

PMSummerColpEM Resource

From: Sebrosky, Joseph
Sent: Friday, April 09, 2010 4:01 PM
To: PMSummerColpEM Resource
Cc: 'amonroe@scana.com'; See, Kenneth; 'jmgiles@scana.com'; Barnhurst, Daniel
Subject: Summary of April 7, 2010, phone call with Summer to discuss hydrology

MEMORANDUM TO: File (Summer Units 2 and 3)

From: Joseph Sebrosky, Project Manager
AP1000Projects Branch (NWE1)
Division of New reactor Licensing
Office of New Reactors

Subject: Summary of April 7, 2010 phone call with Summer to discuss hydrology

The purpose of the phone call was to discuss Summer's response to RAI 2.4.12-6

The NRC attendees were:

- Daniel Barnhurst and Joe Sebrosky
- Micahel Fayer, Pacific Northwest National Laboratory (PNNL)

The applicant participants included:

- SCE&G: Amy M. Monroe, James Fender, Julie Giles, Justin Bouknight, and Kyle Young
- Bechtel: Angelos Findikakis, Lloyd Desotell, Garrett Day, Matt Carney, Altheia Wyche, Dan Patton, and Nick Cherish

In preparation for the phone call the staff developed the following topics of discussion related to RAI 2.4.12-6:

- Water balance calculations. Post-construction, how does the applicant imagine precipitation is partitioned between infiltration and runoff? How much runoff eventually infiltrates in ditches and stormwater basins versus flows off the plateau? How does this compare to the current runoff volume? Maybe this SME can also address the recharge rates for post-construction surfaces (e.g., grass; gravel; etc.)
- Details related to post-construction site layout (Topographic details between the two reactors and within 200 feet of nuclear islands, Areal distribution of post construction surface cover (e.g., grass, gravel, pavement), Max surface water elevation of stormwater basins that surround site)
- Pre- and post-construction vadose zone thickness. The reason is that the post-construction water table in areas with thinner vadose zones will have ground water levels that respond more quickly to precipitation events. This is most important in the area just west of the centerline between the reactors. In this area, the sound rock surface is as high as 385+ ft and the post-construction surface in the vicinity will be at 392 to 396 ft.
- Movement of groundwater away from the plateau, given the Ks of the common fill is expected to be 5E-5 cm/s.
- Maximum operational groundwater level (RG 1.206) resulting from site changes to ensure compliance with DCD level (Currently have reported max based on historical conditions and describe future conditions using general statements (i.e., changes "could lower" gw levels, "not expected to impact"))).

Based on discussions during the phone call, SCE&G agreed to supplement their previous RAI 2.4.12-6 response to provide additional discussion and conceptual design information dealing primarily with surface water effects on groundwater. There was a discussion that the supplemental information would generally be qualitative in nature and not quantitative.

The staff took an action to review previous RAI responses associated with the surface water review to determine if these responses would aid in the understanding of the post-construction topography of the site. In addition, the staff took an action to provide feedback regarding its expectations for changes to be made to the FSAR to better describe the effect, if any, the post-construction conditions at the site would have on the ground water levels. Subsequent to the phone call the staff indicated to SCE&G that it's the staff's expectation that several paragraphs should be added to the FSAR from the updated RAI response that Summer is to provide since this information is important to the staff's safety determination.

Hearing Identifier: VCSummer_COL_Public
Email Number: 268

Mail Envelope Properties (36CF286628C20846A68047F2463233091E5C42DCBD)

Subject: Summary of April 7, 2010, phone call with Summer to discuss hydrology
Sent Date: 4/9/2010 4:00:48 PM
Received Date: 4/9/2010 4:00:49 PM
From: Sebrosky, Joseph

Created By: Joseph.Sebrosky@nrc.gov

Recipients:

"amonroe@scana.com" <amonroe@scana.com>

Tracking Status: None

"See, Kenneth" <Kenneth.See@nrc.gov>

Tracking Status: None

"jmgiles@scana.com" <jmgiles@scana.com>

Tracking Status: None

"Barnhurst, Daniel" <Daniel.Barnhurst@nrc.gov>

Tracking Status: None

"PMSummerColpEM Resource" <PMSummerColpEM.Resource@nrc.gov>

Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	Size	Date & Time
MESSAGE	3645	4/9/2010 4:00:49 PM

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Priority: Standard

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