

PMGrandGulfColpem Resource

From: Andrea Johnson
Sent: Thursday, June 12, 2008 4:06 PM
To: gcesare@enercon.com
Cc: Eric Oesterle; Christopher Cook; GrandGulf Resource
Subject: FW: GG Hydrology Safety Audit Info Needs: final
Attachments: GG_Info_Needs-Hydrology_Safety_Audit.pdf; GG_Info_Needs-Hydrology_Safety_Audit.doc

Guy,

Attached please find our list of information needs for the site safety hydrology audit next week. Please do not hesitate to contact me should you have any questions.

Please confirm receipt of this email.

Thank you!

Andrea M. Johnson
Project Manager
U.S. Nuclear Regulatory Commission
Office of New Reactors
Division of New Reactor Licensing
NGE1 Projects Branch

From: Christopher Cook
Sent: Thursday, June 12, 2008 3:39 PM
To: Eric Oesterle; Andrea Johnson
Cc: Lance Vail; Mark McBride; Sara Brock; Renee Holmes; Mark Thaggard; Jill Caverly
Subject: GG Hydrology Safety Audit Info Needs: final

Eric and/or Andrea,
Attached is the list of Information Needs for the Grand Gulf hydrology-related safety audit next week (PDF and Word format). Please transmit to the applicant at your earliest convenience.

Thank you,
Chris

Christopher B. Cook, Ph.D.
Senior Hydrologist
Hydrologic Engineering Branch, Office of New Reactors
U.S. Nuclear Regulatory Commission
Mail Stop: T-7E18
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Hearing Identifier: Grand_Gulf_3_COL_Public
Email Number: 4

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Subject: FW: GG Hydrology Safety Audit Info Needs: final
Sent Date: 6/12/2008 4:05:35 PM
Received Date: 6/12/2008 4:05:38 PM
From: Andrea Johnson

Created By: Andrea.Johnson@nrc.gov

Recipients:

"Eric Oesterle" <Eric.Oesterle@nrc.gov>
Tracking Status: None
"Christopher Cook" <Christopher.Cook@nrc.gov>
Tracking Status: None
"GrandGulf Resource" <GrandGulf.Resource@nrc.gov>
Tracking Status: None
"gcesare@enercon.com" <gcesare@enercon.com>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	1318	6/12/2008 4:05:38 PM
GG_Info_Needs-Hydrology_Safety_Audit.pdf	20857	
GG_Info_Needs-Hydrology_Safety_Audit.doc	73210	

Options

Priority: Standard
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Reply Requested: No
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Serial #	FSAR Section	Discipline	Information Need	Reviewer
1	2.4.2	Surface Hydrology	Provide an SME (subject matter expert) to discuss the process used to determine that the postulated unit hydrographs employed in the local-intense precipitation calculation are the most conservative plausible.	J Caverly
2	2.4.2, 2.4.3	Surface Hydrology	Provide for review of the calculation packages for the locally-intense precipitation and flooding assessment.	L Vail
3	2.4.2, 2.4.3	Surface Hydrology	Provide for review of the HEC-RAS input files.	L Vail
4	2.4.2, 2.4.3	Surface Hydrology	Provide an SME to discuss the site drainage map.	L Vail
5	2.4.2, 2.4.3	Surface Hydrology	Provide for review of the calculation packages for the site drainage assessment.	L Vail
6	2.4.3	Surface Hydrology	Provide an SME to discuss the blockages of culverts for the PMF on local steams.	J Caverly
7	2.4.12	Groundwater Hydrology	Provide an SME to describe how that applicant determined that the postulated conceptual model of the subsurface environment is the most conservative plausible conceptual model for the site.	L Vail
8	2.4.12	Groundwater Hydrology	Provide an SME to discuss and clarify the stratigraphic relations of the Catahoula formation and the Upland Complex, and the reclassification of strata formerly classified as Catahoula as Upland Complex (<i>cf.</i> Table 2.5.4-201, “Summary of Stratigraphic units and Correlation to Previous Studies”.)	M McBride
9	2.4.12	Groundwater Hydrology	Provide an SME to describe the occurrence of perched water tables in the loess, and their relevance to safety concerns.	M McBride
10	2.4.12	Groundwater Hydrology	Provide maps showing the locations of the Citronelle Formation and other formations mentioned in this section, and showing their relation to the site. <i>Re</i> ESPA 2.4.12.2.1, “Present Ground Water Use”,	M McBride
11	2.4.12	Groundwater Hydrology	Provide an SME to discuss locations of pumping and observation wells, boring and completion logs, pumping rates, observed water levels, and other relevant test conditions for pumping tests on the Mississippi River Alluvium, Upland Complex, and Catahoula Formation (<i>cf.</i> FSAR pp. 2-137 to 2-139).	M McBride
12	2.4.12	Groundwater Hydrology	Provide an SME to discuss relevance of ESPA section 2.4.12.2.5 to the current design of the plant, in particular the direct withdrawal of cooling water from the Mississippi River.	M McBride
13	2.4.12	Groundwater Hydrology	Provide an SME to discuss the basis for constructing ESPA Figure 2.4-52 showing expected groundwater contours in the plant area during plant operation.	M McBride

