UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BLVD
ARLINGTON, TEXAS 76011-4511

September 11, 2012

ML12255A398

Mr. Adam C. Heflin, Senior Vice
President and Chief Nuclear Officer
Union Electric Company
P.O. Box 620
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000483/2012008

Dear Mr. Heflin:

On July 13, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution biennial inspection at your Callaway Plant. The enclosed inspection report documents the inspection results, which the inspection team discussed on July 13, 2012, with you and members of your staff.

This inspection was an examination of activities conducted under your license as they relate to problem identification and resolution and to compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

Based on the inspection sample, the inspection team concluded that the implementation of the corrective action program and overall performance related to identifying, evaluating, and resolving problems at Callaway Plant was effective. Your staff generally identified problems and entered them into the corrective action program at a low threshold, though the team noted some exceptions, as described in the attached report. Problems were effectively prioritized and evaluated commensurate with the safety significance of the problems. Appropriate corrective actions were identified for most problems and were generally implemented in a timely manner, commensurate with their safety significance. Most corrective actions addressed the causes of identified problems, though the team noted some exceptions. Lessons learned from industry operating experience were generally reviewed and applied when appropriate. Audits and self-assessments were effectively used to identify problems and appropriate corrective actions. Finally, the team determined that the station maintains a safety conscious work environment where employees feel free to raise nuclear safety concerns without fear of retaliation.

Two NRC-identified and two self-revealing findings of very low safety significance (Green) were identified during this inspection. All four of these findings involved violations of NRC requirements. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the NRC's 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, Region IV; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Callaway Plant.

If you disagree with a cross-cutting aspect assignment 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 Callaway Plant

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 Agencywide Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Ray L. Kellar, P.E., Chief
Technical Support Branch
Division of Reactor Safety

Docket No.: 50-483
License No.: NPF-30

Enclosure: Inspection Report 05000483/2012008
w/attachments

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-483
License:	NPF-30
Report:	05000483/2012008
Licensee:	Union Electric Company
Facility:	Callaway Plant
Location:	Junction Hwy CC and Hwy O Fulton, MO
Dates:	June 25 through July 13, 2012
Team Leader:	E. Ruesch, Senior Reactor Inspector
Inspectors:	C. Denissen, Reactor Inspector M. Hayes, Resident Inspector Z. Hollcraft, Resident Inspector M. Keefe, Human Factors Specialist
Accompanying Personnel:	R. Telson, Reactor Operations Engineer K. Watanabe, Chief Inspector, Japan Nuclear Energy Safety Organization (JNES)
Approved By:	R. Kellar, P.E., Chief Technical Support Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000483/2012008; June 25, 2012 – July 13, 2012; Callaway Plant "Biennial Baseline Inspection of the Identification and Resolution of Problems"

The team inspection was performed by one senior reactor inspector, one reactor inspector, two resident inspectors, and one human factors specialist. Four Green non-cited violations of significance 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 team concluded that with limited exceptions, the licensee maintained a corrective action program in which issues were generally identified at an appropriately low threshold. Issues entered into the corrective action program were appropriately evaluated and timely addressed, commensurate with their safety significance. Corrective actions were generally effective, addressing the causes and extents of condition of problems.

The licensee appropriately evaluated industry operating experience for relevance to the facility and 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 its self-identification of some minimally effective corrective action program performance and identification of ineffective corrective actions.

The licensee maintained a safety-conscious work environment in which personnel felt free to raise safety concerns without fear of retaliation. All individuals interviewed by the team were willing to raise these concerns by at least one of the several methods available.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The team reviewed a Green self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for the licensee’s failure to promptly identify and correct a condition adverse to quality. During troubleshooting, the licensee incorrectly identified a failed circuit card as the cause of an essential service water pump room fan damper failure. The licensee returned the damper to service and declared the associated pump operable without identifying the actual failure—pinched wires introduced during previous maintenance. This resulted in a subsequent failure.

The failure to identify that pinched wires had caused the damper failure and to correct the condition before replacing the circuit card and declaring the system operable was a performance deficiency. This performance deficiency was more than minor because it adversely affected 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 team determined the finding to be of very low safety significance (Green) because it did not result in the loss of the safety function of any system or train and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. This finding had a cross-cutting aspect in the decision-making component of the human performance cross-cutting area because the licensee failed to conduct an effectiveness review of safety-significant decisions to verify the validity of the underlying assumptions or identify possible unintended consequences (H.1(b)). (Section 4OA2.5.a)

- Green. The team reviewed a non-cited violation of Technical Specification 5.4.1.a, "Procedures," for the licensee's failure to provide maintenance instructions appropriate for repair of the Train B emergency diesel generator supply fan. These inadequate instructions resulted in maintenance technicians routing and restraining electrical cables inappropriately during maintenance in July 2006. These cables later came loose and, in August 2011, caused a failure of the Train B emergency diesel generator supply fan to start on demand.

  The failure to provide maintenance procedures appropriate to the circumstance was a performance deficiency. This finding was more than minor because it affected 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 team determined that the finding was of very low safety significance (Green) because it did not result in the loss of the safety function of any system or train and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. The team determined that this performance deficiency was not indicative of current plant performance because it was the result of repair instructions written and implemented in 2006. Therefore, no cross-cutting aspect was assigned. (Section 4OA2.5.b)

  Green. The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure, upon discovery of an adverse condition, to initiate a Callaway Action Request, to notify the shift manager, and to review the condition for, operability, functionality, and reportability in accordance with APA-ZZ-00500, "Corrective Action Program," revision 54. During planned testing of tornado dampers for the emergency diesel generator rooms, the as-found breakaway torque for the dampers was high out-of-specification. The licensee failed to document this adverse condition in its corrective action program to evaluate it for significance and to determine whether the operability of the emergency diesel generator was adversely affected.

  The failure to satisfy the guidance in APA-ZZ-00500 upon identification of high out-of-specification torque measurements on safety-related tornado dampers by initiating a Callaway Action Request, informing the shift manager, and evaluating the condition for

operability, functionality, and reportability was a performance deficiency. This performance deficiency was more than minor because if left uncorrected, the licensee's continued failure to conform to APA-ZZ-00500 upon discovery of an adverse condition impacting the EDG tornado protection system had the potential to lead to a more significant safety concern. Using Inspection Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," the team determined that the finding was of very low safety significance (Green) because it did not result in the loss of the safety function of any system or train and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. This finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee failed to completely, accurately, and in a timely manner identify and fully evaluate an issue potentially impacting nuclear safety (P.1(a)). (Section 4OA2.5.c)

- Green. The team identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to fully implement the requirements of its fluid leak management procedure. The team identified two instances where the licensee had not hung a fluid leak management tag on an active fluid leak and several examples of fluid leak management tags not indicating whether individual leaks were monitored. Further, the team found no evidence that leakage indications were actively monitored and trended, as required by procedure both before and after repairs were made. The licensee had previously determined that the extent of condition of weaknesses in its boric acid corrosion control program included the fluid leak management program. However, corrective actions only addressed the boric acid corrosion control program.

