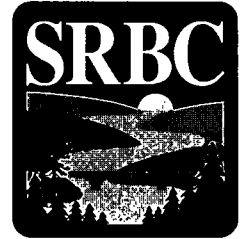


COPY



# Susquehanna River Basin Commission

*a water management agency serving the Susquehanna River Watershed*

August 16, 2011

Mr. Terry L. Harpster  
VP-Bell Bend Project-Development  
PPL Bell Bend, LLC  
38 Bomboy Lane, Suite 2  
Berwick, PA 18603

Re: PPL Bell Bend Nuclear Power Plant;  
Application for Surface Water Withdrawal, and  
Application for Consumptive Water Use – BNP-2011-005;  
Salem Township, Luzerne County, Pennsylvania

Dear Mr. Harpster:

The Susquehanna River Basin Commission (Commission) staff has reviewed the “Application for Surface Water Withdrawal, and Application for Consumptive Use” for Bell Bend Nuclear Power Plant (BBNPP) submitted in the referenced correspondence and provides the following comments.

Our comments are as follows:

1. The fourth paragraph of the referenced correspondence states that “there are no certified cooling tower or pump performance curves” because the design and procurement has not been finalized. The proposed method of determining surface water withdrawal is based on pump capacity. The Commission requires performance curves prior to final approval of the surface water withdrawal application.
2. In Section 4, the last paragraph on page 5, the blowdown methodology for the Circulating Water System Makeup Water System (CWSMWS) is described. At the Mussel Expert Panel meeting on February 23, 2011, the blowdown operating procedure for Susquehanna Steam Electric Station (SSES) was described differently. At SSES, the CWSMWS operates at capacity and the blowdown is the difference between the quantity pumped from the river and the quantity lost to evaporation and drift in the cooling towers, and the blowdown is controlled by maintaining a certain level in the cooling tower basin. The Commission requires a description of the operational parameters that determine the quantity of blowdown at BBNPP.
3. The Commission agrees that the surface water withdrawal quantity to be used in the application should be the “maximum instantaneous surface water withdrawal” as stated in the last paragraph of Section 4.4. The withdrawal is based on the capacity of

- two CWSMWS pumps and one Raw Water Supply System (RWSS) pump which is 29,100 gallons per minute (gpm).
4. The maximum instantaneous surface water withdrawal is determined by the capacity of two of three CWSMWS pumps and one of three RWSS pumps. These systems have the capacity to pump more than the requested withdrawal. The Commission requires a description of the control mechanism and/or administrative procedures to prevent more than two CWSMWS pumps and one RWSS pump from operating to assure that the requested withdrawal is not exceeded.
  5. Attachment A to Enclosure 1, "BBNPP Peak Day Water Use Diagram," does not accurately portray peak flows. For example, the diagram shows the withdrawal for the Circulating Water Supply System to be 25,085 gpm and Section 4.4 indicates the withdrawal to be 26,200 gpm. Similarly, the diagram shows the withdrawal for the Raw Water Supply System to be 952 gpm and Section 4.4 indicates that the withdrawal to be 2,900 gpm. The Commission requires that Attachment A be revised showing water use at the peak water withdrawal requested in Section 4.4 of 29,100 gpm. Additionally, the Commission requires a description of plant operations at peak water withdrawal, including how often the peak withdrawal operating condition will occur.
  6. Evaporation from the Essential Service Water Emergency Makeup System (ESWEMS) retention pond is 34.3 gpm. The Commission requires a description of the operation to provide makeup water from the RWSS, including the makeup rate and anticipated cycles of operation.
  7. In a letter to the U.S. Nuclear Regulatory Commission, BNP-2011-025 dated January 28, 2011, Figure 3.3-1 on page 3-26 is the "Anticipated Water Use Diagram" which indicates the average and maximum water usage for BBNPP. The flows shown on this diagram are significantly different than those shown on the "BBNPP Peak Day Water Use Diagram." Of particular concern is the difference in the RWSS withdrawal which had an average flow of 1,921 gpm on the "Anticipated Water Use Diagram" and on the "BBNPP Peak Day Water Use Diagram" the same flow was indicated to be 952 gpm. The Commission requires reconciliation of the maximum/peak flows shown on the two diagrams. Consistent definitions and quantities may avoid confusion in the future.

If you have any questions regarding the above, please contact Paula Ballaron at (717) 238-0423, extension 222, or Andrew Dehoff, extension 221.

Sincerely yours,



Andrew D. Dehoff  
Manager, Project Review

cc: Michael Canova; USNRC  
Donald Palmrose; USNRC  
Stacey Imboden; USNRC

Amy Elliott; USACE, Baltimore District  
Susan Weaver; PADEP  
Eugene Trowbridge; PADEP  
Mark Hartle; PFBC  
Tom Shervinskie; PFBC  
Jennifer Kagel; USFWS  
Larry Miller; USFWS  
Jamie Davis; USEPA