



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

January 27, 2014

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

**SUBJECT: CALLAWAY PLANT - INFORMATION REQUEST FOR NRC TRIENNIAL
BASELINE COMPONENT DESIGN BASES INSPECTION NRC INSPECTION
REPORT 05000483/2014007**

Dear Mr. Heflin:

On April 14, 2014, the NRC will begin a triennial baseline Component Design Bases Inspection at the Callaway Plant. A seven-person team will perform this inspection using NRC Inspection Procedure 71111.21, "Component Design Bases Inspection."

The inspection focuses on components and operator actions that have high risk and low design margins. The samples reviewed during this inspection will be identified during an information gathering visit and during the subsequent in-office preparation week. In addition, a number of operating experience issues will also be selected for review.

The inspection will include an information gathering site visit by the team leader and a senior reactor analyst, and 3-weeks of onsite inspection by the team. The inspection will consist of seven NRC inspectors, of which six will focus on engineering and one on operations. The current inspection schedule is as follows:

Onsite information gathering visit: Week of March 24, 2014
Onsite weeks: First On-Site Week – April 14–18, 2014
Second On-Site Week – April 28 – May 2, 2014
Third On-Site Week – May 12–16, 2014

The purpose of the information gathering visit is to meet with members of your staff to identify potential risk-significant components and operator actions. The lead inspector will also request a tour of the plant with members of your operations staff and probabilistic safety assessment staff. Additional information and documentation needed to support the inspection will be identified, including interviews with engineering managers, engineers, and probabilistic safety assessment staff.

Our experience with these inspections has shown they are extremely resource intensive, both for the NRC inspectors and the licensee staff. In order to minimize the inspection impact on the site and to ensure a productive inspection, we have enclosed a request for information needed for the inspection. The request has been divided into three groups. The first group lists information necessary for the information gathering visit and for general preparation. This information should be available to the regional office no later than March 17, 2014. Insofar as possible, this information should be provided electronically to the lead inspector. Since the inspection will be concentrated on high risk/low margin components, calculations associated with your list of high risk components should be available to review during the information gathering visit to assist in our selection of components based on available design margin.

The second group of documents requested are those items that the team will need access to when onsite and after the inspection samples are selected. The third group lists information necessary to aid the inspection team in tracking issues identified as a result of the inspection. It is requested that this information be provided to the lead inspector as the information is generated during the inspection. It is important that all of these documents are up to date and completed in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection. In order to facilitate the inspection, we request that a contact individual be assigned to each inspector to ensure information requests, questions, and concerns are addressed in a timely manner.

The lead inspector for this inspection is Mr. Ronald Kopriva. We understand that our licensing engineer contact for this inspection is Mr. Steve Petzel. If there are any questions about the inspection or the requested materials, please contact the lead inspector at (817) 200-1104 or via e-mail at Ron.Kopriva@nrc.gov.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Thomas R. Farnholtz, Chief
Engineering Branch 1
Division of Reactor Safety

Docket: 50-483
License: NPF-30

Enclosure:
Component Design Basis Inspection
Document Request

cc w/ enclosure: Electronic Distribution for Callaway Plant

ADAMS ACCESSION NUMBER: ML14027A279

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|------------------|---|-----------|---|---------------------|-----|
| SUNSI Rev Compl. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | ADAMS | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Reviewer Initials | TRF |
| Publicly Avail | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Sensitive | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Sens. Type Initials | TRF |
| RIV:SRI:DRS/EB1 | BC/EB1 | | | | |
| RKopriva | TFarnholtz | | | | |
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| 01/23/2014 | 01/23/2014 | | | | |

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**INFORMATION REQUEST FOR CALLAWAY PLANT
COMPONENT DESIGN BASES (CDBI) INSPECTION**

Inspection Report: 05000483/2014007

Information Gathering Dates: March 24-28, 2014

On-site Inspection Dates: First Week – April 14-18, 2014
Second Week – April 28 - May 2, 2014
Third Week – May 12-16, 2014

Inspection Procedure: IP 71111.21, “Component Design Bases Inspection”

Lead Inspector/Team Leader: Ronald Kopriva
817-200-1104
Ron.Kopriva@nrc.gov

I. Information Requested Prior to the information Gathering Visit

The following information is requested by March 17, 2014, or sooner, to facilitate inspection preparation. If you have any questions regarding this information, please call the lead inspector as soon as possible. (Please provide the information electronically in “pdf” files, Excel, or other searchable formats. The information should contain descriptive names, and be indexed and hyperlinked to facilitate ease of use. Information in “lists” should contain enough information to be easily understood by someone who has knowledge of boiling water reactor technology.)