  The licensee's failure to implement the requirements of its fluid leak management procedure was a performance deficiency. The team determined that the performance deficiency was more than minor because if left uncorrected, it had the potential to become a more significant safety concern. Specifically, if the licensee continued to fail to implement its fluid leak management procedure, leaks that adversely affect safety-related equipment could go unmonitored, resulting in equipment degradation. Using Inspection 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 result in the loss of the safety function of any system or train and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. The team determined that the finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee failed to fully evaluate a problem such that the resolution addressed the causes and extent of condition (P.1(c)). (Section 4OA2.5.d)

B. Licensee-Identified Violations

None

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 during the assessment period, which ranged from October 18, 2010, to the end of the on-site portion of this inspection on July 13, 2012.

.1 Assessment of the Corrective Action Program Effectiveness

a. Inspection Scope

The team reviewed approximately 200 Callaway Action Requests (CARs), including associated root cause, apparent cause, and direct cause evaluations, from approximately 13,000 that had been issued between October 18, 2010, and July 13, 2012, 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 orders ("Jobs"), self-assessment results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed daily CARs and Jobs, and attended the licensee's daily CAR screening and leadership 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 verification that the licensee considered the full extent of cause and extent of condition for problems, as well as a review of how the licensee assessed generic implications and previous occurrences. 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 reviewed corrective action documents that addressed past NRC-identified violations to ensure that corrective actions addressed the issues as described in the inspection reports. The team reviewed a sample of corrective actions closed to other corrective action documents to ensure that corrective actions remained appropriate and timely.

The team considered risk insights from both the NRC's and Callaway Plant's risk assessments to focus the sample selection and plant tours on risk significant systems and components. The team focused its sample on emergency core cooling systems and selected the emergency diesel generator system for a five-year in-depth review. The samples reviewed by the team focused on, but were not limited to, these systems. The team conducted walkdowns of these systems to assess whether problems were identified and entered into the corrective action program.

b. Assessments

1. Effectiveness of Problem Identification

The team concluded that in most cases, the licensee identified issues and adverse conditions in accordance with its corrective action program guidance and with NRC requirements. The team determined that the licensee generally identified these problems at a low threshold and entered them into the corrective action program. However, the team found several examples of deficiencies and received several comments during interviews that indicated a reluctance of some plant personnel to use the corrective action program to evaluate and resolve problems that they perceived as minor.

During the 22-month inspection period, approximately 13,000 CARs were generated. The licensee's CAR generation rate of approximately 8000-8500 per year during outage years and 6500-7000 per year during non-outage years had been relatively constant over the previous four years. The team noted that because the licensee maintained a separate system for the initiation of Jobs, not all problems were required by licensee procedures to be entered into the corrective action program. Lower-level conditions that did not meet the licensee's requirement for initiation of a CAR were addressed as Jobs. The team identified that most conditions that required generation of a CAR by APA-ZZ-00500, "Corrective Action Program," Revision 054, and associated attachments were being appropriately entered into the corrective action program. However, the team noted several exceptions:

- In April 2012, as-found EDG building tornado damper torque measurements were found high out of specification. The system engineer failed to write a CAR for this condition as required by procedure. This performance deficiency is further discussed in Section 4OA2.5.b of this report.

- During observations of control room operations on June 28, 2012, the team noted an under-instruction operator at the controls viewing photographs on his mobile phone and sharing these photographs with a maintenance technician. The team disagreed with the licensee's assessment that this was not "distracting" conduct, prohibited by ODP-ZZ-0001, Addendum 11, "Control Room Decorum." The licensee did not initiate a CAR related to this observation.

- During a plant walk-down on June 29, 2012, the team identified potential fluid leaks that the licensee had not identified or documented in its corrective action program. The licensee did not enter these conditions into its corrective action program until July 11, 2012, after being questioned by the team.

Additionally, during other inspections conducted during the inspection period, the NRC had documented three findings that were evaluated to have P.1(a) cross-cutting aspects. These indicated potential deficiencies in the licensee's effective identification of problems:

- On August 21, 2011, the number 3 alternate emergency power supply (AEPS) diesel output breaker tripped open due to incorrect breaker relay settings.

Further investigation by the licensee revealed that all four of the diesel output breakers had incorrect settings. The incorrect settings occurred due to the limited range of the relay chosen for the application and the engineering recommendations that prioritized protecting the diesel over limiting the margin to unintended breaker trips. This was documented as FIN 2011004-02.

- Following a trip of the supply breaker to an emergency diesel generator jacket water keep warm pump on November 6, 2010, the NRC found that a previous evaluation had shown a decrease in motor insulation resistance at a sufficient rate such that there was a reasonable doubt that the motor would continue to be reliable until the next performance evaluation. The licensee failed to recognize this degradation and, as a result, did not enter the condition into the corrective action program. This was documented as NCV 2010005-03.

- On February 8 and March 16, 2011, the NRC identified two locations where scaffold poles and a scaffold pin were less than the procedurally required 1 inch from the auxiliary building vent line, the train B emergency diesel lube oil drain line, and the essential service water system piping in the Train B diesel room. The licensee failed to properly install and inspect these scaffolds and did not exhibit a low threshold for identifying scaffold issues. This was documented as NCV 2011002-04.

The team concluded that these exceptions indicated a higher-than-normal threshold for the formal identification of problems and entry into the corrective action problem for evaluation. Nonetheless, the team noted that most problems were adequately addressed through one of the licensee's programs for the identification and resolution of problems.

2. Assessment - Effectiveness of Prioritization and Evaluation of Issues

Once the licensee enters issues into the corrective action program, they are generally screened to the appropriate level as required by APA-ZZ-00500, "Corrective Action Program," Revision 054, and associated attachments. While the team noted some issues with the timeliness of corrective actions for issues, such as inadequate plant lighting, actions were generally completed by their due dates; due date extensions were generally reasonable and were not overused. However, the team noted some issues with the licensee's implementation of its program to identify trends and with its evaluation of some identified adverse conditions:

- The team identified a minor performance deficiency associated with the licensee's trending program. For adverse trends identified outside of the quarterly trending program, including trends identified through audits, the licensee failed to establish success criteria used to terminate performance monitoring. This created the potential for a trend to be closed without consideration for new data points and the possible need for continued performance monitoring. This could adversely impact the station's ability to use adverse trends as a prediction tool to address issues at a low level, prior to escalating into a significant event. The licensee documented this observation in CAR 201204897.

