

Callaway2COLPEm Resource

From: Surinder Arora
Sent: Tuesday, April 07, 2009 1:32 PM
To: Shafer, David E
Cc: Callaway2COL Resource; Terry Jackson; Deanna Zhang; Peter Hearn; Ann Hodgdon; Joseph Colaccino; NPUnt2-EPR@ameren.com
Subject: Draft RAI No. 9 (eRAI No. 2484) - Public
Attachments: RAI 2484.doc

Dave,

Attached is DRAFT RAI No. 9 (eRAI No. 2484). You have until April 21, 2009 to review it and decide whether you need a conference call to discuss it. After the call or after April 21, 2009, the RAI will be finalized and sent to you for response. You will then have 30 days to respond.

SURINDER ARORA, PE
PROJECT MANAGER,
Office of New Reactors
US Nuclear Regulatory Commission

Phone: 301 415-1421
FAX: 301 415-6077
Email: Surinder.Arora@nrc.gov

Hearing Identifier: CallawayPlant_Unit2_COL_Public
Email Number: 25

Mail Envelope Properties (CB87FC66F95637428C5E0D066E756B6FAC3DF7B8CB)

Subject: Draft RAI No. 9 (eRAI No. 2484) - Public
Sent Date: 4/7/2009 1:31:44 PM
Received Date: 4/7/2009 1:31:45 PM
From: Surinder Arora

Created By: Surinder.Arora@nrc.gov

Recipients:

"Callaway2COL Resource" <Callaway2COL.Resource@nrc.gov>
Tracking Status: None
"Terry Jackson" <Terry.Jackson@nrc.gov>
Tracking Status: None
"Deanna Zhang" <Deanna.Zhang@nrc.gov>
Tracking Status: None
"Peter Hearn" <Peter.Hearn@nrc.gov>
Tracking Status: None
"Ann Hodgdon" <Ann.Hodgdon@nrc.gov>
Tracking Status: None
"Joseph Colaccino" <Joseph.Colaccino@nrc.gov>
Tracking Status: None
"NPUnit2-EPR@ameren.com" <NPUnit2-EPR@ameren.com>
Tracking Status: None
"Shafer, David E" <DShafer@ameren.com>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	496	4/7/2009 1:31:45 PM
RAI 2484.doc	35834	

Options

Priority: Standard
Return Notification: No
Reply Requested: Yes
Sensitivity: Normal
Expiration Date:
Recipients Received:

Draft Request for Additional Information No. 2484 Revision 0

4/7/2009

Callaway Unit 2

AmerenUE

Docket No. 52-037

SRP Section: 09.05.02 - Communications Systems

Application Section: Section 9.5.2

QUESTIONS for Instrumentation, Controls and Electrical Engineering 1 (AP1000/EPR Projects) (ICE1)

09.05.02-1

Demonstrate that the portable wireless communication system used in the ESWEMS Pumphouse is not susceptible to excess noise level, electromagnetic interference (EMI), and radio frequency interference (RFI).

Section 9.5.2.3 of the Callaway COL FSAR states that communications equipment is provided in ESWEMS Pumphouse to support effective communication between plant personnel during normal operation, as well as during accident conditions. These locations will contain equipment to allow use of the plant digital telephone system, PA, and alarm system, and sound powered system. A portable wireless communication system will also be provided for use by fire brigade and other operations personnel required to achieve safe plant shutdown. 10 CFR 52.47(a)(9) requires, in part, that for applications for light-water cooled nuclear power plants, an evaluation of the standard plant design against the SRP revision in effect 6 months before the docket date of the application. The evaluation required by this section shall include an identification and description of all differences in design features, analytical techniques, and procedural measures proposed for a facility and those corresponding features, techniques, and measures given in the SRP acceptance criteria. Where such a difference exists, the evaluation shall discuss the manner in which the alternative proposed provides an acceptable method of complying with those rules or regulations of the Commission, or portions thereof that underlie the corresponding SRP acceptance criteria. Section 9.5.2.III.1 of the Standard Review Plan provides acceptance criteria for plant communications systems. This includes demonstrating that communication systems are not impeded by transmission through barriers, high-noise areas, personnel use of protective equipment, inadequate number of communication channels, interference between channels or subsystems, or interference from other electronic or electrical equipment. Describe the design by which the the portable wireless communication system used in the ESWEMS Pumphouse withstands excess noise level, EMI, RFI, and other interferences within this location.

