{In Archive} Questions Concerning July 2010 Submission

John King to: palmeag 09/22/2010 04:16 PM

From: John King/R1/USEPA/US
To: palmeag@nu.com
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Allan,

Please see the questions from Jeff Andrews. Jeff's question deal with the data used for your analysis.

Could you please address them at your earliest convenience.

I appreciate your help,

John

These are all from PSNH July 2010 submission.
----- Forwarded by John King/R1/USEPA/US on 09/22/2010 04:11 PM -----

From: "Andrews, Jeff" <Jeffrey.Andrews@des.nh.gov>
To: <king.john@epamail.epa.gov>
Date: 09/22/2010 03:09 PM
Subject: Questions

Hi John, here are all of my questions:

1. Page 30, item 3 in section 10.2. Is the 21 years of river flow data USGS data or someone else's?
2. Page 32, Fstation/Friver variable. Similar to comment 2, where was the river flow measured?
3. Page 33, in the equations to calculate T_{S4} and in the discussion in the last paragraph, it appears that they are assuming complete mix or in their words "perfect mixing." As you know, complete mixing of the thermal plume does not occur until the river reaches the dam. Also, the historical measurements of T_{S4} are near the surface. It would be nice to have them use actual river and effluent data and CORMIX 1 to see if their equation is reasonably accurate.
4. In the last paragraph on page 52 and in other previous sections the report mentions that they need to use the minimum daily river flow rates from the 21 year data set to get the limiting condition scenarios. If minimum daily flow rates are that different than the average it implies that there may be significant "draw/fill" cycling going on at the hydro stations. I checked the USGS gage at Goffs falls (see http://waterdata.usgs.gov/nwis/uv?01092000) and it shows significant flow fluctuations on approximate two and one-half per day cycles. My question is whether the flow cycling, which would cause temperature cycling during the day at least during lower flow conditions, would be a problem for the fish (and the fisheries biologists). Also, the recent FERC license renewal may have changed the recent flow regime at the station compared to the historical 21 year data set. Should this be checked for its possible affect on the analysis?

Please let me know if you have any questions.

Thanks, Jeff

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