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14	2.4.12	Groundwater Hydrology	Provide an SME to discuss whether groundwater in the plant area will be monitored for radionuclide releases, and if so the locations and strata to be monitored and the methods to be used for monitoring. (cf. FSAR section 2.4.12.3, "Monitoring or Safeguard Requirements").	M McBride
15	2.4.13	Groundwater Hydrology	FSAR section 2.4.13.2.2 (p. 2-165) states that radionuclides are assumed to be released directly to groundwater. However, one of the basic design assumptions of RESRAD is that the source of radionuclides is in soil above the groundwater table, and that radionuclides enter groundwater by downward leaching from this soil. Provide an SME to discuss how the assumed liquid release is represented in your use of the RESRAD model to simulate radionuclide transport following a hypothetical release.	M McBride
16	2.4.13	Groundwater Hydrology	Provide an SME to discuss why Hamilton Lake is not believed to be directly connected to groundwater (cf. ESPA 2.4.12.2.5, p. 2.4-34; FSAR 2.4.13.2.2., p. 2-165). Provide legible copies of hydrographs and maps needed for this discussion.	M McBride
17	2.4.13	Groundwater Hydrology	Provide an SME to discuss surface water outlets from Gin lake and Hamilton Lake, and the conditions under which outflow occurs.	M McBride
18	2.4.13	Groundwater Hydrology	Provide an SME to discuss those parameters used in the applicant's RESRAD model assessment that are not reflected in FSAR Table 2.4.13-201, "Site-Specific RESRAD-Offsite Inputs".	M McBride
19	2.4.13	Groundwater Hydrology	Provide an SME to discuss the sources of samples, and the analyses made on samples, used to establish K_d values for use in RESRAD modeling. Provide copies of reports documenting site-specific adsorption measurements.	M McBride
20	2.4.13	Groundwater Hydrology	Provide an SME to discuss the possible effects of low-permeability clay/silt material in the Mississippi River Alluvium east of Gin Lake and Hamilton Lake on groundwater flow paths, in particular the possibility that actual flow paths may not be straight from the hypothetical release area toward the Mississippi River but might be diverted (for example) toward small streams A and B that drain into the lakes.	M McBride
21	2.4.13	Groundwater Hydrology	Provide an SME to describe the process the applicant used to determine that the conceptual model of the parameters, spatial configuration, and controlling physical processes of the subsurface environment that were used in the applicant's analysis of the dose consequences of an accidental release is bounding.	L Vail
22	2.4.13	Groundwater Hydrology	Provide for the staff's review of the data input files used in the RESRAD model assessment of the dose consequence of an accidental release based on the requirements of 10 CFR 20 Appendix B Table 2.	L Vail

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