Callaway2COLPEm Resource

From: Surinder Arora
Sent: Tuesday, March 24, 2009 11:08 AM
To: Ann Hodgdon
Cc: Mark McBride; Kenneth See; Callaway2COL Resource; Joseph Colaccino; Richard Raione
Subject: Callaway Unit 2 : Hydrologic Safety Site Audit - Information Needs (Public)
Attachments: Callaway Hydrologic GW Safety Site Audit Information Needs 3 20 2009_revised_all2.4.doc

Ann,

Attached is the Information Need List for the Callaway Plant Unit 2 Hydrologic Safety Site Audit scheduled for the week of 4/13/2009. Please review and provide your concurrence via e-mail so that I can send it to AmerenUE for their preparation.

Thanks.

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: 19

Mail Envelope Properties (CB87FC66F95637428C5E0D066E756B6FAC03D16874)

Subject: Callaway Unit 2 : Hydrologic Safety Site Audit - Information Needs (Public)
Sent Date: 3/24/2009 11:08:29 AM
Received Date: 3/24/2009 11:08:31 AM
From: Surinder Arora

Created By: Surinder.Arora@nrc.gov

Recipients:
"Mark McBride" <Mark.McBride@nrc.gov>
Tracking Status: None
"Kenneth See" <Kenneth.See@nrc.gov>
Tracking Status: None
"Callaway2COL Resource" <Callaway2COL.Resource@nrc.gov>
Tracking Status: None
"Joseph Colaccino" <Joseph.Colaccino@nrc.gov>
Tracking Status: None
"Richard Raione" <Richard.Raione@nrc.gov>
Tracking Status: None
"Ann Hodgdon" <Ann.Hodgdon@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	476	3/24/2009 11:08:31 AM
Callaway Hydrologic GW Safety Site Audit Information Needs 3 20 2009_revised_all2.4.doc	59898	

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

Callaway COLA Review
Hydrologic Safety Site Audit Information Needs

SME= Subject Matter Expert

Serial No.	FSAR Section	Information Needs
1	**2.4.2.3**	Please provide a SME to discuss the input and output data package for the HEC-HMS computer modeling of PMF for onsite stormwater systems (page 2-543). Please make a copy of this data package available for use during this discussion.
2	**2.4.8.2.1**	Please provide a SME to discuss why it is conservative for the calculation of the probable maximum water level in the ESWEMS Retention Pond to assume that pond outflow would be maintained during a PMP event. We would like to discuss, for example, whether there is a potential for ice to block the outfall?
3	**2.4.11.3**	Please provide a SME to discuss why Tables 2.4-38 and 2.4-39 give minimum water level data only for the period 1988 to 2007, while Table 2.4-37 lists the periods of record for the Hermann and Boonville gages as 1929 to 2007 and 1926 to 2007, respectively.
4	**2.4.11.5.2**	Please provide a SME to discuss the water usage rates described in the 4th sentence of the first paragraph on page 2-588. This sentence states: "The average consumptive use of the collector well water during normal operating conditions will be approximately 1.06 E+09 gpm (4.01 E+09 lpm)." These values are unbelievably high, and are inconsistent with those given elsewhere in the paragraph and document.
5	**2.4.12**	Provide a SME to provide access to the following references: • Burns and McDonnell 2007, "Report on the Closed-Cycle Cooling and Makeup Water Supply Options for Future Units at the Callaway Nuclear Plant" • Burns and McDonnell 2008a, "Draft, Phase II Hydrogeologic Investigation Report, Collector Well Siting Study" • Burns and McDonnell 2008b, "E-mail correspondence with Jason Eichenberger and Dave Stous" • AmerenUE 2003, "Final Safety Analysis Report (FSAR) for Callaway Plant Unit 1, Chapter 2" • AmerenUE 2006b, "HTP-ZZ-07101, Radiological Environmental Monitoring Program, Administrative Correction Revision 009" • AmerenUE 2007e, "HTP-ZZ-07101, Appendix A REMP Sample Locations, Minor Revision 010"
6	**2.4.12.1.3.1**	Provide a SME to identify the St Peter Sandstone on Fig. 2.4-48 to be consistent with the statement "In the area of the Callaway Site, the aquitard (Upper Confining Unit) consists of the Snyder Creek Formation underlain by the Callaway Limestone, the St. Peter Sandstone, and the upper portion of the CJC Dolomite." [p 2-599]
7	**2.4.12.1.3.1**	Provide a SME to discuss perching and lateral flow within the aquitard where both saturated and unsaturated zones have been identified.

Serial No.	FSAR Section	Information Needs
8	**2.4.12.3**	Provide a SME to discuss the local and regional characteristics, hydraulic conductivity, and hydraulic gradient of the aquitard consisting of the Burlington Limestone, Bushberg Sandstone, Snyder Creek Formation, St. Peter Sandstone, Callaway Limestone and upper CJC Dolomitic Limestone.
9	**2.4.12.3.2**	Provide a SME to discuss the input values [Table 2.4-57] used in the calculation of travel times. Please specifically address the use of average hydraulic conductivity as a conservative value and the basis for the estimated porosity value.
10	**2.4.12.3.3**	Provide a SME to describe the calculations of groundwater flow and travel times in the subsurface beneath the plant.
11	**2.4.12.3.3.2**	Provide a SME to discuss the conceptual and numerical models (including input files, input parameters, and governing equations) for collector wells in the Missouri River Alluvial Aquifer to supply cooling water to the plant.
12	**2.4.12.4**	Provide a SME to discuss the general conditions and considerations potentially affecting the development of the groundwater plan, including both water levels and potential contaminants.
13	**2.4.13**	Provide a SME to discuss alternative conceptual models, model input values, and model assumptions for the radioactive release scenario.
14	**2.4.13**	Provide a SME to discuss whether the radioactive release scenario considered chemical complexing agents that might increase the mobility of cations by forming stable aqueous complexes. We would like to discuss the possible use of these agents in the Liquid Waste Management System and other plant systems including waste management systems.
15	**2.4.13.1.4.2**	Provide a SME to discuss the selection of the Kd values in Table 2.4-62 and their use in the radioactive release scenario. Please specifically address the use of 10th percentiles as conservative Kd values.
16	**2.4.13.1.4.2**	Provide a SME to discuss the radioactive release scenario(s) with respect to closest receptor well.
17	**2.4.13.1.4.3**	Provide a SME to discuss the dilution factors in Mud Creek and Auxvasse Creek.