- The past operability for the August 2011 essential service water train A fan damper failure (CAR 201106551) declared the essential service water pump operable based on a calculation of maximum room temperatures. In performing this calculation, the licensee considered ambient temperatures for the period from a previous failure in July until the August failure. The licensee had identified that the degraded condition had been introduced during maintenance in May 2011. However, the evaluation of past operability did not consider the period from this time until the July failure. The licensee initiated CAR 201204890 to update the past operability evaluation and to document the issue.

- MDP-ZZ-LM001, "Fluid Leak Management," Revision 011, directs that for all leakage indication other than boric acid, fluid leak management tags be generated and hung on the leaking equipment and that the leaks be monitored. During several walk-downs of safety-related plant equipment, the team noted fluid leaks where either no tag was hanging or where it was unclear which of multiple leaks was identified by a hanging tag. The team noted that in January 2012, a CAR had been written recommending the development of a program-level procedure to govern plant response to leakage, but no action had been taken. This performance deficiency is further discussed in Section 4OA2.5.d of this report.

Additionally, during other inspections conducted during the inspection period, the NRC had documented three findings that were evaluated to have a P.1(c) cross-cutting aspects. These indicated potential deficiencies in the licensee's prioritization and evaluation of problems:

- In September 2011, the NRC identified that Callaway Plant did not have procedures that ensured that hand files and wire brushes designated for stainless steel weld preparation were stored separately from hand files and wire brushes used on carbon steel. The licensee previously identified contaminated tools as the cause of rusting on the motor-driven auxiliary feed pump room cooler stainless steel piping, but took no further action to identify the cause of the contamination. This was documented as NCV 2011005-01.

- On April 19, 2011, the NRC identified that the Callaway Plant failed to maintain an adequate design control calculation for the flooding analysis of control building room 3101. The licensee did not update the flooding analysis of record to consider potential failures in new piping installed in 2009 as part of a modification that replaced essential service water carbon steel piping with high density polyethylene piping. This was documented as NCV 2011003-01.

Overall, the team determined that the licensee had a strong process for screening and prioritizing issues that were entered into the corrective action program. All departments were represented at CAR screening meetings. The departments took clear ownership of the issues discussed and set appropriate due dates for evaluation of the issues identified in the CARs, in accordance with APA-ZZ-00500, "Corrective Action Program," Revision 054, and associated attachments. The issues noted above were related to the subsequent evaluation of these issues and the prioritization of corrective actions.

3. Assessment – Effectiveness of Corrective Actions

When appropriate corrective actions were implemented, they were generally effective. However, the team identified some examples of corrective actions not addressing the entire cause or extent of condition.

- After a failure of ESW room supply fan dampers in July 2011, the licensee incorrectly evaluated the condition. The licensee's evaluation presumed, based on industry operating experience, that a circuit card had failed. The licensee replaced the circuit card and returned the dampers to service. However, the failure was the result of pinched wires; the circuit card was fully functional. The failure recurred in August 2011. This performance deficiency is further discussed in Section 4OA2.5.c of this report.

- Root cause evaluation AUCA 12-002 (CAR 201104707) identified that inadequate corrective actions from previous self-assessments contributed to a security event in 2011. The corrective action for this condition was to require subsequent self-assessments to review trends from previous self-assessments. The licensee implemented a procedure modification to APA-ZZ-01400, Appendix A, "Callaway Self-Assessment and Benchmarking Program." The team noted that Revision 014 to this procedure included prior self-assessments as one of the "considerations for topics" to be included within the scope of subsequent self-assessments. However, this review was not a requirement and the procedure step was not referenced to the CAR or the root cause evaluation. (A similar corrective action to add operating experience reviews to a procedure had been implemented as designed.)

The team noted that corrective actions to address the sample of NRC non-cited violations and findings since the last problem identification and resolution inspection had been timely and effective.

Overall, the team concluded that the licensee generally developed appropriate corrective actions to address identified problems. The licensee generally implemented these corrective actions in a timely manner, commensurate with their safety significance. Except for the issue with the trending program noted in Section 4OA2.1.b.2 above, the licensee generally had performed timely effectiveness reviews of significant corrective actions to verify their adequacy.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The team examined the licensee's program for reviewing industry operating experience, including governing procedures and self-assessments and interviewed individuals responsible for managing the operating experience and vendor equipment technical information review programs. The team reviewed a sample of CARs compared to operating experience documents issued by the NRC and the industry during the assessment period to assess whether the licensee had entered those items into their corrective action program. The team also examined whether the licensee had appropriately evaluated external operating experience for relevance to the facility, assigned appropriate and timely actions to address the issues, and performed

effectiveness reviews to ensure the actions were adequate. The team reviewed a sample of root cause evaluations and significant condition reports to determine if the licensee had appropriately reviewed industry operating experience for relevance. The team observed management meetings and pre-job briefs that included internal and external operating experience discussions and reviewed cause evaluations and event review team meeting summaries that considered pertinent operating experience.

b. Assessment

The team noted that the licensee incorporated both internal and external operating experience into lessons learned for training and into pre-job briefs, and the licensee included a review of operating experience in its cause evaluations. However, the team noted three indications of potential issues with the use of operating experience, one of which the licensee had identified and corrected prior to this inspection:

- In the licensee's root cause evaluation for a security event in 2011, it identified that weaknesses in the assessment and use of security-related operating experience may have resulted in a failure to implement barriers that may have prevented the event. The licensee identified this weakness, documented it in CAR 201104707, and took corrective action to improve its use of security operating experience.

- Two non-cited violations from the most recent integrated inspection report, 05000483/20120003, were related to the proper application of operating experience. One had a cross-cutting aspect of P.2(b) for failure to properly implement operating experience and the second involved failing to consider/take appropriate action on an NRC Information Notice during the periodic Maintenance Rule assessment.

- During focus group interviews, some licensee personnel expressed frustrations with the implementation of operating experience in day-to-day work package preparation and briefing. Some interviewees indicated that applicable operating experience was not always provided or, when it was, it was sometimes limited.

Overall, the team determined that the licensee had appropriately evaluated industry and vendor operating experience for relevance to the facility, had entered applicable items into the corrective action program, and where appropriate, had incorporated lessons learned into station programs, processes, or procedures.

