



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
1600 E. LAMAR BLVD  
ARLINGTON TX 76011-4511

May 5, 2016

Mr. Fadi Diya, 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 05000483/2016008

Dear Mr. Diya:

On March 24, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution biennial inspection at your Callaway Plant and discussed the results of this inspection with Mr. T. Herrmann, Site Vice President, and other members of your staff. The inspection team documented the results of this inspection in the enclosed inspection report.

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

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

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

The NRC inspectors did not identify any findings or violations of more than minor significance.

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

F. Diya

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Sincerely,

***/RA Thomas R. Farnholtz Acting for/***

Thomas R. Hipschman, Team Lead  
Inspection Program and Assessment Team  
Division of Reactor Safety

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

Enclosure:  
Inspection Report 05000483/2016008  
w/Attachments:  
1. Supplemental Information  
2. Information Request

cc w/encl: Electronic Distribution

F. Diya

- 2 -

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**ADAMS ACCESSION NUMBER: ML16126A558**

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NAME	EUribe	PEikmann	MLangelier	HFreeman	NTaylor	THipschman		
SIGNATURE	/RA/	E-mail	E-mail	/RA/	/RA/	/RA/ TRF for		
DATE	4/18/16	4/26/16	4/18/16	4/18/16	4/29/16	5/5/16		

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Letter to Fadi Diya from Thomas R. Hipschman, dated May 5, 2016

SUBJECT: CALLAWAY PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION  
INSPECTION REPORT 05000483/2016008

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RIV/ETA: OEDO (Jeremy.Bowen@nrc.gov)

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Docket: 05000483

License: NPF-30

Report: 05000483/2016008

Licensee: Union Electric Company

Facility: Callaway Plant

Location: Junction of Highway CC and Highway O  
Fulton, MO

Dates: February 29 through March 24, 2016

Team Lead: E. Uribe, Reactor Inspector

Inspectors: H. Freeman, Senior Reactor Inspector  
P. Elkmann, Senior Emergency Preparedness Inspector  
M. Langelier, P.E., Resident Inspector, Callaway Plant  
C. Franklin, General Engineer (Observer)

Approved By: T. Hipschman, Team Lead  
Inspection Program and Assessment Team  
Division of Reactor Safety

## **SUMMARY**

IR 05000483/2016008; 02/29/2016 – 03/24/2016; Callaway Plant; Problem Identification and Resolution (Biennial)

The inspection activities described in this report were performed between February 29 and March 24, 2016, by three inspectors from the NRC's Region IV office and the resident inspector at the Callaway Plant.

### **Assessment of Problem Identification and Resolution**

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

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

The licensee maintained a safety-conscious work environment in which personnel were willing to raise nuclear safety concerns without fear of retaliation.

No findings were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on a sample of corrective action documents that were open and/or closed during the assessment period, which ranged from September 1, 2014, to the end of the on-site portion of this inspection on March 24, 2016.

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

###### a. Inspection Scope

The team reviewed approximately 292 condition reports, also known as Callaway action requests, including associated root cause analyses and apparent cause evaluations, from 10,606 that the licensee had initiated or closed between September 1, 2014, and March 24, 2016. The inspection sample focused on higher-significance condition reports for which the licensee evaluated and took actions to address the cause of the condition. In performing its review, the team evaluated whether the licensee had properly identified, characterized, and entered issues into the corrective action program, and whether the licensee had appropriately evaluated and resolved the issues in accordance with established programs, processes, and procedures. The team also reviewed these programs, processes, and procedures to determine if any issues existed that may impair their effectiveness.

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

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

appropriate and timely. The team reviewed a sample of 53 condition reports where the licensee had changed the significance level after initial classification to determine whether the level changes were in accordance with station procedures and that the conditions were appropriately addressed.

