PMLevyCOLPEm Resource

From: Anderson, Brian
Sent: Friday, December 17, 2010 10:49 AM
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Subject: DRAFT RAI - SRP sections 2.4.12 - Levy County Units 1 and 2 Combined License Application
Attachments: LNP Draft RAI 5316 - 2.4.12.doc

Importance: High

Attached is a draft RAI related to SRP section 2.4.12 for the Levy County Units 1 and 2 Combined License Application. Please let me know if you would like to schedule a conference call to discuss this RAI.

Thank you,
Brian

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Hearing Identifier: Levy_County_COL_Public
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Request for Additional Information No. 5316
Levy County, Units 1 and 2
Progress Energy Florida, Inc.
Docket No. 52-029 and 52-030
SRP Section: 02.04.12 - Groundwater
Application Section: 2.4.12

QUESTIONS for Hydrologic Engineering Branch (RHEB)

02.04.12-***

To meet the requirements of 10 CFR 52.79(a)(1)(iii), 10 CFR 100.20(c), 10 CFR 100.21(d), and GDC 2, additional information is required regarding maximum post-construction groundwater elevations in areas near the SSCs. The key area of interest is between the SSCs and the surrounding stormwater drainage ditches. The applicant's previous estimates based on observed pre-construction water levels do not appear to account for recharge from precipitation resulting in groundwater mounding in the raised areas around the SSCs. The calculation package LNG-0000-XDC-001, "Effect of Grouting on Groundwater Flow Regime, Rev. 2" (Rev. 2, 11/19/08) previously provided in response to a related RAI does not appear to address the issue of recharge and groundwater mounding between the SSCs and the surrounding stormwater drainage ditches.

NRC staff performed an independent assessment which indicated that local groundwater mounding at times of intense and/or prolonged precipitation may be sufficient to exceed the AP1000 DCD requirement regarding maximum allowable groundwater elevation at the SSCs. This assessment was based on the staff's understanding of plant operational conditions, including raising the nominal grade around the plants from 42 to 50 ft elevation NAVD88, grading and installation of stormwater drainage ditches. The staff lacks adequate information on characteristics of the ground surface cover, expected recharge rates, and hydraulic properties of subsurface materials in the area between the safety-related SSCs and the surrounding drainage ditches to make a definitive analysis of the reasonably expected maximum post-construction groundwater level.

As result, the applicant is requested to provide an estimate of the maximum post-construction groundwater level that is based on anticipated post-construction surface conditions, the anticipated properties of the fill material, the conceptual model of the subsurface, and expected maximum recharge rates. This estimate must be based on specific recharge rates associated with the main surface features, including any semi-impervious surfaces, gravel-covered surfaces, and grass-covered surfaces. The applicant's estimate must also be based on the post-construction elevation and capacity of the surrounding stormwater drainage ditches and ponds, and the post-construction geology including properties of engineered fill and backfill. In its response, the applicant is requested to provide proposed updates to the FSAR, which would include the results of this analysis and supporting information used in the analysis.

DRAFT