.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 self-assessments and audits reviewed are listed in the attachment.

b. Assessment

The team concluded that the licensee had an effective self-assessment process. Licensee management was involved in developing the topics and objectives of self-

assessments. Attention was given to assigning team members with the proper skills and experience to perform effective self-assessments and to include people from outside organizations. Audits were self-critical, thorough, and identified new performance deficiencies in addition to evaluating known performance deficiencies across key functional areas. Callaway Action Requests were generated to document deficiencies and improvement opportunities identified through audits and corrective actions were implemented. The team identified one weakness in individual departments missing opportunities to identify adverse trends, as evidenced in the high number of adverse trends identified by Nuclear Oversight through audits. However, the team did not identify any significant adverse trends that had not been identified by at least one licensee process.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The team interviewed forty-three individuals in seven focus groups to evaluate their willingness to raise nuclear safety issues. These individuals were from the Operations, Maintenance, Security, Engineering, Radiation Protection, Chemistry, and Nuclear Oversight departments. The individuals were selected randomly based on availability from these departments. Additionally, the team interviewed the Employee Concerns Program (ECP) manager to assess her perception of the site employees' willingness to raise nuclear safety concerns. The team also reviewed selected documents to assess the safety-conscious work environment (SCWE) at the site.

b. Assessment

1. Willingness to Raise Nuclear Safety Issues

The individuals interviewed indicated they did not have any hesitancy in raising nuclear safety issues. Most feel that their management is receptive to the concerns, and is willing to address them. Most of the interviewees also stated that if they were not satisfied with the response from their immediate supervisor, they would feel free to escalate the concern. In most cases, interviewees had raised issues and concerns to their supervisors and then followed the supervisor's recommendation, which often involved entering the issue into the corrective action program. All the individuals interviewed expressed positive experiences for bringing issues to their supervisors and could name several other avenues for raising concerns. The majority of interviewees explained that going through the supervisor and using the corrective action program had been effective in their experience. Therefore, they had not had the need to use other avenues.

2. Employee Concerns Program

All the interviewees were aware of the Employee Concerns Program. Most explained that they have heard about the program through various means, such as posters, ECP mailers, presentations, and discussion by supervisors or management at meetings. Most did not have any personal experience with the ECP because, as noted above, they felt free to raise safety concerns to their supervisors; they did not need to use the ECP in these cases. However, there was a favorable impression of the program: everyone interviewed stated that they would use the program if they

felt they needed to. Of those who had brought issues to the ECP in the past, all indicated that the experience was positive and that they would use the ECP again if needed. Everyone interviewed also stated that they had not heard of any issues dealing with breaches of confidentiality.

3. Preventing or Mitigating Perceptions of Retaliation

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

.5 Findings

a. Failure to identify and correct the failure mode of an essential service water pump

Introduction. The team reviewed a green self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly identify and correct a condition adverse to quality. During troubleshooting, the licensee incorrectly identified a failed circuit card as the cause of an essential service water pump room fan damper failure. The licensee returned the damper to service and declared the associated pump operable without identifying the actual failure—pinched wires introduced during previous maintenance. This resulted in a subsequent failure.

Description. On July 13, 2011, an air damper associated with the essential service water train A supply fan failed to open as required during pump operation. The licensee declared the associated pump inoperable, took compensatory actions to manually reposition and de-energize the damper in its safety-related position, and declared the pump operable. The licensee then performed troubleshooting on the Foxboro circuit card associated with the damper per Job 11003848. The licensee failed to use troubleshooting procedure MDP-ZZ-TR001, "Planning and Execution of Troubleshooting Activities," Revision 7, as guidance in preparing and conducting the troubleshooting. A technician initially identified an intermittent ground and postulated that it may have been associated with the field wiring. However, a second technician retested the field wiring and determined that no ground existed. Based on these readings and on operating experience indicating a history of problems with these cards, the cognizant engineer elected to replace the Foxboro circuit card. Contrary to the instructions in Job 11003848, the licensee performed no testing on the removed card to confirm it was the cause and to document that cause. The licensee replaced the card and retested the damper satisfactorily.

On August 17, 2011, the damper failed again. The licensee identified this as a repeat occurrence and performed formal troubleshooting on this second failure in accordance with procedure MDP-ZZ-TR001. The licensee again identified the ground on the field wires initially detected following the July failure. The licensee inspected these wires and discovered that two pinched field wires inside the hydramotor junction box, causing the ground. In 2005, the licensee had removed this hydramotor actuator, refurbished it, and placed it in storage. The licensee determined that during the refurbishment, the terminal board had been positioned too close to the junction box housing. As a result, when the licensee removed the actuator from storage and installed it back into the plant on

May 24, 2011, a threaded cap pinched the wires on the terminal board. Following this discovery, the circuit was rewired and retested satisfactorily. The licensee performed an evaluation of past operability that demonstrated, given the ambient temperatures during the time of the failure, the essential service water pump had been operable despite the damper failure.

Analysis. The failure to identify that pinched wires had caused the damper failure and to correct the condition before replacing the circuit card and declaring the system operable was a performance deficiency. This performance deficiency was more than minor because it adversely affected 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 team determined the finding to be of very low safety significance (Green) because it did not result in the loss of the safety function of any system or train and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. This finding has a cross-cutting aspect in the decision-making component of the human performance cross-cutting area because the licensee failed to conduct an effectiveness review of safety-significant decisions to verify the validity of the underlying assumptions or identify possible unintended consequences (H.1(b)).

Enforcement. Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion XVI, "Corrective Actions," requires, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Contrary to the above, between July 13 and August 17, 2011, the licensee failed to establish measures to assure that conditions adverse to quality were promptly identified and corrected. Specifically, the licensee failed to identify that pinched wires were causing grounds on the train A essential service water pump room fan damper resulting in the pump being inoperable. Because it was of very low safety significance and had been entered into the licensee's corrective action program as Callaway Action Requests 201106551 and 201110845, this violation is being treated as a non-cited violation consistent with Section 2.3.2 of the Enforcement Policy: NCV 05000483/2012008-01, "Failure to identify and correct the failure mode of an essential service water pump."

b. Failure to Provide Adequate Maintenance Instructions

Introduction: The team reviewed a non-cited violation of Technical Specification 5.4.1.a, "Procedures," for the licensee's failure to provide maintenance instructions appropriate for repair of the Train B emergency diesel generator supply fan. These inadequate instructions resulted in maintenance technicians routing and restraining electrical cables inappropriately during maintenance in July 2006. These cables later came loose and, in August 2011, caused a failure of the train B emergency diesel generator supply fan to start on demand.

Description: On August 30, 2011, while performing scheduled emergency diesel generator surveillances, the train B emergency diesel generator ventilation supply fan breaker tripped unexpectedly resulting in the licensee declaring the train B emergency diesel generator inoperable. The licensee performed troubleshooting activities and determined the supply fan motor stator winding lead grounded to the rotor shaft shorting

the 480 volt supply leads to ground. The leads had been extended in July 2006 in response to a failure of the fan while running. The cause of the failure in 2006 was due to the motor leads pulling apart due to tension in the wires. During initial construction, the leads were cut too short which caused undue tension. The remedy for this 2006 event was to cut off and extend the motor leads. These new extended leads were then tucked inside the airspace between the stator and the motor housing within the end-bell of the motor. Between July 2006 and August 2011 the motor leads inside the end-bell came out of their tucked position and draped across the motor shaft. During operation of the fan, the rotor shaft rubbed a hole in the motor lead insulation. On August 31, 2011, the bare copper leads contacted the shaft and went to ground. The team reviewed the work package used to extend the motor leads in 2006 and noted there were no specific steps to route the extended cables. The cables should have been routed underneath the stator and this would have prevented the failure on August 30, 2011.

