



August 18, 2017

Maria D. Bebenek, P.E.
Environmental Program Manager
Clean Water Program, PA DEP
909 Elmerton Ave.
Harrisburg, PA 17110

Subject: PBAPS Cooling Tower Operation and Measurement Uncertainty Recapture
Uprate Thermal Monitoring

Dear Ms. Bebenek,

We are writing to communicate our response to a letter from PA DEP dated May 3, 2017 and pursuant conversation on "08/18/17" related to Post-EPU Thermal and Biological Monitoring and Notice of Planned Measurement Uncertainty Recapture Uprate. You will find our response to the two topics outlined below, as discussed on our call.

PBAPS Cooling Tower Operation (Post-EPU)

Based upon data from the Post-EPU Thermal Monitoring study performed in 2016, PA DEP has strongly recommended Exelon consider continued operation of the PBAPS Cooling Towers until the end of September to mitigate the thermal impact to the Susquehanna River, especially during period of elevated temperatures and low-flow River conditions. Exelon agrees with the DEP's observation of the unusual environmental conditions in September of 2016, and understands the additional benefits of running towers under these conditions. Going forward Peach Bottom has decided to operate Cooling Towers on a conditional temperature basis until the end of September, although we understand the current NPDES Permit requirements, PA0009733, will remain unchanged for this permit cycle. Exelon has developed the following average intake temperature basis conditions for cooling tower operation from the end of August through September 30th (all based on 48 hour averages):

1. One tower will operate continuously through September 30, if temperature is equal to or greater than 81 F. If temperature lowers to 81F the one remaining operational tower may be secured.
2. A second tower will continue operation or commence operation within 48 hours of average intake temperatures being equal to or greater than 83F. When intake temperature is less than 83F, operation of the second cooling tower will cease.
3. A third cooling tower will operate conditionally in accordance with the language in the current NPDES Permit.

Operation of the cooling towers in this manner will "balance" the thermal load generated from PBAPS and mitigate potential impacts on the fish and macroinvertebrate populations in the Susquehanna River. Should we not be able to meet these guidelines during the September period due to operational or equipment challenges, Peach Bottom will provide courtesy notifications and pursue the plan to restore availability.

Measurement Uncertainty Recapture Uprate Thermal Monitoring

Measurement Uncertainty Recapture (MUR) Uprate is scheduled to commence in December of 2017. We have developed a monitoring plan as discussed which can be found attached to this letter. Once the uprate has been implemented, PBAPS will commence the attached plan over the course of one year. The data will be compiled and submitted with the NPDES Permit renewal application in April 2019 to support continuation of our thermal variance.

Should you have any questions on either of these matters, please contact Samantha Rice (717-456-4526), Environmental Specialist in training, or Ben Neufeld, Environmental Supervisor (717-456-4809)

Sincerely,

A handwritten signature in black ink, appearing to read 'm. herr', with a stylized flourish at the end.

Matthew J. Herr, Plant Manager
Peach Bottom Atomic Power Station

Attachment:

SCOPE OF SERVICES

The following scope of work provides detail regarding temperature monitoring during 2017 and 2018 associated with the MUR Uprate for Exelon's Peach Bottom Atomic Power Station (PBAPS). This work is a continuation of aspects of temperature monitoring completed during 2010 through 2013 and again during 2016. Normandeau's understanding is that PADEP is requesting this monitoring to validate the assumptions of the increase in ΔT of up to 0.4 °F associated with the MUR Uprate. As per our previous efforts associated with temperature monitoring at PBAPS, Normandeau will sub-contract ERM to complete aspects of this scope of work. The scope of work is outlined below.

- Install equipment and monitor water temperature from December 1, 2017 through November 30, 2018
- Monitor water temperature at biological stations 208, 214, 215, 189, 190 (a subset of the Post-EPU monitoring stations)
- Monitor water temperature at temperature transects 201, 203, 205, 301, 303 (a subset of Post-EPU monitoring stations)
- Monitor water temperature at the PBAPS intake screen, head of the discharge canal, and end of the discharge canal
- Monthly download of water temperature loggers for all stations
- Complete data processing and analysis
- Complete short report detailing methods and results of the Post-MUR temperature monitoring and comparison to the assumptions of the MUR Uprate

ASSUMPTIONS: Normandeau assumptions regarding this proposal are as follows:

1. Normandeau will deploy equipment (except for temperature monitors) that was used during previous 316(a) monitoring studies at PBAPS.
2. Cost includes purchase of new temperature monitors.
3. Monthly downloads of temperature loggers will be completed starting in January 2018.
4. One round of comments and revisions based on consolidated Exelon comments for the report.
5. Cost does not include presentation or meeting with PADEP or Exelon.

SCHEDULE

Monitoring equipment will be deployed prior to December 1, 2017. Monitoring equipment will be retrieved after November 30, 2018. The report will be completed prior to January 31, 2019.