

May 06, 2009

10 CFR 52.75

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

ALNRC 00022



Subject: AmerenUE, Callaway Plant Unit 2 (NRC Docket No. 52-037)
Response to RAI No. 7 (eRAI 2432), Revision 0,
Section 03.05.01.03 - Turbine Missiles

- References:
1. Surinder Arora (NRC) to David E. Shafer (AmerenUE), "Final RAI No. 7 (e-RAI No. 2432) – Public" email dated 4/22/09.
 2. UN#09-112, UniStar Nuclear Energy, NRC Docket No. 52-016, Response to Request for Additional Information for Calvert Cliffs Nuclear Power Plant, Unit 3, RAI No. 29, Questions 03.05.01.03-1 and 03.05.01.03-2, Turbine Missiles, dated 3/02/09.
 3. UN#09-209, UniStar Nuclear Energy, NRC Docket No. 52-016, Transmittal of Redacted Analysis in Response to Request for Additional Information for Calvert Cliffs Nuclear Power Plant, Unit 3, RAI No. 29, Questions 03.05.01.03-1 and 03.05.01.03-2, Turbine Missiles, dated 4/22/09.
 4. ALNRC 00023, AmerenUE, Callaway Plant Unit 2 (NRC Docket No. 52-037) Response to RAI No. 4 (eRAI 2433), Revision 0, Section 10.02.03, Turbine Rotor Integrity dated 5/6/09.

The purpose of this letter is to respond to the request for additional information (RAI) identified in the NRC e-mail correspondence to AmerenUE, dated 4/22/09 (Reference 1). This RAI addresses Turbine Missiles as discussed in Section 3.5 of the Final Safety Analysis Report (FSAR), as submitted in Part 2 of the Callaway Plant Unit 2 Combined License Application (COLA).

D079
NR0

ALNRC 00022

May 06, 2009

Page 2 of 3

The same RAI questions were addressed to Calvert Cliffs Nuclear Power Plant Unit 3 which is the Reference COLA for the U.S. EPR Design Center. UniStar Nuclear Energy provided a response to this RAI for Calvert Cliffs Nuclear Power Plant Unit 3 in References 2 and 3.

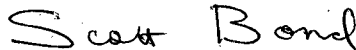
Callaway Plant Unit 2 accepts and endorses the same response provided in Reference 3 and in Reference 2 questions 03.05.01.03-1 and 03.05.01.03-2 for Callaway Plant Unit 2. Enclosure 1 provides the Callaway Plant Unit 2 COLA markups associated with the response to this RAI.

This response does not include any new regulatory commitments.

If there are any questions regarding this transmittal, please contact me at (573) 676-8519, SBond2@ameren.com or Dave Shafer at (573) 676-4722, DShafer@ameren.com.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 06, 2009



Scott M. Bond

Manager

Nuclear Generation Development



SMB/RCW/slk

ALNRC 00022

May 06, 2009

Page 3 of 3

cc:

Mr. Elmo E. Collins, Jr.
Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
612 E. Lamar Blvd, Suite 400
Arlington, TX. 76011-4125

Senior Resident Inspector
Callaway Resident Office
U.S. Nuclear Regulatory Commission
8201 NRC Road
Steedman, MO 65077

Bruce Olson, P.E.
Environmental Project Manager
U.S. EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors
Bruce.Olson@nrc.gov

Surinder Arora, P.E.
Project Manager
U.S. EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors
Surinder.Arora@nrc.gov

Joseph Colaccino, Chief
U.S. EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors
Joseph.Colaccino@nrc.gov

Michael Miernicki
Senior Project Manager
U.S. EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors
Michael.Miernicki@nrc.gov

Project Team contacts:

RACC Members contacts:

File code: A160.5761

ALNRC 00022
Enclosure 1

Enclosure 1
Callaway Plant Unit 2 FSAR Changes in Response to RAI No. 7 (eRAI 2432)

Table 1.8-2—FSAR Sections that Address COL Items

(Page 10 of 14)