Analysis: The failure to provide maintenance procedures appropriate to the circumstance is a performance deficiency. This finding was more than minor because it affected 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 team determined that the finding was of very low safety significance (Green) because it did not result in the loss of the safety function of any system or train and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. The team determined that this performance deficiency was not indicative of current plant performance because it was the result of repair instructions written and implemented in 2006. Therefore, no cross-cutting aspect was assigned.

Enforcement: Technical Specification 5.4.1.a requires, in part, that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, dated February 1978. Paragraph 9.a of this appendix requires, in part, that maintenance that can affect the performance of safety-related equipment should be properly pre-planned and performed in accordance with written procedures appropriate to the circumstances. Contrary to the above, on July 11, 2006, the licensee failed to properly plan and perform maintenance that could affect the performance of safety-related equipment with written procedures appropriate for the circumstance. Specifically, the inadequate instructions resulted in maintenance technicians routing and restraining electrical cables inappropriately during maintenance in July 2006, which later caused a failure of the train B emergency diesel generator supply fan to start on demand. Because this finding is of very low safety significance and was entered into the licensee's corrective action program as Callaway Action Request 201106905, this violation is being treated as a non-cited violation consistent with Section 2.3.2 of the NRC Enforcement Policy:
NCV 05000483/2012008-02, "Failure to provide adequate maintenance instructions."

c. Failure to Initiate a Corrective Action Document

Introduction. The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure, upon discovery of an adverse condition, to initiate a Callaway Action Request, to notify the shift manager, and to review the condition for, operability, functionality, and reportability as required by APA-ZZ-00500, "Corrective Action Program," revision 054.

Description. Emergency diesel generator tornado dampers are safety-related components. They have an active safety function to automatically reposition during tornado conditions to protect the emergency diesel generator. During the licensee's performance of Job 05514809.500, "Lubricate and Inspect Damper GMD0004," on April 24, 2012, the as-found breakaway torque measurement for the train A emergency diesel generator tornado dampers was 25.7 percent higher than the shop value. This exceeded the vendor-recommended torque range of plus-or-minus 20 percent for a properly functioning damper.

Procedure APA-ZZ-00500 Appendix 22, "Corrective Action Program Definitions," revision 007, includes in its definition of "condition adverse to quality," a non-conformance of safety-related equipment or the potential inability of safety-related equipment to perform its safety function. In addition, APA-ZZ-00500 Appendix 22 defines "adverse condition" as "an encompassing term" that includes, among other examples, a condition that could credibly impact nuclear safety, a condition not in compliance with design specifications, or a condition adverse to quality.

Procedure APA-ZZ-00500, "Corrective Action Program," revision 054, requires that any individual discovering an adverse condition promptly initiate a CAR; promptly is defined to be within the same shift. Further, when initiating a CAR for an equipment issue, APA-ZZ-00500 requires the originator to notify the shift manager, and requires the shift manager to review the condition for operability, functionality, and reportability.

On April 24, 2012, the as-found breakaway torque of the train A emergency diesel generator tornado damper exceeded the vendor-recommended torque range. This represented a non-conformance of safety-related equipment, in that it was not in compliance with design specifications, and a potential inability of safety-related equipment to perform its safety function. The identification of this adverse condition required the initiation of a CAR, notification of the shift manager, and evaluation of the condition by the shift manager. Upon discovery of this condition, the licensee failed to initiate a CAR, notify the shift manager, or review the condition for operability, functionality, or reportability.

On June 27, 2012, after identification of this condition by the team, licensee engineering staff analyzed the as-found breakaway torque for the emergency diesel generator tornado damper. This analysis determined that though the breakaway torque was outside the acceptance band provided by the vendor, it was below the maximum breakaway torque under which the dampers could successfully close against the maximum differential pressure the ductwork is designed to withstand. The operations department subsequently declared the train A emergency diesel generators operable and performed an extent of condition review, determining the opposite train tornado dampers to be operable as well. The licensee documented the team's concerns in CAR 201204571.

Analysis. The failure to satisfy the requirements of APA-ZZ-00500 upon identification of high out-of-specification torque measurements on safety-related tornado dampers by initiating a Callaway Action Request, informing the shift manager, and evaluating the condition for operability, functionality, and reportability was a performance deficiency related to the mitigating systems cornerstone. This performance deficiency was more than minor because if left uncorrected, the licensee's continued failure to conform to

APA-ZZ-00500 upon discovery of an adverse condition impacting the EDG tornado protection system would have the potential to lead to a more significant safety concern.

Using Inspection Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," the team determined that the finding was of very low safety significance (Green) because it did not result in the loss of the safety function of any system or train and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. This finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee failed to completely, accurately, and in a timely manner identify and fully evaluate an issue potentially impacting nuclear safety (P.1(a)).

Enforcement. Title 10 of the Code of Federal Regulations, 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 APA-ZZ-00500, "Corrective Action Program," revision 54, required initiation of a Callaway Action Request within the same shift as the identification of an adverse condition. Further, APA-ZZ-00500 required that the shift manager be notified of all adverse conditions affecting equipment and that the shift manager review the condition for operability, functionality, and reportability.

Contrary to the above, from April 24, 2012 until June 26, 2012, licensee staff failed to accomplish an activity affecting quality in accordance with documented procedures. Specifically, the licensee failed to initiate a CAR within a shift after discovery of an adverse condition, as required by APA-ZZ-00500, failed to notify the shift manager of an adverse condition affecting plant equipment, and failed to evaluate the condition for operability, functionality, and reportability. Because this finding is of very low safety significance and was entered into the licensee's corrective action program as Callaway Action Request 201204571, the violation is being treated as a non-cited violation consistent with Section 2.3.2 of the NRC Enforcement Policy: NCV 05000483/2012008-03, "Failure to initiate a corrective action document."

d. Failure to Implement Procedure Requirements

Introduction. The team identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to fully implement the requirements of its fluid leak management procedure. The team identified two instances where the licensee had not hung a fluid leak management tag on an active fluid leak and several examples of fluid leak management tags not indicating whether individual leaks were monitored. Further, the team found that the licensee did not always document leakage monitoring, making trending difficult.

