

PMNorthAnna3COLPEmails Resource

From: Christopher Cook
Sent: Thursday, November 15, 2007 5:58 PM
To: Mark Thaggard
Cc: Michael Masnik; Alicia Williamson
Subject: Fwd: Phone Call on North Anna

Mark,

The email from Mike included below describes a phone conversation we had this afternoon with two members of the public regarding environmental impacts of the proposed Unit 3. In addition to Mike's comments, I would add that I will also send a copy of a publically-available report documenting thermal modeling of Lake Anna to Mr. Ruth. This report documents activities I completed for the NRC while I was at PNNL. The report was published in early 2005 and is cited in the EIS.

I will also send Mr. Ruth a statement regarding the temperature increase due to Unit 3, which is discussed in Section 5.3.3 of the EIS. Assuming the heat rejection rate from operations of existing Units 1 and 2 remains constant, the reduced volume of water in the lake caused by proposed Unit 3 operations would result in an increase of average lake temperature. This temperature rise was computed to be less than 0.1 F.

Chris

>>> Michael Masnik 11/15/2007 5:19 PM >>>

Chris Cook and I had a telephone conversation this afternoon with Mr. Larry Ruth and Ken Rammer. Larry has a residence on the shore of the North Anna WHTF and Ken is the Chairman of the local citizens group that has conducted water quality monitoring on the Lake Anna reservoir. Larry had contacted me about a week and a half ago to ask some followup questions resulting from discussions I had with him at the recent North Anna public meeting. They raised three issues which we discussed in some detail. First was a concern that the operation of the third unit would result in less water in the reservoir available to dilute the heat being added to the WHTF and lake from the Unit 3 blowdown. Larry was concerned that during low flow conditions the temperature in the WHTF and lake would continue to climb because of the additional heat input and the reduction of water in the reservoir due to evaporative losses. Chris explained that the waterbody would reach an equilibrium temperature and not continue to rise as time went on.

Larry also raised the issue of PAME (primary amoebic meningoencephalitis) caused by the proliferation of *Naegleria fowleri* in the WHTF due to the increase in water temperature as a result of the operation of an additional unit at North Anna. We discussed his concern and we asked for the results of the studies the citizen's group had commissioned from Virginia Commonwealth University. We were told that the study was not available yet. Ken asked what the Units 1 and 2 condenser tubes were made off. We stated that we did not know but could find out and let them know. Ken believed that it had some bearing on the abundance of *N. fowleri* in the reservoir.

Larry's final questions dealt with endangered mussel species potentially inhabiting the WHTF and lake. I told him that we had a discussion of protected mussels in the December 2006 FEIS for the North Anna ESP and we had no concerns. He mentioned that he had spoken to a Mr. Brian Watson, Commonwealth of Virginia, who had expressed some concern particularly since neither he nor Larry knew of any mussel surveys done in Lake Anna. Again the concern is the additional heating of the reservoir due to the operation of an additional unit would result in increased water temperatures which might be detrimental to the mussels. I committed to speaking to Mr. Watson should we receive a COL application from Dominion.

Chris agreed to look into the quantification of the increase in lake temperature due to operation of an addition closed -cycle unit at North Anna. Should we receive a COL application from Dominion both individuals urged the NRC to evaluate alternatives for heat dissipation from the station that involve reducing the heat loading of the reservoir due to the operation of Units 1 and 2.

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From: Christopher Cook

Created By: Christopher.Cook@nrc.gov

Recipients:

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Tracking Status: None
"Alicia Williamson" <Alicia.Williamson@nrc.gov>
Tracking Status: None
"Mark Thaggard" <Mark.Thaggard@nrc.gov>
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Options

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