The team considered risk insights from both the NRC's and Callaway's risk models to focus the sample selection and plant tours on risk-significant systems and components. The team focused a portion of its samples on the essential service water system, the emergency diesel generator heating ventilation and air conditioning system, and on components that had been reversed engineered, for a five-year in-depth review. The team conducted walk-downs of these systems and other plant areas to assess whether licensee personnel identified problems at a low threshold and entered them into the corrective action program.

b. Assessments

1. Effectiveness of Problem Identification

During the 18-month inspection period, licensee staff generated approximately 10,000 condition reports. The team determined that most conditions that required generation of a condition report by Procedure APA-ZZ-00500, "Corrective Action Program," and associated attachments, had been appropriately entered into the corrective action program. However, the team noted several examples where the licensee had failed to properly identify conditions in accordance with procedures:

- An NRC Special Inspection Report 2015009 documented a non-cited violation for failure to identify and correct a condition adverse to quality. Specifically, as of September 23, 2015, the licensee had not taken corrective action, following a previous identification of undersized field current rectifier bridges on auxiliary feedwater flow control valve Modutronics cards, to ensure that an independent review of the modified circuit design had been completed or that the modified cards had been subjected to a sufficient testing and qualification program. Thus, following questioning by the NRC, the licensee identified additional components (two other rectifier bridges) on the newly modified circuit cards that were also potentially undersized.
- The team identified that Callaway Action Request 201405750 documented an equipment issue regarding control building cooling, but originally addressed the issue a number of days before issuing the action request. The team communicated that, while it appears that the site had initiated actions to evaluate the equipment issue, the condition should have been documented in an action request on the date of discovery. The action request was initiated on August 29, 2014, but should have the date of August 24, 2014.
- While reviewing the activities performed by the employee concerns program during the assessment period, the inspectors identified an example where the program guidance allowed the delay of a potential technical concern entry into the corrective action program for over two weeks. Once entered into the

corrective action program, the licensee concluded that the concern did not affect activities at the Callaway Plant. The employee concerns program manager had raised the question as to whether the issue should be entered into the corrective action program, but never received an adequate response, so she finally documented the issue on an action request.

Overall, the team concluded that the licensee generally maintained a low threshold for the formal identification of problems and entry into the corrective action program for evaluation. Licensee personnel initiated over 550 action requests per month during the inspection period. Most of the personnel interviewed by the team understood the requirements for condition report initiation and most expressed a willingness to enter newly identified issues into the corrective action program at a very low threshold.

## 2. Effectiveness of Prioritization and Evaluation of Issues

The sample of action requests reviewed by the team focused primarily on issues screened by the licensee as having higher-level significance, including those that received cause evaluations, those classified as significant conditions adverse to quality, and those that required engineering evaluations. The team also reviewed a number of condition reports that included or should have included immediate operability determinations to assess the quality, timeliness, and prioritization of these determinations.

The team identified several examples where the licensee failed to address aspects of issue evaluation in accordance with their process:

- The team identified a number of instances of approvals for extending due dates while action requests were in Pending Close status. Procedure APA-ZZ-00500, "Corrective Action Program," does not contain guidance for performing that kind of activity. The site initiated Callaway Action Request 201601916 documenting this deficiency.
- The team identified that several management evaluation/closure reviews were not in accordance with procedural guidance. Specifically, when answering "No" to any question, justification did not always exist. In addition, a number of questions required either a "Yes" or a "No," yet an "N/A" was the answer, without an adequate justification. The site initiated Callaway Action Request 201601918 documenting this deficiency.
- The team identified that management closure reviews were not in accordance with procedural guidance. Specifically, the criteria for evaluating the completeness and adequacy of corrective actions attached to every Significance Level 1, 2, and 3 action request does not meet the templates specified in Procedure APA-ZZ-00500, Appendices 12, 13, and 14. The site initiated Callaway Action Request 201602445 documenting this deficiency.

- The team identified that the licensee’s process characterizes a condition based on a measure of severity and frequency. The measure of frequency has three levels. Level 3 is defined as “not acceptable to occur in the life of an individual item, system, process, or should not reasonably be expected to occur in the life of a large number of similar components.” The licensee’s process allows a classification of Significance Levels 4 and 5 of a condition characterized as a Level 3. The team determined that this introduces conflict because Significance Levels 4 and 5 are broke-fix items.
- The team reviewed a number of rescreened corrective action requests and identified that some did not provide justification for changing the significance levels. As an example, significance levels changed during the rescreening from one level to another, skipping levels (e.g., Significance Level 1 to Significance Level 4). It was not always clear why the condition described in an action request did not meet the levels between the original level and final level.
- The team identified that in Callaway Action Requests 201505796 and 201403898, corrective actions to prevent recurrence did not align with the identified root causes as expected. Although corrective actions were adequate, the corrective action listed did not provide the clarity required, but the team did conclude that corrective actions to prevent recurrence were implemented.

