Assessment

The team concluded that the licensee effectively utilized the self-assessment process. The Quality Assurance audits and self-assessments provided an appropriate evaluation of plant performance. For example, Quality Assurance Audit Report QA-3-2007-RBS-1 identified two deficiencies in which the licensee failed to follow procedures. The first deficiency was a failure to follow procedure EN-LI-102, "Corrective Action Process," in that the process for closure of corrective actions and condition reports to work orders had not been implemented with sufficient controls to ensure that work was completed as intended by the condition report and/or corrective action. The licensee entered the deficiency in the corrective action program as condition Report CR-RBS-2007-3538. The team identified one additional example of this performance deficiency in that condition Report CR-RBS-2008-1056 was closed to work order WO137768, which was subsequently canceled without approval from the licensee's condition review group.

The second deficiency identified in the Quality Assurance audit report was failure to follow procedure EN-LI-119, "Apparent Cause Evaluation Process," in that the evaluators failed to follow the guidelines and requirements of the procedure. The licensee entered the deficiency into their corrective action program as condition Report CR-RBS-2007-3542. The team also identified four additional examples of this performance deficiency. Specifically, three apparent cause evaluations did not use an approved method of cause analysis as required by the procedure. The fourth example

involved the failure to follow EN-LI-118, "Root Cause Evaluation Process," in that one of the evaluators did not meet the qualification requirements described in the procedure. Specifically, the independent reviewer did not meet the qualification criteria as required by the procedure during the formulation of the root cause evaluation. The quality of the root cause evaluation was not adversely affected and the adequacy of the root cause determination and associated corrective actions were not adversely affected. The licensee entered these additional examples into the corrective action program under condition Report CR-RBS-2009-2787. The team noted that each additional example occurred either prior to the licensee's identification of the deficiency or shortly thereafter and prior to the corrective actions becoming effective. No additional examples were identified that occurred during the 2008 or 2009.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The inspection team conducted focus group interviews with eight to ten individuals from five different organizations and individual interviews with six individuals from a sixth organization. The interviewees represented various functional organizations and ranged across contractor and frontline staff. The team conducted these interviews to assess whether conditions existed that would challenge the safety-conscious work environment at River Bend Station.

b. Assessment

The inspection team concluded that the licensee has maintained a safety-conscious work environment. Most individuals interviewed agreed that the safety-conscious work environment had significantly improved approximately 2 years ago with a change in senior management and that trend continues to the present. Employees believed that senior management was committed to safety and are encouraged by management to raise safety concerns. All individuals expressed a willingness to raise safety concerns as soon as they were recognized and indicated that they felt it was their duty to raise concerns to ensure the safety of the plant, their fellow employees, and the public. No individual expressed any fear of retaliation for raising safety concerns and most individuals identified that they had several options available to them. The options identified by the employees typically involved telling their supervisor and/or writing a condition report. Most employees also advised that their management has an "open door" policy and that they can "go up the chain" until their concern is addressed. Those interviewed also recognized that they have the option of taking their concern to the Employee Concerns Program or to the NRC, but none acknowledged that they had used or felt a need to use either method within the last 2 years. Those interviewed generally expressed a belief that safety concerns were appropriately prioritized and corrected in a timely fashion.

.5 Specific Issues Identified During This Inspection

a. Failure to Perform an Adequate Operability Evaluation for a Degraded Diesel Exhaust Pipe

Introduction: The NRC identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for failure to follow the requirements of Procedure EN-OP-104, "Operability Determinations," Revisions 2 and 3. Specifically, the team identified two occasions where the licensee failed to document an adequate basis for operability when a degraded or nonconforming condition existed.

Description: Procedure EN-OP-104, "Operability Determinations," is the procedure used by licensee personnel at River Bend Station to determine whether degraded or nonconforming conditions affects the operability of structures, systems or components. Paragraph 4.5.1 requires in part that the basis for operability be documented when a degraded or nonconforming condition exists. Contrary to this requirement, the team identified two examples of operability determinations associated with the Division II diesel generator exhaust pipe failures that failed to adequately document the basis for operability.

After running for approximately 7 hours on May 15, 2009, the Division II diesel generator Number 8 exhaust pipe and supporting hardware unexpectedly failed and separated from the cylinder head exhaust port. The licensee shut down the diesel approximately 45 minutes later aborting a scheduled 24 hour surveillance run. The licensee determined that a locked slip-joint between the Number 8 exhaust pipe flange and horizontal piping allowed thermal stresses to build and induce the failure. Prior to this event, the exhaust pipe had developed a through wall crack in the flange weld during a surveillance run on April 26, 2008. Additionally, during a surveillance run on January 21, 2009, two of four flange bolts fractured and were subsequently replaced. The licensee's operability evaluations of these two events supported diesel operability, predicted further degradation unlikely, and evaluated that insignificant performance degradation would occur in the event of a worst case failure.