09.05.02-2

Provide the functional design of the SENTRY system used for emergency communications with state and local authorities as required by Appendix 10 CFR 50.47(b)(8).

Section F, "Emergency Communications" of the Callaway Plant unit 2 Emergency Plan describes the details of the plant's emergency response facilities and associated

communications capabilities. Section F.1 of the Emergency Plan states that the SENTRY System is a dedicated communications system that has been installed for the purpose of notifying state and local authorities of declared nuclear emergencies. This system links together the station control room, the EOF, TSC and State and local authorities as appropriate. It allows a notification form to be completed on screen and transmitted to the local agencies and the State Emergency Operations Center. 10 CFR 50.47(b)(8) requires the licensee to provide equipment and facilities to support emergency response. The staff finds that additional information is necessary to evaluate the adequacy SENTRY system to notify the state and local authorities of declared nuclear emergencies. Describe the functional design of the SENTRY System (e.g. dedicated phone lines) that will be used to communicate with state and local authorities as required by 10 CFR 50.47(b)(8).

09.05.02-3

Demonstrate that Bulletin 80-15 has been addressed in the Emergency Communications System design. Specifically, provide information identifying the backup power sources that are available for the Emergency Notification System (ENS) and its interfaces.

The staff reviewed Section 9.5.2 of the U.S. EPR DC-FSAR. The staff found that Bulletin 80-15 had not been addressed in the DC-FSAR. The staff requested that AREVA provide information to demonstrate Bulletin 80-15 had been addressed as required by 10 CFR 50.54(f). NRC Bulletin 80-15 states that licensees should address Emergency Notification System backup power availability in case of loss-of-offsite power. In response, AREVA stated that the power source for the emergency offsite communication system, including backup power, will be addressed by the COL Applicant. This COL applicant responsibility is included in the proposed new COL Item 9.5-21, which states: "a COL applicant that references the U.S. EPR design certification will provide a description of the offsite communication system that interfaces with the onsite communication system." Identify the backup power sources that are available in the Callaway Unit 2 Plant design for the Emergency Notification System and its interfaces.

09.05.02-4

Demonstrate the adequacy of the backup communications systems to provide communications capabilities to plant personnel in the Main Control Room (MCR), Technical Support Center (TSC), Operations Support Center (OSC), and Emergency Offsite Facility (EOF) when the primary communications system is unavailable to meet the requirements of 10 CFR 50.47(b)(8).

Section F, "Emergency Communications" of the Callaway Plant unit 2 Emergency Plan describes the details of the plant's emergency response facilities and associated communications capabilities. This section describes several communication systems that ensure reliable and timely exchange of information necessary to provide effective Command and Control over any emergency response; (1) between the site and state and local agencies within the emergency planning zones, (2) with federal emergency response organizations, (3) between the plant, the EOF, and the state and local emergency offsite centers, and (4) between Emergency Response Facilities and

Monitoring Teams. 10 CFR 50.47(b)(8) requires the licensee to provide equipment and facilities to support emergency response. The staff finds that additional information is required to demonstrate the adequacy of the backup communications systems to provide communications capabilities to plant personnel in the required locations (e.g. MCR, TSC, OSC, and EOF) when the primary communications system is unavailable to meet the requirements of 10 CFR 50.47(b)(8). Specifically, demonstrate that a single event, such as a fire, cannot prevent the operation of both the primary and the backup communications systems in the required locations.