Overall, the team determined that the licensee’s process for prioritizing and evaluating issues that had been entered into the corrective action program supported nuclear safety. The licensee’s operability determinations were generally consistent, accurately documented, and completed in accordance with procedures.

### 3. Effectiveness of Corrective Actions

In general, the corrective actions identified by the licensee to address adverse conditions were effective. The team noted a number of instances in which corrective actions had been untimely or incompletely accomplished:

- The team communicated that it became apparent that, during our focus group meetings, a communication gap exists on change management, “Although the site implemented corrective actions, it is not always clear to site employees why changes are made.” It was evident that site personnel desire better communication as to the reasons for the changes. The site documented this observation in Callaway Action Request 201602454.
- The team identified that the use of the ‘Why’ analysis method to address equipment issues was prohibited. Although the teams’ understanding of this is to exclude the use of the ‘Why’ analysis as the only method, clarification is needed in Procedure APA-ZZ-00500, Appendix 12, “Significant Adverse

Condition – Significance Level 1.” The site documented this observation in Callaway Action Request 201601936.

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

## **.2 Assessment of the Use of Operating Experience**

### **a. Inspection Scope**

The team examined the licensee’s program for reviewing industry operating experience, including reviewing the governing procedures. The team reviewed a sample of 12 industry and NRC operating experience communications and the associated site evaluations to assess whether the licensee had appropriately assessed the communications for relevance to the facility. The team also reviewed the assigned actions to determine whether they were appropriate. The team reviewed four procedures governing the review and use of internal and external operating experience. The team also reviewed 22 action requests (corrective action program entries) related to the use of operating experience in plant activities.

### **b. Assessment**

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

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

## **.3 Assessment of Self-Assessments and Audits**

### **a. Inspection Scope**

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

b. Assessment

Overall, the team concluded that the licensee had an effective self-assessment and audit process. The team determined that self-assessments were self-critical and thorough enough to identify deficiencies.

**.4 Assessment of Safety-Conscious Work Environment**

A safety-conscious work environment is defined by the NRC as an environment in which employees feel free to raise safety concerns, both to their management and to the NRC, without fear of retaliation. The NRC recognizes that an employee's willingness to identify safety concerns can also be affected by other factors such as the effectiveness of the licensee's processes for resolving concerns or senior management's ability to detect and prevent retaliatory actions. Therefore, the NRC assesses the safety-conscious work environment for indications that could impact employees' willingness to raise safety concerns as part of the reactor oversight process.

a. Inspection Scope

The team interviewed 39 individuals in five focus groups and 6 individuals in one-on-one interviews. The purpose of these interviews was: (1) to evaluate the willingness of the licensee's staff to raise safety issues without fear of retaliation; (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems; and (3) to evaluate licensee management's involvement in establishing and promoting a safety-conscious work environment (SCWE). The focus group participants included personnel from system engineering, design engineering, electrical maintenance, mechanical maintenance, instrumentation and controls, nuclear oversight, and quality control. The licensee's regulatory affairs staff assisted in coordinating the interviews from participants who were randomly selected based upon staff availability and position. To supplement these focus group discussions, the team interviewed the employee concerns program manager to assess her perceptions of employees' willingness to raise nuclear safety concerns. The team reviewed the employee concerns program case log and select case files.

b. Assessment

1. Willingness to Raise Nuclear Safety Issues

All individuals interviewed indicated that they felt free to raise nuclear safety concerns without fear of retaliation. All indicated that management was receptive to nuclear safety concerns and was willing to address them accordingly. All interviewees stated that they had the ability to initiate action requests, but the maintenance groups generally relied on their supervisor to actually initiate and document the concern.

## 2. Perceived Effectiveness of the Corrective Action Program

Individuals from all groups indicated that they believed that the corrective action program was generally effective and appropriately prioritized. Some individuals expressed that they felt that too much emphasis was placed on low-level action requests, but none indicated that conditions adverse to quality were not being addressed. All of the interviewees agreed that if they were not satisfied with the initial response to their concern, they had the ability to escalate the concern to a higher organizational level; however, individuals from one group appeared reluctant to push resolution of a concern beyond the initial review level. Most expressed positive experiences after raising issues to their supervisors. Several individuals from different groups expressed positive experiences with using a new process called the "technical conscience board," where they had the ability to elevate their concerns and perhaps influence the resources directed toward resolution of their concern.