The operability evaluations following the April 26, 2008, weld crack event and the January 21, 2009, bolt fracture event contained non-conservative "worst case" assumptions that failed to bound the actual conditions exhibited during the failure that occurred during the May 15, 2009, Division II diesel generator surveillance run. The licensee had assumed that the exhaust pipe flange weld would crack circumferentially and the pipe would drop vertically 1 3/8 inches creating a small opening for exhaust gas to bypass the turbo-charger. On May 15, 2009, the pipe, the flange and two of four anchor bolts fractured. The pipe sprang free of the cylinder head and fell down and to the right resulting in a larger than assumed opening for exhaust gas bypass flow.

The licensee had assumed that only about half of the exhaust energy from the number 8 cylinder and a small percentage from the number one cylinder would bypass the turbo-charger leaving approximately 92 percent of the total exhaust energy available to the turbo-charger. Following the May 15, 2009, event all the exhaust energy from the

Number 8 cylinder and an un-quantified percentage of the energy from the other seven cylinders bypassed the turbo-charger.

The licensee had predicted that the average exhaust pipe temperature would increase from a normal of around 850°F. to a maximum of around 981°F, which is well below the turbo-charger maximum limit of 1200°F. Following the May 15, 2009, event, several cylinder exhaust temperatures increased to over 1000°F and at least one cylinder reached 1200°F which challenged the turbo-charger limits.

The licensee had predicted that any fuel consumption increase would not challenge the diesel generator minimum fuel supply. The actual fuel consumption rate following the May 15, 2009, event challenged the technical specification minimum stored fuel limit.

Analysis: The team determined that the failure to adequately document the basis for operability was a performance deficiency. The finding is more than minor because it affects the mitigating systems cornerstone objective to ensure the availability, reliability and capability of systems responding to initiating events to prevent undesirable consequences. The team determined that a Phase 3 significance determination was required because the finding screened as potentially risk significant due to potential loss of safety function of a single train for greater than the Technical Specification Allowed Outage Time. Region IV senior risk analysts performed a Phase 3 significance determination and determined that the issue represents a finding of very low safety significance. The final determination of significance is included as Attachment 3 to this report. This violation has a crosscutting aspect in the area of problem identification and resolution; associated with the corrective action program because the licensee did not thoroughly evaluate problems such that the resolutions address causes and extent of conditions. Specifically the licensee failed to properly prioritize and evaluate for operability a degraded Division II diesel generator Number 8 cylinder exhaust pipe and flange [P.1(c)] (Section 4OA2.5).

Enforcement: 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” requires in part that activities affecting quality shall be prescribed by documented instructions procedures or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings. Procedure EN-OP-104, “Operability Determinations,” Revisions 2 and 3, requires that the shift manager document the basis for operability when a degraded or nonconforming condition is identified. Contrary to this requirement, on April 30, 2008, and on January 28, 2009, the documented bases for operability for degraded conditions did not adequately support the operability position taken by the shift manager. Because this noncompliance is of very low safety significance and has been entered into the licensee’s corrective action program as Condition Report CR-RBS-2009-03055, this violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV05000458/2009008-01, "Inadequate Operability Determinations for a Degraded Diesel Exhaust Pipe."

4OA6 Meetings

Exit Meeting Summary

On July 10, 2009, the team presented the inspection results to Mr. Michael Perito, Vice President, Operations, and other members of the licensee's staff. The licensee acknowledged the issues presented. The inspectors confirmed with the licensee that no proprietary information was provided to the inspection team.

4OA7 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 a non-cited violation.

Undocumented Field Change to the Division I Diesel Generator Turbo-Charger Drain Line

The licensee identified a non-cited annotated with a violation of 10 CFR 50, Appendix B, Criteria III, Design Control, associated with a field change performed on the Division I diesel generator turbo-charger drain line modification. The licensee had identified a crack on the turbo-charger oil drain line connection to the Division I diesel generator. The licensee developed a modification to preclude recurrence of the leak. While installing the modification, the licensee performed an undocumented field change to route the drain line around a physical interference. The undocumented change placed the diesel generator in a degraded condition which if left uncorrected could have become a more significant safety concern. The licensee subsequently discovered the undocumented field change and took corrective action to restore the drain line to design specifications. The licensee documented the condition in the condition reporting process as Condition Report CR-RBS-2009-002296.

ATTACHMENTS:
1. SUPPLEMENTAL INFORMATION
2. INFORMATION REQUEST
3. FINAL DETERMINATION OF SIGNIFICANCE

SUPPLEMENTAL INFORMATION

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M. Chase, Manager, Training and Development
J. Clark, Operations Manager, Operations
B. Cox, Manager, Operations
R. Crawford, Engineering Supervisor, Engineering
C. Forpahl, Manager, Engineering Programs & Components
B. Houston, Manager, Radiation Protection
K. Huffstatler, Senior Licensing Specialist, Licensing
A. James, Manager, Plant Security
L. Kitchen, Manager, Planning & Scheduling - Outages
R. Kowaleski, Manager, Corrective Actions & Assessments
J. Leavines, Manager, Emergency Preparedness
D. Lorfing, Manager, Licensing
W. Mashburn, Manager, Design Engineering
R. McAdams, Manager, System Engineering
J. McElwain, Manager, Human Resources
E. Olson, General Manager, Plant Operations
M. Perito, Vice President, Operations
S. Phillips, CA&A Specialist, Corrective Actions & Assessment
J. Roberts, Director, Nuclear Safety Assurance
J. Schlesinger, Supervisor, Engineering
A. Spencer, Maintenance Coordinator, Maintenance
C. Walker, Manager, Project Engineering
D. Wiles, Director, Engineering
D. Wells, Coordinator, Employee Concerns Program
L. Woods, Manager, Quality Assurance (Acting)

