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Puleo, Shelley

From: Cobb, Michael
Sent: Tuesday, April 02, 2013 4:59 PM
To: DeMeo, Sharon M.; Houlihan, Damien; Stein, Mark
Subject: FW: Schiller Questions

I just received this initial response to a couple recent requests Sharon and I sent to Allan Palmer. Let me know if we should discuss any items in more detail.

Mark, item 4 addresses the CCR discharge issue (it is a "dry" process). Also, item 1 requests that you contact Linda Landis.

Best,

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From: allan.palmer@nu.com [mailto:allan.palmer@nu.com]
Sent: Tuesday, April 02, 2013 4:49 PM
To: Cobb, Michael
Cc: landilt@nu.com; william.smagula@nu.com; elizabeth.tillotson@nu.com; richard.despins@nu.com; peter.leavitt@nu.com; felicia.giordano@nu.com; jeffrey.patry@nu.com
Subject: Schiller Questions

Michael, Sorry for the delay in getting this first round of answers to you, but we were tied up finishing the 308 response for Merrimack Station that was due last week. Several of these questions need to be confirmed with Enercon and I am wrapping up a Purchase Order with them to perform the work. Once under contract, I expect they will complete the review in a couple weeks and I will forward that information to you, with the exception of the final question on the list. An evaluation of a new fish return system will take extra time and money so I want to discuss that matter with you further before we proceed.

Please let me know if you have any questions with this response; I hope to follow-up with the majority of the remaining answers by mid-month. Thanks, Allan.

Firstly, as we discussed during the February 13, 2013 site visit, EPA requests the following:

- 1.) Either a redacted version of the October 2008 Response to EPA's CWA § 308 letter or a letter from PSNH releasing the CBI designation for the same report.
Please have Mark Stein contact Linda Landis directly to discuss this request.
- 2.) Dimensions of the Unit 4 intake pipe, as well as the dimensions of the two abandoned Unit 3 intake pipes. Please also include intake velocity calculation at the intake point of the Unit 4 pipe based on maximum design flow.
The 2008 Report provided plans in Attachment 5 and a description was provided on pages 4 and 5 (all 3 pipes are 6.5 feet ID). We have asked Enercon to analyze the velocity at the bar rack at the offshore inlet and will provide the estimate when available.

3.) A spreadsheet (preferably in MS Excel) detailing the actual (or estimated) total daily intake flow volume and corresponding electrical generation over a period of the most recent 2 years.

Daily average cooling water flows for the 3 units are reported individually to EPA each month with the DMR forms. We are compiling the station total generation numbers on a monthly basis for the last two years and will provide the data when complete.

Additionally, after the site visit, other questions have been raised that need clarification. They are as follows:

4.) Please provide the details regarding ash handling systems (fly ash and bottom ash). Specifically, is any waste water generated from these operations? If so, provide the volume, processing steps and ultimate discharge location. Also, please provide the mass and disposal method of the ash solids. Is there an impoundment or landfill on-site? If so, is leachate collected and discharged?

All ash handling is done "dry" with no wastewater generation or the use of an impoundment or on-site landfill.

Ash weight estimates and facilities used are reported to EPA in the station annual Toxics Release Inventory report.

5.) Please clarify under what conditions, if any, only 1 intake pump is operated.

Historically the units only generate power when both circulating water pumps are operating; rarely is only one circulating pump running. Based upon the discussion at our 2/13 meeting, station personnel have begun to evaluate conditions when only one circ pump is needed and if it is possible to turn off both pumps on a more frequent basis. We will provide that information when their evaluation is complete.

6.) In the October 2008 Response to EPA's CWA § 308 letter, PSNH indicates that maintenance costs for Unit 3 intake renovation and the continuous operation of screen option are \$20,000 and \$50,000, respectively. Please confirm that these are yearly figures.

Yes, these are the added annual estimated costs associated with running traveling screens and the fish return system continuously.

7.) Did PSNH contact Gunderboom directly during its evaluation of aquatic microfiltration barriers for the 2008 report in regards to Schiller Station? If so, please provide their direct findings.

PSNH did not contact Gunderboom as the analysis by Enercon indicated that the space limitations were too severe to allow the proper deployment of a long enough barrier. Enercon will review their file to determine if any information specific to Schiller Station was provided directly from Gunderboom.

EPA continues to work on the reissuance of Schiller Stations NPDES permit. Based on the review of the October, 2008 report titled "Response to Environmental Protection Agency CWA §308 Letter, PSNH Schiller Station, Portsmouth, New Hampshire," EPA requests the following information:

1) Please provide further explanation why the installation of multi-disc screens would result in higher through-screen velocities especially when combined the Unit 3 renovations, since the Unit 3 renovations is reported to reduce intake velocity. EPA notes that for Merrimack Station, PSNH reported that the installation of multi-disc screens would reduce impingement mortality by 69% for Unit 1 and 80% for Unit 2.

We are working with Enercon to work out the details to this issue and will provide the response when it is available.

2) Does Schiller Station normally run all 6 circulating pumps during generation and 3 pumps when on standby?

It has been common practice to typically run all six pumps the majority of the time. As mentioned in response #5 above, Station Operations is investigating the practice of when one or both pumps can be turned off as a part of off-line operation and we will provide that information when the evaluation is complete.

3) What construction material is used for the fish return pipes (i.e., fiberglass, PVC)?

Our records indicate that the pipe is constructed of vinylester resin fiberglass.

4) Please provide further explanation why the installation of WIP screens would result in smaller screen surface area overall (and higher through-screen velocities) especially when combined the Unit 3 renovations, since the Unit 3 renovations is reported to reduce intake velocity.

We are working with Enercon to work out the details to this issue and will provide the response when it is available.

5) Please provide an evaluation of a combined fish return system that connects both screen houses and engineered to transport fish away from the intake structures based on the direction of tidal flow.

We have not considered a combined fish return system and, as stated in the 2008 Report, additional studies are required to identify optimum discharge locations and determine the feasibility of adequate support structures. This work represents a significant effort with commensurate costs for both biological and engineering evaluations. PSNH requests a discussion with EPA before we commit to such an evaluation.

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