PMNorthAnna3COLPEmails Resource

From: Mark McBride
Sent: Friday, February 20, 2009 3:11 PM
To: Jean-Claude Dehmel
Cc: Thomas Kevern; Alicia Williamson; Christopher Cook; Richard Raione
Subject: North Anna/S: Status of RAIs for 2.4.12 and 2.4.13

Revision 1 of the FSAR did not include any substantive changes to section 2.4.12 or 2.4.12. In particular, nothing in Revision 1 addresses any of our RAIs. The only changes are very minor ones to formatting and marginal references.

As things are now, Dominion has responded to our RAIs as follows:

RAI 2.4.12-1: Dominion provided more detailed information on the MODFLOW model used to calculate groundwater levels in the power block area, and additional discussion regarding the significance of anomalously high groundwater levels in well OW-901 which is located in the power block area. More attention to modeled groundwater levels is needed; see below.

RAI 2.4.13-1: Dominion responded that no use of chelating agents is planned at NAPS Unit 3. This response appears satisfactory.

RAI 2.4.13-2: Dominion responded with a discussion of why the Kd values that they selected for groundwater radionuclide transport modeling are conservative. We are not convinced that their approach is sufficiently conservative for bounding analyses; see below.

RAI 1.4.13-3: Dominion responded with a discussion of why some of the parameters used in groundwater modeling differ between the modeling of groundwater heads and modeling of groundwater radionuclide transport. Also, they presented a justification for using a hydraulic conductivity less than the maximum observed value in transport modeling. We are unconvinced about the hydraulic conductivities, on the ground that a bounding analysis (rather than one using some sort of best estimate of hydraulic conductivity) is what is needed; see below.

On February 9, Chris Cook and I, and Phil Meyer from PNNL, talked to Dominion about some points related to the above issues. On the basis of this discussion, we plan two new RAIs:

RAI 2.4.12-XX: We will request that Dominion expand its description of modeling of groundwater levels in the power block areas. This is intended to clear up some details such as the simulation of surface drains in the model, and related sensitivity analysis.

RAi 2.4.13-XX: We will request additional calculations of groundwater radionuclide transport to assure that the transport analysis constitutes a bounding analysis. We will request that the calculations use the maximum hydraulic conductivity observed onsite, and the minimum site-specific value of Kd.

It does not appear that dealing with these remaining RAIs will require significant additional resources.

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