NRC Personnel
G. Larkin, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened and Closed

05000458/2009008-001 NCV	Inadequate Operability Determinations for a Degraded Diesel Exhaust Pipe (Section 4OA2.5)

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 4OA2: Identification and Resolution of Problems

PROCEDURES		
NUMBER	TITLE	REVISION
EN-HU-103	Human Performance Error Reviews	1
EN-LI-118	Root Cause Evaluations	7, 10
EN-LI-119	Apparent Cause Evaluations	5, 8
EN-LI-121	Entergy Trending Process	8
EN-LI-102	Corrective Action Process	13
EN-MA-105	Control of Measuring and Test Equipment	3
EN-OP-104	Operability Determinations	3, 4

CONDITION REPORTS		
CR RBS-2007-00206	CR-RBS-1992-00207	CR-RBS-1994-01616
CR-RBS-1996-00634	CR-RBS-1998-01230	CR-RBS-2004 -01659
CR-RBS-2004 -01672	CR-RBS-2004 -01690	CR-RBS-2004 -01691
CR-RBS-2004 -01747	CR-RBS-2004 -01769	CR-RBS-2004 -01793
CR-RBS-2004 -01797	CR-RBS-2004 -01839	CR-RBS-2004 -02014
CR-RBS-2004 -02077	CR-RBS-2004 -02135	CR-RBS-2004 -02165
CR-RBS-2004 -02220	CR-RBS-2004 -02480	CR-RBS-2004 -02634
CR-RBS-2004 -02850	CR-RBS-2004 -02866	CR-RBS-2004 -03156
CR-RBS-2004 -03536	CR-RBS-2004 -03546	CR-RBS-2004 -03592
CR-RBS-2004 -04208	CR-RBS-2004 -04331	CR-RBS-2004 -04391
CR-RBS-2004-01634	CR-RBS-2004-01661	CR-RBS-2004-01765
CR-RBS-2004-01880	CR-RBS-2004-01916	CR-RBS-2004-02117
CR-RBS-2004-02147	CR-RBS-2004-02226	CR-RBS-2004-02260
CR-RBS-2004-02298	CR-RBS-2004-03218	CR-RBS-2004-03394
CR-RBS-2004-03499	CR-RBS-2004-03598	CR-RBS-2004-03699
CR-RBS-2004-03773	CR-RBS-2004-04210	CR-RBS-2004-04218
CR-RBS-2004-04348	CR-RBS-2004-04375	CR-RBS-2004-04458
CR-RBS-2004-04967	CR-RBS-2005 -00252	CR-RBS-2005 -00393
CR-RBS-2005 -00516	CR-RBS-2005 -00597	CR-RBS-2005 -00641
CR-RBS-2005 -00933	CR-RBS-2005 -00937	CR-RBS-2005 -01008
CR-RBS-2005 -01256	CR-RBS-2005 -01450	CR-RBS-2005 -01478
CR-RBS-2005 -01531	CR-RBS-2005 -01573	CR-RBS-2005 -01600
CR-RBS-2005 -01619	CR-RBS-2005 -01673	CR-RBS-2005 -01680
CR-RBS-2005 -01699	CR-RBS-2005 -01728	CR-RBS-2005 -01753
CR-RBS-2005 -01762	CR-RBS-2005 -02020	CR-RBS-2005 -02172
CR-RBS-2005 -02189	CR-RBS-2005-00045	CR-RBS-2005-00112
CR-RBS-2005-00193	CR-RBS-2005-00202	CR-RBS-2005-00237
CR-RBS-2005-00290	CR-RBS-2005-00371	CR-RBS-2005-00379