Item No.	Description	Section
9.5-7	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.8.5, 10 CFR 50.72 Notification and 10 CFR 50.73 Reporting.	Table 9.5-1, C.1.8.5
9.5-8	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.1.8.7, Fire Modeling.	Table 9.5-1, C.1.8.7
9.5-9	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.5.5, Post-Fire Safe- Shutdown Procedures.	Table 9.5-1, C.5.5
9.5-10	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.5.5.1, Safe- Shutdown Procedures.	Table 9.5-1, C.5.5.1
9.5-11	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.5.5.2, Alternative/ Dedicated Shutdown Procedures.	Table 9.5-1, C.5.5.2
9.5-12	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.5.5.3, Repair Procedures.	Table 9.5-1, C.5.5.3
9.5-13	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.6.2.4, Independent Spent Fuel Storage Areas.	Table 9.5-1, Section C.6.2.4
9.5-14	A COL applicant that references the U.S. EPR design certification will submit site specific information to address the Regulatory Guide 1.189, Regulatory Position C.6.2.6, Cooling Towers.	Table 9.5-1, Section C.6.2.6
9.5-15	A COL applicant that references the U.S. EPR design certification will submit site specific information to address Regulatory Guide 1.189, Regulatory Position C.7.6, Nearby Facilities.	Table 9.5-1, Section C.7.6
10.0-1	A COL applicant that references the U.S. EPR design certification will select Section 10.1, 10.2 and 10.4.7 or 10.1A, 10.2A and 10.4.7A for inclusion in the COL FSAR as applicable to the chosen turbine-generator design option.	10.0
10.2-1	A COL applicant that references the U.S. EPR design certification will provide the site-specific turbine rotor inservice inspection program consistent with the recommendations of the manufacturer.	Not applicable. Alternate design not selected.
10.2-2	A COL applicant that references the U.S. EPR design certification will provide applicable material properties of the turbine rotor after the site specific turbine has been procured.	10.2.3.1
10.2-3	A COL applicant that references the U.S. EPR design certification will provide applicable turbine disk rotor specimen test data, load displacement data from the compact tension specimens and the fracture toughness properties after the site-specific turbine has been procured.	10.2.3.2
10.2-4	A COL applicant that references the U.S. EPR design certification, and selects the alternate turbine, will provide a list of material specifications for the alternate turbine-generator components.	Not applicable. Alternate design not selected.
10.2-5	<u>A COL applicant that references the U.S. EPR design certification will provide the site-specific turbine rotor inservice inspection interval consistent with the manufacturer's turbine missile analysis.</u>	<u>10.2.3.6</u>
10.3-1	A COL applicant that references the U.S. EPR design certification will identify the authority responsible for implementation and management of the secondary side water chemistry program.	10.3.5
10.3-2	A COL applicant that references the U.S. EPR design certification will develop a FAC condition monitoring program that is consistent with Generic Letter 89-08 and NSAC-202L-R3 for the carbon steel portions of the steam and power conversion systems that contain water or wet steam.	10.3.6.3
10.4-1	A COL applicant that references the U.S. EPR design certification will describe the site-specific main condenser materials.	10.4.1.2
10.4-2	A COL applicant that references the U.S. EPR design certification will describe the site-specific design pressure and test pressure for the main condenser.	10.4.1.2
10.4-3	A COL applicant that references the U.S. EPR design certification will provide the description of the site-specific portions of the CWS.	10.4.5.2.1

LBD/CR 09-0070

specimens and fracture toughness properties after the site-specific turbine has been procured.

This COL Item is addressed as follows:

Following procurement of the {Callaway Plant Unit 2} turbine generator, {AmerenUE} shall submit to the NRC the applicable turbine disk rotor specimen test data, load-displacement data from the compact tension specimens and the fracture toughness properties to demonstrate that the associated information and data presented in the U.S. EPR FSAR is bounding.

10.2.3.3 High Temperature Properties

No departures or supplements.

10.2.3.4 Turbine Rotor Design

No departures or supplements.

10.2.3.5 Turbine Rotor Preservice Inspections and Testing

No departures or supplements.

10.2.3.6 Turbine Rotor Inservice Inspection Program Plan

~~No departures or supplements.~~

The U.S. EPR FSAR includes the following COL Item in Section 10.2.3.6:

A COL applicant that references the U.S. EPR design certification will provide the site-specific turbine rotor inservice inspection interval consistent with the manufacturer's turbine missile analysis.

This COL Item is addressed as follows:

The turbine manufacturer recommends major rotor inspection intervals of 10 years, during major overhauls. The inspections are performed during refueling outages on an interval consistent with the inservice inspection schedules in ASME Section XI so that a total inspection has been completed at least once within a 10 year time period.

10.2.4 SAFETY EVALUATION

No departures or supplements.

10.2.5 REFERENCES

No departures or supplements.

10.3 MAIN STEAM SUPPLY SYSTEM

This section of the U.S. EPR FSAR is incorporated by reference with the following supplements.

10.3.1 DESIGN BASES

No departures or supplements.

10.3.2 SYSTEM DESCRIPTION

No departures or supplements.

LBDCR 09-0070