Description. Procedure MDP-ZZ-LM001, "Fluid Leak Management," revision 011, was established by the licensee as its process for the timely identification, investigation, and repair of fluid leaks in plant systems and components, including those involving nuclear safety, fire hazards, spread of contamination, and equipment damage. For all indications of leakage of non-boric-acid fluids (except in the reactor building), this procedure directed that a Job be initiated and a fluid leak management tag be generated and hung for monitoring and trending purposes. The procedure further directed that,

once repairs were accomplished, repaired leaks be monitored for two months to ensure the leak was corrected. During walk-downs of safety-related plant equipment on June 27 and June 29, 2012, the team noted four examples of fluid leak indications that were not being managed in accordance with this procedure:

- Safety injection pump B (PEM01B) had multiple small oil leaks that appeared to be coming from threaded fittings. No fluid leak management tag was hanging and no Job had been initiated for evaluation and repair. The licensee stated that recent repairs had been made to this piping and a previously hanging fluid leak management tag had been removed upon completion of those repairs, prior to the end of the two-month monitoring window required by procedure.
- Fire protection valve KCV0084 had a packing leak with a catch device in place to collect the leaking fluid. No fluid leak management tag was hanging, though the licensee had initiated Job 12003073 to adjust the packing.
- Component cooling water pump B (PEG01B) had water leaks from both pump bearing housings and evidence of an oil leak in the pump skid. One fluid leak management tag related to Job 06114561, to replace the pump bearing housings, was hanging on the pump motor identifying an oil leak; other leaks were not tracked.
- Containment spray pump B (PEN01B) had a puddle of oil on top of the pump flange, inside the motor housing. No fluid leak management tag was hanging and no Job had been initiated to evaluate the source of the oil. The licensee stated that the oil "appears to be residual spill from oil changes on the motor" in December 2011. Job 12003518 was initiated to clean the oil; no Job was initiated to confirm the source of the oil or to monitor for potential leakage.

In discussions with the team on June 29, 2012, an individual responsible for the implementation of the fluid leak management program acknowledged some inconsistent adherence to the fluid leak management program procedure by station personnel. Further, though the team discussed the safety injection pump B oil leaks with the licensee on June 29, 2012, the licensee did not document these leaks "at the earliest possible stages" in accordance with MDP-ZZ-LM001 instructions. During follow-up discussions on July 9, 2012, the team questioned why this leak had not yet been documented. On July 11, 2012, the licensee initiated Job 12003542 and CAR 201204882 to evaluate and track the leak. The team concluded that the inconsistent application of procedural requirements and inconsistent identification of the source of leaks when fluid leak management tags were hung, indicated programmatic deficiencies in the licensee's process for identifying, investigating, and repairing fluid leaks.

The team further noted that in September 2011, the licensee completed a self-assessment of its boric acid corrosion control program, which at the time was part of the fluid leak management program. In its self-assessment, the licensee noted similar weaknesses in implementation of the boric acid corrosion control program. The licensee documented in CAR 201107657 that the extent of condition of these weaknesses included both the boric acid corrosion control program and the fluid leak management program for non-boric acid leaks. The licensee took corrective actions to address the deficiencies in the boric acid corrosion control program, but did not address the fluid leak management program deficiencies. On January 10, 2012, the licensee initiated CAR 201200272, recommending the development of a program-level procedure to govern

plant response to leakage. At the conclusion of this inspection, this CAR remained open with no actions taken.

Analysis. The licensee's failure to fully implement the requirements of its fluid leak management procedure was a performance deficiency. The team determined that the performance deficiency was more than minor because if left uncorrected, it had the potential to become a more significant safety concern. Specifically, if the licensee continued to fail to implement its fluid leak management procedure, leaks that adversely affect safety-related equipment could go unmonitored, resulting in undetected equipment degradation. Using Inspection 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 result in the loss of the safety function of any system or train and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. The team determined that the finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee failed to fully evaluate a problem such that the resolution addressed the causes and extent of condition (P.1(c)).

Enforcement. Title 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires in part that activities affecting quality be prescribed by documented instructions, procedures, or drawings, and be accomplished in accordance with these instructions, procedures, and drawings. Contrary to this requirement, on June 27, 2012, the licensee failed to accomplish activities affecting quality in accordance with prescribed instructions, procedures, and drawings. Specifically, the licensee failed to fully implement the requirements of MDP-ZZ-LM001, "Fluid Leak Management Program," Revision 011, to identify, evaluate, document, mitigate, and monitor leakage from safety-related structures, systems, and components. Because this finding was of very low safety significance (Green) and was entered into the licensee's corrective action program as Callaway Action Request 201204929, the violation is being treated as a non-cited violation consistent with Section 2.3.2 of the Enforcement Policy: NCV 05000483/2012008-04, "Failure to fully implement fluid leak management program."

4OA6 Meetings

.1 Exit Meeting Summary

On July 13, 2012, the team presented the inspection results to Mr. Adam C. Heflin, Senior Vice President and Chief Nuclear Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The team noted that proprietary information had been included electronically in the response to the initial information request and that this information would be destroyed. The licensee acknowledged that other proprietary information that the team reviewed had been returned.

.2 Other Management Meetings

On August 1, 2012, August 21, 2012, and September 11. 2012, Mr. Scott Maglio and other licensee personnel discussed NCV 05000483/2012008-04 with the team lead and the Branch Chief, Technical Support Branch. Licensee management reiterated its position that the Fluid Leak Management program was being fully implemented. The

team acknowledged and considered the licensee's position and discussed it with NRR Program Office personnel, but for the reasons listed in Section 4OA5.5.d above, did not agree.

ATTACHMENTS:

1. Supplemental Information
2. Information Request
3. Supplemental Information Request

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

F. Bianco, Assistant Operations Manager (Support)
M. Daly, Corrective Action Program Supervisor
M. Dunbar, Manager, Maintenance (Acting)
S. Edwards, Employee Concerns Manager
S. Enloe, Mechanical Maintenance Technician
T. Fugate, Manager, Maintenance
S. Maglio, Regulatory Affairs Manager
B. Miller, Performance Improvement Manager (Acting)
H. Osborn, Regulatory Affairs Specialist
D. Rickard, Root Cause Coordinator
L. Sandbothe, Manager Plant Support
A. Schnitz, Engineer, Regulatory Affairs

NRC personnel

D. Powers, Senior Technical Advisor, Technical Support Branch

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000483/2012008-01	NCV	Failure to identify and correct the failure mode of an essential service water pump (Section 4OA2.5.a)
05000483/2012008-02	NCV	Failure to provide adequate maintenance instructions (Section 4OA2.5.b)
05000483/2012008-03	NCV	Failure to initiate a corrective action document (Section 4OA2.5.c)
05000483/2012008-04	NCV	Failure to fully implement fluid leak management program (Section 4OA2.5.d)

Discussed

None

LIST OF DOCUMENTS REVIEWED

CALLAWAY ACTION REQUESTS (CARS)