CR-RBS-2005-00400	CR-RBS-2005-00402	CR-RBS-2005-00459
CR-RBS-2005-00580	CR-RBS-2005-00836	CR-RBS-2005-00927
CR-RBS-2005-01036	CR-RBS-2005-01460	CR-RBS-2005-01688
CR-RBS-2005-01757	CR-RBS-2005-01830	CR-RBS-2005-02078
CR-RBS-2005-02226	CR-RBS-2005-02237	CR-RBS-2005-02353
CR-RBS-2005-02429	CR-RBS-2005-02549	CR-RBS-2005-02624
CR-RBS-2005-02626	CR-RBS-2005-02727	CR-RBS-2005-02732
CR-RBS-2005-02754	CR-RBS-2005-02836	CR-RBS-2005-02843
CR-RBS-2005-02849	CR-RBS-2005-02897	CR-RBS-2005-02985
CR-RBS-2005-03064	CR-RBS-2005-03066	CR-RBS-2005-03082
CR-RBS-2005-03112	CR-RBS-2005-03138	CR-RBS-2005-03152
CR-RBS-2005-03156	CR-RBS-2005-03165	CR-RBS-2005-03168
CR-RBS-2005-03243	CR-RBS-2005-03255	CR-RBS-2005-03279
CR-RBS-2005-03400	CR-RBS-2005-03589	CR-RBS-2005-03737
CR-RBS-2005-03906	CR-RBS-2005-03968	CR-RBS-2005-03990
CR-RBS-2005-04031	CR-RBS-2005-04064	CR-RBS-2005-04103
CR-RBS-2005-04159	CR-RBS-2005-04244	CR-RBS-2005-04308
CR-RBS-2005-04309	CR-RBS-2006-00159	CR-RBS-2006-00298
CR-RBS-2006-00328	CR-RBS-2006-00780	CR-RBS-2006-01118
CR-RBS-2006-01193	CR-RBS-2006-01788	CR-RBS-2006-02186
CR-RBS-2006-02235	CR-RBS-2006-02339	CR-RBS-2006-02377
CR-RBS-2006-02380	CR-RBS-2006-02382	CR-RBS-2006-02529
CR-RBS-2006-02540	CR-RBS-2006-02559	CR-RBS-2006-02661
CR-RBS-2006-02799	CR-RBS-2006-03605	CR-RBS-2006-03631
CR-RBS-2006-03690	CR-RBS-2006-03716	CR-RBS-2006-03849
CR-RBS-2006-0402	CR-RBS-2006-04083	CR-RBS-2006-04187
CR-RBS-2006-04206	CR-RBS-2006-04297	CR-RBS-2006-04456
CR-RBS-2006-04457	CR-RBS-2006-04506	CR-RBS-2006-04692
CR-RBS-2006-04714	CR-RBS-2006-04741	CR-RBS-2006-0749
CR-RBS-2006-1200	CR-RBS-2006-1402	CR-RBS-2006-1509
CR-RBS-2006-1527	CR-RBS-2006-1561	CR-RBS-2006-1593
CR-RBS-2006-1786	CR-RBS-2006-1867	CR-RBS-2006-2401
CR-RBS-2006-3020	CR-RBS-2006-3262	CR-RBS-2006-3532
CR-RBS-2006-4008	CR-RBS-2006-4121	CR-RBS-2006-4260
CR-RBS-2006-4291	CR-RBS-2006-4325	CR-RBS-2006-4478
CR-RBS-2006-4491	CR-RBS-2006-4503	CR-RBS-2006-4600
CR-RBS-2007-00128	CR-RBS-2007-00222	CR-RBS-2007-00255
CR-RBS-2007-0039	CR-RBS-2007-0040	CR-RBS-2007-00427
CR-RBS-2007-00448	CR-RBS-2007-00455	CR-RBS-2007-00464
CR-RBS-2007-00487	CR-RBS-2007-00493	CR-RBS-2007-00495
CR-RBS-2007-00497	CR-RBS-2007-0065	CR-RBS-2007-00738
CR-RBS-2007-00763	CR-RBS-2007-00764	CR-RBS-2007-00784
CR-RBS-2007-00803	CR-RBS-2007-00908	CR-RBS-2007-01018
CR-RBS-2007-0113	CR-RBS-2007-01216	CR-RBS-2007-0129
CR-RBS-2007-01496	CR-RBS-2007-01730	CR-RBS-2007-0179
CR-RBS-2007-01802	CR-RBS-2007-01875	CR-RBS-2007-02014
CR-RBS-2007-02016	CR-RBS-2007-02060	CR-RBS-2007-0208
CR-RBS-2007-0208	CR-RBS-2007-02102	CR-RBS-2007-02113
CR-RBS-2007-02952	CR-RBS-2007-0299	CR-RBS-2007-0309