## 3. Management Involvement in Establishing and Promoting a Safety-Conscious Work Environment

Responses from the focus group interviewees indicate that they believe that management has established and promoted a safety-conscious work environment where individuals feel free to raise safety concerns without fear of retaliation. Individuals stated that management encourages them to raise and document safety concerns in the corrective action program. None of the individuals had experienced retaliation or other negative reaction for raising issues. Individuals were aware of and generally expressed a positive view of the employee concerns program. However, some individuals believed that the station still could improve communications down to the worker level associated with concerns, process changes, and decisions associated priorities. Overall, the team determined that the licensee had processes in place to promote a safety-conscious work environment that were generally effective.

## **.5 Findings**

No findings were identified

## **40A6 Meetings, Including Exit**

### Exit Meeting Summary

On March 24, 2016, the inspectors presented the inspection results to Mr. T. Herrmann, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

### ATTACHMENTS:

1. Supplemental Information
2. Information Request

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee Personnel**

R. Aldrich, Senior Performance Improvement Coordinator  
M. Breshears, Engineer, HVAC Systems  
M. Daly, Supervisor, Corrective Action Program  
F. Diya, Senior Vice President and Chief Nuclear Officer  
M. Hall, Director, Engineering Program  
T. Herrmann, Site Vice President  
A. Hunt, Engineer, Motors Program  
S. Kovaleski, Director, Engineering Design  
S. Maglio, Manager, Regulatory Affairs (Retiring)  
S. McLaughlin, Manager Performance Improvement  
J. McLaughlin, Engineer, Diesel Systems  
S. Petzel, Engineer, Regulatory Affairs/Licensing  
M. Waller, Manager, Employee Concerns  
R. Wink, Manager, Regulatory Affairs (Incoming)  
T. Witt, Engineer, Regulatory Affairs/Licensing  
B. Price, Supervisor, Operations

#### **NRC Personnel**

S. Alferink, Reactor Inspector  
T. Hartman, Senior Resident Inspector

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

No docket items opened, closed, or discussed in this report.

## LIST OF DOCUMENTS REVIEWED

### Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
APA-SS-00604	Requests for Resolution	35
APA-ZZ-00013	Conduct of Operations: Maintenance	28
APA-ZZ-00100	Written Instructions Use and Adherence	33
APA-ZZ-00101 Appendix C	Specific Documents Requiring Verification and Validation	3
APA-ZZ-00107	Review of Current Industry Operating Experience	19
APA-ZZ-00140 Appendix A	Licensing Impact Review Guidance	5
APA-ZZ-00200	Document Control	23
APA-ZZ-00500	Corrective Action Program	63
APA-ZZ-00500 Appendix 10	Corrective Action Program, Trending Program	10
APA-ZZ-00500 Appendix 19	Common Cause Evaluation	5
APA-ZZ-00500 Appendix 22	Corrective Action Program Definitions	12
APA-ZZ-00500 Appendix 7	Effectiveness Reviews	10
APA-ZZ-00500 Appendix 8	Corrective Action Program Training Requirements	13
APA-ZZ-00500 Appendix 1	Operability and Functionality Determinations	23
APA-ZZ-00500 Appendix 12	Significant Adverse Condition – Significance Level 1	24
APA-ZZ-00500 Appendix 13	Adverse Condition – Significance Level 2	25
APA-ZZ-00500 Appendix 14	Adverse Condition – Significance Level 3	22
APA-ZZ-00500 Appendix 17	Screening Process Guidelines	27
APA-ZZ-00500 Appendix 18	Equipment Performance Evaluation	8