200409580	200901515	201005401	201102588	201107460	201201587	201203507
200700100	200901831	201005616	201103219	201107657	201201652	201203559
200701415	200903102	201005654	201104132	201107679	201201712	201203562
200702872	200903204	201006376	201104403	201107759	201201790	201203576
200703247	200905171	201007711	201104475	201107761	201201851	201203586
200703260	200906859	201008001	201104654	201107762	201202058	201203593
200703313	200908108	201008153	201104707	201107763	201202157	201203637
200703331	200908133	201008230	201104775	201108091	201202169	201203709
200705117	200908262	201009423	201104836	201108586	201202224	201203767
200705410	200909091	201009719	201105121	201108775	201202273	201204094
200706042	200909120	201009922	201105137	201109194	201202333	201204467
200706307	200909455	201010145	201105210	201109257	201202340	201204482
200706804	200909951	201010266	201105273	201109259	201202561	201204529
200706892	200910153	201010432	201105282	201109441	201202632	201204542
200707394	201001515	201010472	201105331	201109490	201202717	201204548
200709539	201001529	201010530	201105365	201109521	201202909	201204571
200709540	201002281	201010634	201105477	201109562	201202922	201204586
200711788	201002456	201010635	201105534	201109569	201203103	201204692
200800175	201002599	201011161	201105601	201109621	201203140	201204702
200801069	201002675	201011278	201105700	201109732	201203144	201204777
200801146	201002916	201100526	201105727	201109894	201203223	201204803
200801270	201003236	201101042	201105768	201109948	201203232	201204805
200804103	201003472	201101192	201105831	201110797	201203319	201204882
200804164	201003813	201101583	201105861	201110845	201203347	201204885
200804337	201004071	201101755	201105886	201110929	201203434	201204890
200805586	201004250	201101769	201105927	201200272	201203453	201204896
200810335	201004294	201101835	201105965	201200336	201203469	201206157
200810902	201004687	201102064	201106369	201200577	201203484	
200812985	201005233	201102129	201106551	201200905	201203501	
200900986	201005328	201102329	201106905	201201245	201203502	

JOBS

11003848 11004803 11006688

PROCEDURES

NUMBER	TITLE	REVISION
APA-ZZ-00101	Processing Procedures, Manuals, and Desktop Instructions	061
APA-ZZ-00101 App. D	Manuals, Desktop Instructions, Handbooks, Forms and Policies	011
APA-ZZ-00107	Review of Current Industry Operating Experience	015
APA-ZZ-00203	Forms Management	013
APA-ZZ-00303	Classification of Systems	013
APA-ZZ-00303 App. 1	Callaway Director Plant System Classification Data	010
APA-ZZ-00304	Control of Callaway Equipment List	035
APA-ZZ-00500	Corrective Action Program	054
APA-ZZ-00500 App. 1	Operability and Functionality Determinations	017
APA-ZZ-00500 App. 10	Trending Program	005
APA-ZZ-00500 App. 11	Regulatory Issue Summary 2005-20 Degraded and Nonconforming Condition Resolution	006
APA-ZZ-00500 App. 12	Significant Adverse Condition – Significance Level 1	014
APA-ZZ-00500 App. 13	Adverse Condition – Significance Level 2	014
APA-ZZ-00500 App. 14	Adverse Condition – Significance Level 3	012
APA-ZZ-00500 App. 15	Adverse Condition – Significance Level 4	012
APA-ZZ-00500 App. 16	Adverse Condition – Significance Level 5	009
APA-ZZ-00500 App. 17	Screening Process Guidelines	014
APA-ZZ-00500 App. 18	Equipment Performance Evaluation	006
APA-ZZ-00500 App. 2	Non-Conforming Materials Report (NMR)	012
APA-ZZ-00500 App. 21	Other Issues – Significance Level 6	012
APA-ZZ-00500 App. 3	Past Operability & Reportability Evaluations (REPO)	014
APA-ZZ-00500 App. 5	Maintenance Rule (MR)	012
APA-ZZ-00500 App. 7	Effectiveness Reviews	009
APA-ZZ-00500 App. 9	Mitigating Systems Performance Index (MSPI)	004

NUMBER	TITLE	REVISION
APA-ZZ-00542	Event Review and Post Transient Evaluation	016
APA-ZZ-00542 App. 1	Event Review Team	011
APA-ZZ-00605	Temporary System Modifications	028
APA-ZZ-00905	Limitation of Callaway Plant Staff Working Hours	15
APA-ZZ-00911	Fatigue Management	2
APA-ZZ-00930	Employee Concerns Program	014
APA-ZZ-00932	Nuclear Safety Culture Monitoring	000
APA-ZZ-01400	Performance Improvement Program	013
APA-ZZ-01400 App. A	Callaway Self-Assessment and Benchmarking Program	014
APA-ZZ-01400 App. E	Operating Experience	010
APA-ZZ-01400 App. H	Performance Review Group	013
APA-ZZ-01400 App. N		006
EDP-ZZ-04100	Review, Planning, Implementation & Closure Of Modification Packages	022
EDP-ZZ-06000	Vendor Equipment Technical Information Review Program	017
GDP-ZZ-01810	Nuclear Oversight Assessment Coverage	044
ITL-KJ-00P24	LOOP-PRESS; Diesel Engine (KKJ01A) Crankcase Exit Pressure	4
ITP-KJ-00001	Emergency DG A Trip Checks	8
LDP-ZZ-00500	Corrective Action Review Board	021
MDP-ZZ-LM001	Fluid Leak Management Program	011
MDP-ZZ-TR001	Planning and Execution of Troubleshooting Activities	007
MDP-ZZ-TR001	Planning and Execution of Troubleshooting Activities	009
MPE-ZZ-QY210	Emergency Diesel Generator NE01 and NE02 Protective Relay Inspection, Test and Calibration	6
MSE-NB-QY002	Operational Test Sequence of 4.16KV Diesel Generator NE01 Air Circuit Breaker 152NB0111	11
ODP-ZZ-00001	Operations Department – Code of Conduct	076
ODP-ZZ-00001 Add. 04	Operating Experience	002
ODP-ZZ-00001 Add. 11	Control Room Decorum	011

OTHER

NUMBER	TITLE	REVISION
	1Q11 Quarterly Trend Report Attachment 1	5/17/2011
	1Q12 Quarterly Trend Report Attachment 1	4/24/2012
	2Q11 Quarterly Trend Report Attachment 1	8/23/2011
	3Q11 Quarterly Trend Report Attachment 1	11/29/2011
	4Q11 Quarterly Trend Report Attachment 1	2/17/2012
	Brochure: Employee Concerns Program	08/24/11
	Callaway Procedure Writers Manual	012
	Nuclear Safety Culture Assessment	
	Operating Quality Assurance Manual (OQAM)	028c
	Plant Status Control Events List	
	Surveillance Report SP12-010	5/31/2012
	Surveillance Report SP12-011	6/18/2012
	Surveillance Report SP12-013	6/22/2012
201200167-05	Employee Concerns Program Self-Assessment	
AP11-001	Radiation Protection Audit	1/4/2011
AP11-002	Operations Audit	4/28/2011
AP11-003	Information Management Audit	3/15/2011
AP11-004	Operations Training Audit	6/13/2011
AP11-005	Access Authorization Audit	8/11/2011
AP11-006	Maintenance Audit	8/24/2011
AP11-007	Independent Quality Program Audit	8/2/2011
AP11-008	Emergency Preparedness Audit	8/15/2011
AP11-009	Corrective Action Program Audit	11/5/2011
AP12-001	Material Services Audit	3/6/2012
AP12-002	Configuration Management Audit	3/28/2012
AP12-003	Fire Protection Program Audit	5/7/2012
POL0017	Safety Conscious Work Environment Policy	007
POL0048	Executive Review Board Policy	004
SP12-007	Functional Area Performance Assessment Report for March 1 to March 15, 2012	3/29/12