CR-RBS-2007-03256	CR-RBS-2007-03349	CR-RBS-2007-0335
CR-RBS-2007-03559	CR-RBS-2007-03569	CR-RBS-2007-03652
CR-RBS-2007-03791	CR-RBS-2007-03798	CR-RBS-2007-03909
CR-RBS-2007-03994	CR-RBS-2007-0402	CR-RBS-2007-04029
CR-RBS-2007-0410	CR-RBS-2007-04241	CR-RBS-2007-04242
CR-RBS-2007-04251	CR-RBS-2007-04256	CR-RBS-2007-04391
CR-RBS-2007-04491	CR-RBS-2007-04494	CR-RBS-2007-04554
CR-RBS-2007-04620	CR-RBS-2007-04715	CR-RBS-2007-04850
CR-RBS-2007-04909	CR-RBS-2007-04914	CR-RBS-2007-04916
CR-RBS-2007-04935	CR-RBS-2007-04937	CR-RBS-2007-05119
CR-RBS-2007-05203	CR-RBS-2007-05213	CR-RBS-2007-05352
CR-RBS-2007-05394	CR-RBS-2007-05395	CR-RBS-2007-05398
CR-RBS-2007-0542	CR-RBS-2007-05458	CR-RBS-2007-05460
CR-RBS-2007-05691	CR-RBS-2007-0591	CR-RBS-2007-0669
CR-RBS-2007-0711	CR-RBS-2007-0718	CR-RBS-2007-0719
CR-RBS-2007-0721	CR-RBS-2007-0724	CR-RBS-2007-0765
CR-RBS-2007-0793	CR-RBS-2007-0795	CR-RBS-2007-0937
CR-RBS-2007-0945	CR-RBS-2007-0978	CR-RBS-2007-1009
CR-RBS-2007-1069	CR-RBS-2007-1118	CR-RBS-2007-1190
CR-RBS-2007-1215	CR-RBS-2007-1234	CR-RBS-2007-1305
CR-RBS-2007-1364	CR-RBS-2007-1368	CR-RBS-2007-1380
CR-RBS-2007-1383	CR-RBS-2007-1390	CR-RBS-2007-1392
CR-RBS-2007-1394	CR-RBS-2007-1396	CR-RBS-2007-1463
CR-RBS-2007-1551	CR-RBS-2007-1584	CR-RBS-2007-1739
CR-RBS-2007-1794	CR-RBS-2007-1800	CR-RBS-2007-1806
CR-RBS-2007-1808	CR-RBS-2007-1809	CR-RBS-2007-1822
CR-RBS-2007-1869	CR-RBS-2007-1878	CR-RBS-2007-1949
CR-RBS-2007-2048	CR-RBS-2007-2140	CR-RBS-2007-2480
CR-RBS-2007-2534	CR-RBS-2007-2597	CR-RBS-2007-2648
CR-RBS-2007-2762	CR-RBS-2007-2828	CR-RBS-2007-2872
CR-RBS-2007-2872	CR-RBS-2007-2921	CR-RBS-2007-2948
CR-RBS-2007-2953	CR-RBS-2007-2978	CR-RBS-2007-2979
CR-RBS-2007-2988	CR-RBS-2007-3034	CR-RBS-2007-3036
CR-RBS-2007-3038	CR-RBS-2007-3048	CR-RBS-2007-3192
CR-RBS-2007-3212	CR-RBS-2007-3299	CR-RBS-2007-3315
CR-RBS-2007-3319	CR-RBS-2007-3490	CR-RBS-2007-3502
CR-RBS-2007-3536	CR-RBS-2007-3538	CR-RBS-2007-3666
CR-RBS-2007-3712	CR-RBS-2007-4114	CR-RBS-2007-4261
CR-RBS-2007-4264	CR-RBS-2007-4285	CR-RBS-2007-4351
CR-RBS-2007-4415	CR-RBS-2007-4643	CR-RBS-2007-4789
CR-RBS-2007-4919	CR-RBS-2007-4922	CR-RBS-2007-4923
CR-RBS-2007-4954	CR-RBS-2007-4965	CR-RBS-2007-4991
CR-RBS-2007-4992	CR-RBS-2007-5318	CR-RBS-2007-5516
CR-RBS-2007-5531	CR-RBS-2007-5548	CR-RBS-2008-00438
CR-RBS-2008-00553	CR-RBS-2008-00991	CR-RBS-2008-01024
CR-RBS-2008-0103	CR-RBS-2008-01089	CR-RBS-2008-01106
CR-RBS-2008-01158	CR-RBS-2008-01240	CR-RBS-2008-01263
CR-RBS-2008-01373	CR-RBS-2008-01487	CR-RBS-2008-01506
CR-RBS-2008-01601	CR-RBS-2008-0163	CR-RBS-2008-01654