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
APA-ZZ-00500 Appendix 22	Corrective Action Program Definitions	12
APA-ZZ-00925	Training and Qualification of Plant Personnel	35
APA-ZZ-00930	Employee Concerns Program	18
APA-ZZ-01000	Callaway Energy Center Radiation Protection Program	41
APA-ZZ-01000 Appendix A	Control of Radioactive Material	18
APA-ZZ-01400 Appendix A	Callaway Self-Assessment and Benchmarking Program	20
APA-ZZ-01400 Appendix E	Operating Experience	19
APA-ZZ-01400 Appendix M	Self-Assessment Review Board	17
APA-ZZ-01400 Appendix N	INPO Level 1 or 2 Event Reports and Significant Operating Experience Reports	12
APA-ZZ-01400 Appendix O	Callaway Continuous Improvement Program	5
APA-ZZ-04015	Evaluating and Processing Requests for Resolution	69
HDP-ZZ-01100	ALARA Planning and Review	20
LDP-ZZ-00500	Corrective Action Review Board	28
MTE-KJ-00001	2301A Woodward Governor and Woodward Digital Reference Unit (DRU) Setup	2
MTM-ZZ-QA003	Limiter Operator Inspection and Maintenance Types HBC and WB0	14
ODP-ZZ-00002	Equipment Status Control	83
ODP-ZZ-00016	Reactor Operator Watchstation Practices and Logs	76
OTN-BG-00004	Volume Control Tank Atmosphere Control	12
	Operating Quality Assurance Manual	31a

Callaway Action Requests

200711064	200802264	200811088	200811650	200906909
201001159	201001813	201003558	201008779	201008821
201010336	201100342	201100423	201100609	201102287
201102957	201103255	201103325	201105289	201105861
201106046	201109907	201110609	201204094	201204097
201204140	201204149	201206227	201208791	201208818
201300133	201301144	201302280	201302862	201303306
201303326	201303653	201304222	201304223	201304227
201304231	201304853	201305642	201307265	201307617
201307763	201308743	201308910	201309318	201309626
201309706	201400020	201400240	201400495	201400645
201401167	201401204	201401315	201401657	201401703
201401725	201401761	201402033	201402043	201402060
201402538	201402564	201402623	201402691	201402698
201402814	201402927	201403294	201403491	201403497
201403511	201403524	201403629	201403634	201403702
201403806	201403898	201404079	201404107	201404217
201404267	201404344	201404477	201404714	201404722
201404791	201405019	201405034	201405042	201405064
201405071	201405138	201405173	201405193	201405200
201405322	201405334	201405359	201405441	201405508
201405545	201405554	201405671	201405722	201405750
201405752	201405757	201405804	201405928	201406043
201406045	201406075	201406123	201406128	201406146
201406204	201406297	201406426	201406435	201406445
201406659	201407000	201407066	201407121	201407178
201407204	201407264	201407289	201407302	201407378
201407402	201407444	201407453	201407591	201407613
201407618	201407634	201407637	201407644	201407730
201407735	201407867	201407868	201407872	201407906

Callaway Action Requests

201407929	201407945	201407991	201408003	201408067
201408090	201408136	201408215	201408321	201408344
201408345	201408399	201408405	201408530	201408704
201408731	201408891	201408897	201408899	201409048
201409290	201409335	201500338	201500402	201500525
201500662	201500770	201500970	201500986	201500992
201501141	201501183	201501268	201501299	201501418
201501419	201501420	201501424	201501425	201501480
201501525	201501795	201501819	201501853	201501917
201501940	201501973	201502222	201502229	201502471
201502559	201502638	201502678	201502701	201502708
201502789	201502843	201502869	201502925	201503066
201503077	201503339	201503418	201503437	201503501
201503536	201503593	201503604	201503659	201503697
201503849	201504030	201504143	201504150	201504279
201504280	201504283	201504729	201504757	201504812
201504911	201504977	201505221	201505317	201505332
201505411	201505682	201505697	201505795	201505796
201505928	201505963	201505965	201506284	201506340
201506352	201506362	201506363	201506487	201506659
201506734	201506735	201506736	201506846	201506874
201506921	201506922	201506989	201506990	201507027
201507043	201507198	201507302	201507384	201507392
201507403	201507645	201507668	201507672	201507826
201508335	201508429	201508442	201508521	201508663
201508757	201508793	201508897	201508966	201508980
201509000	201509056	201509092	201600173	201600193
201600248	201600863	201601412	201601721	201601766
201601771	201601916*	201601918*	201601936*	201602427*
201602445*	201602454*	201602455*	201602456*	