1. An excel spreadsheet of equipment basic events (with definitions) including importance measures sorted by risk achievement worth (RAW) and Fussell-Vesely (FV) from your internal events probabilistic risk assessment (PRA). Include basic events with RAW value of 1.3 or greater.
2. Provide a list of the top 500 cut-sets from your PRA.
3. Copies of PRA “system notebooks,” and the latest PRA summary document.
4. An excel spreadsheet of PRA human action basic events or risk ranking of operator actions from your site specific PSA sorted by RAW and FV. Provide copies of your human reliability worksheets for these items.
5. If you have an external events or fire PSA model, provide the information requested in items 1-4 for external events and fire.

6. Any pre-existing evaluation or list of components and associated calculations with low design margins, (i.e., pumps closest to the design limit for flow or pressure, diesel generator close to design required output, heat exchangers close to rated design heat removal, etc.).
7. List of high risk maintenance rule systems/components and functions; based on engineering or expert panel judgment.
8. A list of operating experience evaluations for the last 2 years.
9. A list of all time-critical operator actions in procedures.
10. A list of permanent and temporary modifications sorted by component identified in Item 1.
11. List of current "operator work arounds/burdens."
12. A list of the design calculations, which provide the design margin information for components included in Item 1. (Calculations should be available during the information gathering visit.)
13. List of root cause evaluations associated with component failures or design issues initiated/completed in the last 5 years.
14. Current management and engineering organizational charts.
15. Callaway Plant IPEEE, if available electronically.
16. Mechanical piping drawings for:
 - Engineered safety features
 - Emergency core cooling Systems
 - Emergency diesel generators
17. Electrical one-line drawings for:
 - Offsite power/switchyard supplies
 - Normal ac power systems
 - Emergency ac/dc power systems including 120Vac power, and 125Vdc/24Vdc safety class systems
18. List of any common-cause failures of components in the last 3 years.
19. An electronic copy of the Design Bases Documents.
20. An electronic copy of the System Health notebooks.

**II. Information Requested to be Available on First Day of Inspection
(April 14, 2014)**

1. List of condition reports (corrective action documents) associated with each of the selected components for the last 5 years.
2. The corrective maintenance history associated with each of the selected components for the last 2 years.
3. Copies of calculations associated with each of the selected components (if not previously provided), excluding data files. Please review the calculations and also provide copies of reference material (such as drawings, engineering requests, and vendor letters).
4. Copies of operability evaluations associated with each of the selected components and plans for restoring operability, if applicable.
5. Copies of selected operator work-around evaluations associated with each of the selected components and plans for resolution, if applicable.
6. Copies of any open temporary modifications associated with each of the selected components, if applicable.
7. Trend data on the selected electrical/mechanical components' performance for last 3 years (for example, pumps' performance including in-service testing, other vibration monitoring, oil sample results, etc., as applicable).
8. A copy of any internal/external self-assessments and associated corrective action documents generated in preparation for the inspection.
9. A copy of engineering/operations related audits completed in the last 2 years.
10. List of motor operated valves (MOVs) in the program, design margin and risk ranking.
11. List of air operated valves (AOVs) in the valve program, design and risk ranking.
12. Structure, system and components in the Maintenance Rule (a)(1) category.
13. Site top 10 issues list.
14. Procedures used to accomplish operator actions associated with the basic events in your PRA.
15. List of licensee contacts for the inspection team with pager or phone numbers.

III. Information Requested to be provided throughout the inspection.

1. Copies of any corrective action documents generated as a result of the team's questions or queries during this inspection.
2. Copies of the list of questions submitted by the team members and the status/resolution of the information requested (provide daily during the inspection to each team member).
3. Reference materials (available electronically and as needed during all onsite weeks):

General set of plant drawings
IPE/PRA report
Procurement documents for components selected
Plant procedures (normal, abnormal, emergency, surveillance, etc.)
Technical Specifications
Updated Final Safety Analysis Report
Vendor manuals

Inspector Contact Information:

Ronald Kopriva
Senior Reactor Inspector
(817) 200-1104
Ron.Kopriva@nrc.gov

Mailing Address:

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