NUMBER	TITLE	REVISION
SP12-008	Functional Area Performance Assessment Report for February 23 to March 31, 2012	4/29/12
SP12-010	Functional Area Performance Assessment Report for April 15 to 30, 2012	4/31/12
T51.0092 6	Safety Conscious Work Environment and Managing Protected Employees- training slide presentation	05/31/2012
TM 08-0004	Temporary Modification Request and Authorization	11/3/2008
TM 09-0002	Temporary Modification Request and Authorization	2/6/2009

Information Request
May 4, 2012
Biennial Problem Identification and Resolution Inspection
June 25 – July 13, 2012
Callaway Plant
Inspection Report 50-483/2012-008

This inspection will cover the period from October 18, 2010 to July 13, 2012. All requested information should be limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in Adobe PDF or Microsoft Office format. Lists of documents should be provided in Microsoft Excel or a similar sortable format.

Please provide the following no later than June 1, 2012:

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

   a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period

   b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period

   c. Summary lists of all corrective action documents which were upgraded or downgraded in priority/significance during the period

   d. Summary list of all corrective action documents that subsume or "roll up" one or more smaller issues for the period

   e. Summary lists of operator workarounds, engineering review requests and/or operability evaluations, temporary modifications, and control room and safety system deficiencies opened, closed, or evaluated during the period

   f. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent)

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

   h. Summary list of all Root Cause Evaluations planned or in progress but not complete at the end of the period

2. Full Documents with Attachments

   a. Root Cause Evaluations completed during the period

   b. Quality assurance audits performed during the period

   c. All audits/surveillances performed during the period of the Corrective Action Program, of individual corrective actions, and of cause evaluations

d. Corrective action activity reports, functional area self-assessments, and non-NRC third party assessments completed during the period (do not include INPO assessments)

e. Corrective action documents generated during the period for the following:

   i. All Cited and Non-Cited Violations issued to Callaway Plant

   ii. All Licensee Event Reports issued by Callaway Plant

f. Corrective action documents generated for the following, if they were determined to be applicable to Callaway Plant (for those that were evaluated but determined not to be applicable, provide a summary list):

   i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period

   ii. Part 21 reports issued or evaluated during the period

   iii. Vendor safety information letters (or equivalent) issued or evaluated during the period

   iv. Other external events and/or Operating Experience evaluated for applicability during the period

g. Corrective action documents generated for the following:

   i. Emergency planning drills and tabletop exercises performed during the period

   ii. Maintenance preventable functional failures which occurred or were evaluated during the period

   iii. Adverse trends in equipment, processes, procedures, or programs which were evaluated during the period

   iv. Action items generated or addressed by plant safety review committees during the period

3. <u>Logs and Reports</u>

a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization

b. Corrective action effectiveness review reports generated during the period

c. Current system health reports or similar information

d. Radiation protection event logs during the period

e. Security event logs and security incidents during the period (sensitive information

can be provided by hard copy during first week on site)

f. Employee Concern Program (or equivalent) logs (sensitive information can be provided by hard copy during first week on site)

g. List of Training deficiencies, requests for training improvements, and simulator deficiencies for the period

4. Procedures

a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures which implement the corrective action program at Callaway Plant

b. Quality Assurance program procedures

c. Employee Concerns Program (or equivalent) procedures

d. Procedures which implement/maintain a Safety Conscious Work Environment

5. Other

a. List of risk significant components and systems

b. Organization charts for plant staff and long-term/permanent contractors

Note: "Corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to Callaway Plant.

All requested documents should be provided electronically. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. Four copies of the CD or DVD should be sent to the team lead at the following address, to arrive no later than June 1, 2012:

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

Supplemental Information Request
June 21, 2012
Biennial Problem Identification and Resolution Inspection
June 25 – July 13, 2012
Callaway Plant
Inspection Report 50-483/2012-008

This request supplements the original information request. Where possible, the information should be available to the inspection team immediately following the entrance meeting. This inspection will cover the period from October 18, 2010 to July 13, 2012. All requested information should be limited to this period unless otherwise specified.

Please provide the following:

1. Electronic copies of the FSAR, technical specifications, and technical specification bases

2. For each week the team is on site,
    - Planned work/maintenance schedule for the station
    - Schedule of management or corrective action review meetings (e.g., CARB, MRM, CAR screening meetings, etc.)
    - Agendas for these meetings

3. As part of the inspection, the team will do a five-year in-depth review of emergency diesel generator issues and corrective actions. The following documents are to support this review (electronic format preferred):
    - Copies of upper and lower tier cause evaluations performed on emergency diesel generators and alternate emergency diesel generators within the last 5 years
    - List of all surveillances run on the emergency diesel generators within the last five years, sortable by individual diesel generator and including acceptance criteria
    - List of all corrective maintenance work orders performed on the emergency diesel generators and alternate emergency diesel generators within the last 5 years
    - List of maintenance rule functional failure assessments—regardless of the result—performed on the emergency diesel generators and alternate emergency diesel generators within the last 5 years
    - System training manual for emergency diesel generators and alternate emergency diesel generators

4. The team will also review the station's implementation of the fatigue rule. These documents support this review:
    - List of all fatigue assessments performed during the inspection period separated by department
    - List of all work hour rule waivers and violations during the inspection period separated by department
    - Fatigue rule implementing procedures

5. Specific documents:
    - Conduct of Operations procedure
    - APA-ZZ-00605 Temporary Modifications

- APA-ZZ-00107 OE Review
- APA-ZZ-00520, Reporting Requirements and Responsibilities
- APA-ZZ-00152, Emergent Issue Response
- Job 10006321
- Job 10006322
- Job 10007548
- Job 10007549
- HI 2007013
- CA2847 “Long Term Corrective Action (LTCA) Request Form”
- Callaway Action Requests (CARs):
    - 201107759
    - 201107761
    - 201107762
    - 201003813
    - 201105331
    - 201105768
    - 201105273
- Temporary modification packages:
    - 08-0004
    - 09-0001
    - 09-0002
    - 09-0072
    - 10-0003
    - 10-0004
    - 10-0007
    - 10-0008