CR-RBS-2008-01690	CR-RBS-2008-01812	CR-RBS-2008-01824
CR-RBS-2008-01826	CR-RBS-2008-01878	CR-RBS-2008-01917
CR-RBS-2008-02022	CR-RBS-2008-0203	CR-RBS-2008-02123
CR-RBS-2008-02410	CR-RBS-2008-02429	CR-RBS-2008-02474
CR-RBS-2008-02738	CR-RBS-2008-02919	CR-RBS-2008-02926
CR-RBS-2008-02978	CR-RBS-2008-02983	CR-RBS-2008-02987
CR-RBS-2008-03020	CR-RBS-2008-03148	CR-RBS-2008-03206
CR-RBS-2008-03212	CR-RBS-2008-03213	CR-RBS-2008-03226
CR-RBS-2008-0326	CR-RBS-2008-03262	CR-RBS-2008-0327
CR-RBS-2008-03325	CR-RBS-2008-03359	CR-RBS-2008-03372
CR-RBS-2008-0340	CR-RBS-2008-03489	CR-RBS-2008-03556
CR-RBS-2008-0359	CR-RBS-2008-03648	CR-RBS-2008-03657
CR-RBS-2008-03676	CR-RBS-2008-0371	CR-RBS-2008-03808
CR-RBS-2008-0387	CR-RBS-2008-03939	CR-RBS-2008-04051
CR-RBS-2008-04228	CR-RBS-2008-04325	CR-RBS-2008-04326
CR-RBS-2008-04464	CR-RBS-2008-04542	CR-RBS-2008-04944
CR-RBS-2008-04946	CR-RBS-2008-04970	CR-RBS-2008-05036
CR-RBS-2008-05050	CR-RBS-2008-05334	CR-RBS-2008-05883
CR-RBS-2008-06352	CR-RBS-2008-06389	CR-RBS-2008-06526
CR-RBS-2008-06707	CR-RBS-2008-06772	CR-RBS-2008-0784
CR-RBS-2008-0812	CR-RBS-2008-0919	CR-RBS-2008-0928
CR-RBS-2008-1056	CR-RBS-2008-1145	CR-RBS-2008-1198
CR-RBS-2008-1415	CR-RBS-2008-1473	CR-RBS-2008-1612
CR-RBS-2008-1661	CR-RBS-2008-1754	CR-RBS-2008-1761
CR-RBS-2008-1868	CR-RBS-2008-1955	CR-RBS-2008-1977
CR-RBS-2008-1978	CR-RBS-2008-2206	CR-RBS-2008-2281
CR-RBS-2008-2355	CR-RBS-2008-2356	CR-RBS-2008-2514
CR-RBS-2008-2743	CR-RBS-2008-3113	CR-RBS-2008-3191
CR-RBS-2008-3449	CR-RBS-2008-3517	CR-RBS-2008-3826
CR-RBS-2008-3904	CR-RBS-2008-4037	CR-RBS-2008-4150
CR-RBS-2008-4161	CR-RBS-2008-4292	CR-RBS-2008-4314
CR-RBS-2008-4324	CR-RBS-2008-4330	CR-RBS-2008-4709
CR-RBS-2008-4818	CR-RBS-2008-4869	CR-RBS-2008-4951
CR-RBS-2008-4951	CR-RBS-2008-5028	CR-RBS-2008-5068
CR-RBS-2008-5082	CR-RBS-2008-5091	CR-RBS-2008-5166
CR-RBS-2008-5170	CR-RBS-2008-5229	CR-RBS-2008-5272
CR-RBS-2008-5290	CR-RBS-2008-5294	CR-RBS-2008-5295
CR-RBS-2008-5301	CR-RBS-2008-5302	CR-RBS-2008-5310
CR-RBS-2008-5311	CR-RBS-2008-5391	CR-RBS-2008-5397
CR-RBS-2008-5698	CR-RBS-2008-5699	CR-RBS-2008-5740
CR-RBS-2008-5749	CR-RBS-2008-5793	CR-RBS-2008-5818
CR-RBS-2008-5834	CR-RBS-2008-5839	CR-RBS-2008-5914
CR-RBS-2008-5958	CR-RBS-2008-6055	CR-RBS-2008-6056
CR-RBS-2008-6233	CR-RBS-2008-6264	CR-RBS-2008-6336
CR-RBS-2008-6340	CR-RBS-2008-6456	CR-RBS-2008-6532
CR-RBS-2008-6548	CR-RBS-2008-6583	CR-RBS-2008-6653
CR-RBS-2008-6752	CR-RBS-2009-00075	CR-RBS-2009-00142
CR-RBS-2009-00352	CR-RBS-2009-00409	CR-RBS-2009-00416
CR-RBS-2009-00445	CR-RBS-2009-00515	CR-RBS-2009-00541

CR-RBS-2009-00542	CR-RBS-2009-00543	CR-RBS-2009-00551
CR-RBS-2009-00646	CR-RBS-2009-00679	CR-RBS-2009-00813
CR-RBS-2009-01019	CR-RBS-2009-01053	CR-RBS-2009-01453
CR-RBS-2009-01625	CR-RBS-2009-01666	CR-RBS-2009-01928
CR-RBS-2009-01930	CR-RBS-2009-01965	CR-RBS-2009-02276
CR-RBS-2009-02284	CR-RBS-2009-02296	CR-RBS-2009-02299
CR-RBS-2009-02300	CR-RBS-2009-02365	CR-RBS-2009-02374
CR-RBS-2009-0573	CR-RBS-2009-0612	CR-RBS-2009-0638
CR-RBS-2009-06818	CR-RBS-2009-0747	CR-RBS-2009-0862
CR-RBS-2009-0893	CR-RBS-2009-0900	CR-RBS-2009-0943
CR-RBS-2009-0976	CR-RBS-2009-0986	CR-RBS-2009-1101
CR-RBS-2009-1118	CR-RBS-2009-1140	CR-RBS-2009-1206
CR-RBS-2009-1219	CR-RBS-2009-1271	CR-RBS-2009-1294
CR-RBS-2009-1488	CR-RBS-2009-1514	CR-RBS-2009-1515
CR-RBS-2009-1530	CR-RBS-2009-1532	CR-RBS-2009-1539
CR-RBS-2009-1542	CR-RBS-2009-1589	CR-RBS-2009-1647
CR-RBS-2009-1667	CR-RBS-2009-1670	CR-RBS-2009-1726
CR-RBS-2009-1735	CR-RBS-2009-1737	CR-RBS-2009-1747
CR-RBS-2009-1859	CR-RBS-2009-1886	CR-RBS-2009-1939
CR-RBS-2009-1967	CR-RBS-2009-1968	CR-RBS-2009-1973
CR-RBS-2009-2023	CR-RBS-2009-2042	CR-RBS-2009-2054
CR-RBS-2009-2237	CR-RBS-2009-2691	CR-RBS-2009-2728
CR-RBS-2009-2786	CR-RBS-2009-2787	CR-RBS-2009-2906
CR-RBS-2009-3039	CR-RBS-HQN-2008-0716	CR-RBS-HQN-2008-0776
CR-RBS-HQN-2008-0889	RLO-2007-0113	RLO-2007-2113
LO-LAR-2008-0147		