Jobs

14003158	14003510	15001720	15001722	15001723
14006288	08008026	13003282	14002601	14002600

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision Date</u>
AP15-002	Nuclear Oversight Audit of Radiation Protection	February 23, 2015
AP15-004	Nuclear Oversight Audit of Operations – Chemistry	June 5, 2015
AP15-008	Nuclear Oversight Audit of Maintenance, Work Management, and Measuring and Test Equipment	July 30, 2015
AP15-011	Nuclear Oversight Audit of Corrective Action Program	November 30, 2015
AUCA 14-005	CAR201403898, NN11 Auto Transferred to its Internal AC Source	February 10, 2015
CA0922	Worker Debrief for ALARA (form)	March 3, 2011
CA0923	Level 2 ALARA Post Work Review	September 25, 2015
CA1503	Level 1 ALARA Post Work Review	March 17, 2009
CA1798	ALARA Planning Open Item Checklist	March 17, 2009
CA2104	Work In Progress ALARA Review	January 14, 2016
CA2529	Callaway Action Request System - CARs	February 4, 2015
FSA 201500405 04	Formal Self-Assessment Report: Work Management Planning	June 10, 2015
FSA 201500405 04	Formal Self-Assessment Report: Work Management Planning	June 10, 2015
FSA201408190-10	Self-Assessment: Maintenance Training Programs	May 6, 2015
FSA201500920-18	Self-Assessment: Pre-Problem Identification and Resolution Inspection	

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision Date</u>
Health Issue 2003231	Corrosion of Buried ESW Piping Including Piping Embedded in Concrete in the ESW Pump House and UHS Cooling Tower	
Health Issue 2014010	Low Operating Margin on Ultimate Heat Sink (UHS) Pond Inventory and Temperature	
OE302499	ICES: Effective mitigation strategies have not been implemented for some long-standing equipment issues	April 23, 2013
OE317987	ICES: Continued Adverse Trend in Equipment Reliability	July 1, 2015
OE33524	ICES: Weaknesses Associated With CAP Implementation and Effectiveness	November 10, 2015
OE34018	ICES: Adverse Trend for Maintenance Related Equipment Failures and Degraded Conditions	November 10, 2015
RFR 15642	Chemical Degas RCS System on Plant Shutdown	B
RFR 201301144	Spare ESW Pump Motor Acceptance	
RFR 201601367	Document TDAFP Exhaust Stack Tornado Missile Impact Analysis in FSAR	
SP14-013	Surveillance Report	October 20, 2014
SP15-002	Surveillance Report	February 27, 2015
SP15-004	Surveillance Report	March 27, 2015
SP15-005	Surveillance Report	April 20, 2015
SP15-008	Surveillance Report	May 28, 2015
SP15-010	Surveillance Report	June 24, 2015
Specification E-1056	Repair and Reconditioning Specification for Medium Voltage AC Motors	1
Specification M-925	Technical Specification for the Fabrication and Procurement of an Essential Service Water Pump	1
SSA201309684022	Self-Assessment: Security Training	August 25, 2014
SSA201309684-21	Self-Assessment: Security Equipment Performance, Testing, and Maintenance	August 28, 2014

Miscellaneous

<u>Number</u>	<u>Title</u>	<u>Revision Date</u>
SSA201309686, CA5	Maintenance Radiation Work Practices	December 18, 2014
SSA201406362-5.2	Self-Assessment: Radiation Safety Team Pre-Inspection	May 18, 2015
SSA201408190-19	Self-Assessment: Radioactive Material Shipping Documentation	February 25, 2015
SSA201500405-06	Self-Assessment: ALARA Plans, Packages, RWP's	March 12, 2015
SSA201500405-08	Self-Assessment: Lab QA/QC	August 13, 2015
SSA201500405-10	Self-Assessment: Radioactive Shipping Program	July 23, 2015
SSA201500919-19	Self-Assessment: Corrective Action Program	November 9, 2015
SSA201500919-30	Self-Assessment: PM Program	September 30, 2015
SSA201500919-34	Self-Assessment: OE Program	November 18, 2015
SSA201500920-02	Self-Assessment: Self-Assessment and Benchmark Program	November 24, 2015
SSA201500920-03	Self-Assessment: Maintenance Lockout	December 31, 2015
	Quarter 4, 2015, Health Report for ESW System (EF)	
	Callaway Energy Center Quarterly Trend Report, First Quarter 2015	June 1, 2015
	Callaway Energy Center Quarterly Trend Report, Second Quarter 2015	August 31, 2015
	Callaway Energy Center Quarterly Trend Report, Third Quarter 2015	December 12, 2015
	Callaway Energy Center Quarterly Trend Report, Fourth Quarter 2015	February 26, 2016
	FME Presentation (W. Books, FME Coordinator)	September 15, 2014
	INPO Encyclopedia of OE for Management Oversight	November 24, 2015