Operational Experience Review Documents		
CR-NOE-2007-0291	CR-NOE-2007-0309	CR-NOE-2007-0363
CR-NOE-2008-0016	CR-NOE-2008-0047	LO-NOE-2007-00015
LO-NOE-2007-00073	LO-NOE-2007-00308	LO-NOE-2007-00308
LO-NOE-2007-0078	LO-NOE-2008-00045	LO-NOE-2008-00156
LO-NOE-2008-0135	LO-NOE-2008-0145	LO-NOE-2008-0177
LO-NOE-2009-0004	LO-NOE-2009-0141	

Work Orders			
WO-00169283	WO-00171135	WO-00171138	WO-113733
WO-114019	WO-114312	WO-129731	WO-129738
WO-132710	WO-132713	WO-132733	WO-143887
WO-50363965	WO-50363966	WO-50363967	WO-50363968
WO-51677984	WO-62347		

MISCELLANEOUS DOCUMENTS

NUMBER	TITLE	REVISION / DATE
Information Notice 2007-27	Recurring Events Involving Emergency Diesel Generator Operability	
	"Top Ten/Next Ten/Strategic Initiative Action Plan; Title: HVK Maintenance"	added 5/13/08, updated 3/23/09
	PM Basis Template EN-Relay-Timing	Rev 2, 2/17/07
	PM Basis Template EN-Relay-Control	Rev 2, 2/17/07
QA-09-2007-RBS-1	Quality Assurance Audit of the Fire Protection Program	4/30/07
QA-14-2007-RBS-1	Quality Assurance Audit of the Radiation Protection Program	4/20/07
QA-01-2008-RBS-1	Quality Assurance Audit of Fitness for Duty/Access Authorization	9/25/08
QA-03-2007-RBS-1	Quality Assurance Audit of the Corrective Action Program	8/20/07
RLO-2007-0142	Operability Determination Self Assessment	10/08/07
RLO-2007-0068	Radiation Protection Program	4/02/07
RLO-2007-0098	Snap Shot Assessment NCV Closure	6/05/07
LO-RLO-2008-001011	"River Bend Nuclear Station Pre-PI&R Problem Identification and Resolution Assessment"	December 8-11, 2008
3Q 2007	River Bend Quarterly Report – 3rd Quarter 2007	
4Q 2008	River Bend Quarterly Report – 4th Quarter 2008	
1Q 2009	River Bend Quarterly Report – 1st Quarter 2009	

Information Request - May 7, 2009
River Bend Station
Problem Identification and Resolution Inspection Document Request
(IP 71152; Inspection Report 05000458/2009006)

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.

The team will get updated lists et cetera during the first day onsite (June 15, 2009).

Please provide the following on a compact disk to Harry Freeman by May 18, 2009:

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

The information can be posted to Certrec or emailed earlier, as available, if desired.
Note: For requested summary lists, please include a description of problem, significance level, status, initiation date, and owner organization.

1. A complete copy of all Condition Reports (CRs) 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).

2. Summary list of all CRs that were generated since January 2007.

3. List of all CRs that subsume or "roll-up" one or more smaller issues for the period

4. Summary list of all CRs that were up-graded or down-graded during the period

5. List of root-cause analyses completed during the period

6. List of root-cause analyses planned, but not complete at end of the period

7. List of all apparent cause analysis completed during the period

8. List of plant safety issues raised or addressed by the employee concerns program during the period

9. List of action items generated or addressed by the plant safety review committees during the period

10. Copy of quality assurance audits and surveillances of corrective action activities completed during the period

11. Summary list of all quality assurance audits and surveillances scheduled for completion during the period, but which were not completed

12. 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)

13. Copy of corrective action performance trending/tracking information generated during the period and broken down by functional organization

14. Copy of current revisions of governing procedures/policies/guidelines for:

    a. Condition reporting
    b. Corrective Action Program
    c. Root Cause Evaluation/Determination
    d. Operator work-arounds
    e. Work requests
    f. Temporary modifications
    g. Procedure change requests
    h. Deficiency reporting and resolution
    I. Operating experience evaluation
    j. Safety culture policy/procedures
    k. Employee Concerns Program

15. List of external events and operating experience (OE) evaluated for applicability at River Bend Station during the period

16. Copy of CRs 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 River Bend Station (also include a copy of the LERs)
    d. NCVs and Violations issued to River Bend Station

17. 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 current system health reports or similar information

20. Copy of current predictive maintenance summary reports or similar information

21. Copy of corrective action effectiveness review reports generated during the period

22. List of risk significant components and systems

23. List of corrective actions closed to other programs, such as maintenance action requests/work orders, engineering requests, etc.