Miscellaneous

Number

Title

Revision  
Date

Area for Improvement, WANO MA.1

February 26,  
2015

Area for Improvement, WANO MA.2

February 26,  
2015

Operating Experience Report: CAR201501798,  
BMHV0001 found to be short stroking closed

2015 Callaway Energy Center Site Assessment and  
Benchmarking Schedule

2016 Callaway Energy Center Site Assessment and  
Benchmarking Schedule

**Information Request**  
**Biennial Problem Identification and Resolution**  
**Inspection Callaway**  
**December 17, 2015**  
**Inspection Report: 50-483/2016008**  
**On-site Inspection Dates: February 29 – March 22, 2016**

This inspection will cover the period from September 1, 2014, through March 22, 2016. All requested information is limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in word-searchable Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site; do not provide any sensitive or proprietary information electronically.

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

Please provide the following information no later than February 5, 2016:

1. Document Lists

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

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary lists of all corrective action documents that were upgraded or downgraded in priority/significance during the period (these may be limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- d. Summary list of all corrective action documents initiated during the period that "roll up" multiple similar or related issues, or that identify a trend
- e. Summary lists of operator workarounds, operator burdens, temporary modifications, and control room deficiencies (1) currently open and (2) that were evaluated and/or closed during the period
- f. Summary list of safety system deficiencies that required prompt operability determinations (or other engineering evaluations) to provide reasonable assurance of operability

- g. Summary list of plant safety issues raised or addressed by the employee concerns program (or equivalent) (sensitive information should be made available during the team's first week on site—do not provide electronically)

## 2. Full Documents with Attachments

- a. Root cause evaluations completed during the period; include a list of any planned or in progress
- b. Apparent cause evaluations completed during the period; include a list of any planned or in progress
- c. Quality Assurance audits performed during the period
- d. Audits/surveillances performed during the period on the corrective action program, of individual corrective actions, or of cause evaluations
- e. Functional area self-assessments and non-NRC third-party assessments (e.g., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- f. Any assessments of the safety-conscious work environment
- g. Corrective action documents generated during the period associated with the following:
  - i. NRC findings and/or violations issued to Callaway Plant
  - ii. Licensee event reports issued by Callaway Plant
- h. 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
- i. Corrective action documents generated for the following:
  - i. Emergency planning drills and tabletop exercises performed during the period
  - ii. Maintenance preventable functional failures which occurred or were evaluated during the period
  - iii. Adverse trends in equipment, processes, procedures, or programs that were evaluated during the period
  - iv. Action items generated or addressed by offsite review committees during the period

### 3. Logs and Reports

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

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

### 4. Procedures

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

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures that implement the corrective action program at Callaway Plant
- b. Quality assurance program procedures (specific audit procedures are not necessary)
- c. Employee concerns program (or equivalent) procedures
- d. Procedures which implement/maintain a safety-conscious work environment

### 5. Other

- a. List of risk-significant components and systems, ranked by risk worth
- b. Organization charts for plant staff and long-term/permanent contractors

- c. Electronic copies of the UFSAR (or equivalent), technical specifications, and technical specification bases, if available
- d. For each day the team is on site:
  - Note: These items may be provided on a weekly or daily basis after the team arrives on site.
  - i. Planned work/maintenance schedule for the station
  - ii. Schedule of management or corrective action review meetings (e.g., operations focus meetings, condition report screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)
  - iii. Agendas for these meetings

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector at Callaway Plant; three additional copies should be provided to the team lead, to arrive no later than February 21, 2016:

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

**PAPERWORK REDUCTION ACT STATEMENT**

This request does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011.