24. List of degraded conditions and nonconformances under Generic Letter 91-18, which were not corrected in the last outage

25. 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

26. Copy of CRs associated with adverse trends in human performance, equipment, processes, procedures, or programs during the period

Attachment 3
Final Determination of Significance
River Bend Station
Operability Evaluation for a Degraded Diesel Exhaust Pipe

Phase 1 Screening

The analyst evaluated the issue using the Significance Determination Process (SDP) Phase 1 Screening Worksheet for the Initiating Events, Mitigating Systems, and Barriers Cornerstones provided in Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings." This finding affected the Mitigating Systems Cornerstone. The analyst determined that the finding represented an actual loss of safety function of the Division II diesel generator for longer than the technical specification allowed outage time. Therefore, a Phase 2 estimation was conducted in accordance with Manual Chapter 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations."

Phase 2 Estimation

In accordance with Manual Chapter 0609, Appendix A, Attachment 1, Step 2.1.3, "Find the Appropriate Target for the Inspection Finding in the Pre-solved Table," the Senior Reactor Analyst determined that the appropriate target for evaluating this performance deficiency was "EDG 1B." Therefore, the analyst utilized the pre-solved table associated with the SDP notebook to perform the estimation.

Using the pre-solved worksheet, the result from this estimation indicated that the finding was of moderate safety significance (YELLOW). However, the analyst determined that this estimate did not include a full coverage of the risk related to the failure identified, particularly because of a detailed exposure period and the time that the diesel would have run before failure following a postulated demand. Therefore, a Phase 3 evaluation was conducted to better assess the risk of the finding related to internal initiators and fully assess the risk related to external initiators.

Phase 3 Analysis

The Division II EDG was at full load at 4:35 a.m. on May 15, 2009. It ran loaded for 7.82 hours before operators shut the engine down because of the failure. Therefore analyst assumed that the engine would have run for 7.82 hours prior to complete failure during a postulated event.

Using the plant-specific SPAR model, the analyst evaluated the risk related to this failure of the Division II EDG. The initiation frequency of a station blackout (λ_{SBO}) was calculated by combining the loss of offsite power initiation frequency (λ_{LOOP}), the failure probability of the Division I EDG as quantified by the appropriate SPAR fault trees ($P_{Div\text{-}I}$), the offsite power nonrecovery ($P_{NR\text{-}OP\text{-}7.82}$), and the nonrecovery for the Division I EDG ($P_{NR\text{-}DG\text{-}7.82}$), as follows:

$$\lambda_{SBO} = \lambda_{LOOP} * P_{Div\text{-}I} * P_{NR\text{-}OP\text{-}7.82} * P_{NR\text{-}DG\text{-}7.82}$$

$$= 3.59 \times 10^{-2}/\text{year} * 4.36 \times 10^{-2} * 6.91 \times 10^{-2} * 0.302$$

$$= 3.27 \times 10^{-5}/\text{year}$$

the analyst adjusted the nonrecovery values in the SPAR model for offsite power and the Division I EDG to account for a 7.82-hour delay in the initiation of a postulated station blackout.

The model was then quantified to calculate the conditional core damage probability (CCDP) for the postulated station blackout occurring 7.82 hours after a loss of offsite power. This value was 1.14×10^{-1}. The conditional core damage frequency ($CCDF_{CASE}$) was calculated as follows:

$$CCDF_{CASE} = \lambda_{SBO} * CCDP$$

$$= 3.27 \times 10^{-5}/\text{year} * 1.14 \times 10^{-1}$$

$$= 3.71 \times 10^{-6}/\text{year}$$

Using the SPAR model, the analyst calculated the baseline model core damage frequency for a station blackout (CDF_{SBO}) to be 1.62×10^{-6}/year.

The analyst evaluated the historical run data for the last 24 hours of run time of the Division II EDG. The analyst noted that from the October 2008 surveillance run through the shut down on May 15, 2009, the machine had run 24.15 hours. Therefore, assuming a straight line, run-related failure of the exhaust system, the analyst determined that the Division II EDG would have been capable of running for its 24 mission time at any point prior to the October 2008 surveillance. This implied an exposure time (EXP) of approximately 7 months. Given these assumptions, the analyst calculated a bounding incremental conditional core damage probability (ICCDP) as follows:

$$ICCDP = (CCDF_{CASE} - CDF_{SBO}) * EXP$$

$$= (3.71 \times 10^{-6}/\text{year} - 1.62 \times 10^{-6}/\text{year}) * 7 \text{ months} \div 12 \text{ months/year}$$

$$= 1.22 \times 10^{-6}$$

The analyst noted that this bounding value would was based on the Division II EDG failing at 7.82 hours if demanded at anytime during the exposure period. In reality, the EDG would have run longer on May 15, 2009, because it had not failed at the time the operators shut it down. Additionally, each month of the exposure period, the diesel would have performed its mission for a longer period. Again, assuming a straight line model the time the diesel would have run following each monthly surveillance is provided below:

October 2008	22.4 hours
November 2008	20.5 hours
December 2008	16.8 hours
January 2009	13.5 hours
February 2009	11.5 hours
March 2009	9.6 hours
April 2009	7.8 hours

Given that each of these previous time windows would have been at a lower risk than one after, the analyst qualitatively determined that the ICCDP for the subject degraded condition was less than 1×10^{-6}. Therefore, the finding was of very low safety significance (Green).