

Susquehanna River Basin Commission

a water management agency serving the Susquehanna River Watershed



77 FR 36012

6/15/12

July 16, 2012

(5)

Ms. Cindy Bladey
Chief, Rules, Announcements, and Directives Branch (RADB)
Office of Administration
Mail Stop TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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RULES AND DIRECTIVES
BRANCH
JUL 25 2012

Re: U.S. Nuclear Regulatory Commission Request for Participation in the
Supplemental Scoping Process Regarding the Revised Site Layout for the
Bell Bend Nuclear Power Plant Combined License Application Review

Dear Ms. Bladey:

The Susquehanna River Basin Commission (SRBC) appreciates the opportunity to offer comments in response to the referenced request for participation in the supplemental scoping process regarding the revised site layout for the Bell Bend Nuclear Power Plant (BBNPP), a new nuclear power facility located in Salem Township, Luzerne County, Pennsylvania. SRBC staff is currently reviewing several aspects of the project with the intent of presenting recommendations to our commissioners at a future meeting of the SRBC.

The SRBC is a federal-interstate compact commission, created in 1971 by the passage of concurrent legislation by the General Assemblies of the three basin states (Pennsylvania, New York, and Maryland) and by the U.S. Congress. Under the terms of the Susquehanna River Basin Compact (Compact), SRBC is vested with very broad authority in the areas of water resources planning, management, conservation, development, utilization, and allocation within the jurisdictional area of the Susquehanna River Basin. SRBC regulates the withdrawal and consumptive use of water pursuant to Article 3, Section 3.10, of the Compact, P.L. 91-575, 84 Stat. 1509 et seq., and SRBC Regulations 18 CFR Parts 801, 806, 807, and 808. SRBC authorizes withdrawals and consumptive water uses in accordance with its Comprehensive Plan for the Water Resources of the Susquehanna River Basin, adopted on December 4, 2008, and as amended from time to time.

SRBC received applications for BBNPP dated May 13, 2009, requesting a surface water withdrawal from the North Branch Susquehanna River of up to 44 million gallons of water per day (mgd) and the consumptive use of water of up to 31 mgd. A groundwater withdrawal application also received at that time was subsequently retracted due to a lack of detailed information available. SRBC commenced review of the applications in accordance with its regulations and SRBC Policy No. 2003-01, "Guidelines for Using and Determining Passby

SUNSI Review Complete

E-R105-ADM-03

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(LMAI)

Template = ADM-013

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Flows and Conservation Releases for Surface-Water and Ground-Water Withdrawal Approvals.” On January 14, 2011, PPL Bell Bend, LLC (PPL) amended the applications, changing the surface water withdrawal amount from 44 mgd to 42 mgd, and the consumptive use from 31 mgd to 28 mgd. On January 10, 2012, SRBC received an application for a groundwater withdrawal of 1 mgd (30-day average) for dewatering necessary for construction activities primarily related to the essential service water emergency make-up system pond.

Due to the magnitude of the project and its proposed water withdrawal and consumptive use requested in the applications, the project review by SRBC staff has been extensive. PPL has provided a large volume of supplementary documents in response to SRBC staff’s comments; this includes the Joint Permit Application (JPA), submitted to the SRBC on June 28, 2011, as a supplement to the application. PPL is continuing to submit additional information about the project and results of various studies. Several studies related to aquatic resources are being conducted this summer. Based upon the outcome of staff’s technical evaluations, SRBC staff will make a recommendation to the commissioners regarding approval, conditional approval, or denial of the project.

SRBC staff’s technical review is ongoing, and some issues, as described below, are not resolved at this time. Because the review is incomplete, other issues may arise. The following sections of this letter include comments regarding the BBNPP project consumptive use, water withdrawal, and general comments.

Consumptive Water Use. Consumptive use is defined by SRBC as the loss of water withdrawn from the basin through a process by which the water is not returned to the waters of the basin undiminished in quantity including, but not limited to, evaporation, transpiration by vegetation, incorporation in products during their manufacture, injection into a subsurface formation, and diversion out of basin. In accordance with SRBC regulations, PPL must propose (and the SRBC commissioners must approve) mitigation for its requested consumptive water use of 28 mgd. SRBC staff finds appropriate mitigation for consumptive use by a new facility of this magnitude and at this location must be in the form of compensatory water or discontinuance of use during designated low flow periods rather than payment of the mitigation fee.

PPL is proposing an innovative approach of pooling its various water storage “assets” to meet its consumptive use mitigation requirements at several existing projects within the basin and at the proposed BBNPP facility. This approach was presented to the commissioners in the form of a general concept and not a specific plan on June 23, 2011. PPL refers to the plan as the Stored Asset Plan (SAP). PPL has not made a formal submission to the SRBC of the SAP; however, applications for several assets within the SAP have been submitted for review. The U.S. Nuclear Regulatory Commission (NRC) and other appropriate agencies will be on the distribution list for relevant correspondence pertaining to the SAP. Some of the details required in the plan include a list of specific water supply assets located upstream of BBNPP that are being considered as part of the SAP proposal, including the proposed amount of mitigation and expected licensing/permitting or contractual actions for each asset. In addition to sources of storage being identified, all necessary agreements among the different entities, both within the PPL corporate structure and any other project sponsors or owners of assets, must be resolved

prior to approval of an “asset” into the SAP. As a separate action from the BBNPP applications, SRBC staff will make a recommendation to the commissioners regarding acceptance, modification, or rejection of the consumptive use mitigation plan.

SRBC regulations also require that major projects explore options to limit the quantity or avoid consumptive use of water. PPL has submitted studies that investigate using dry cooling techniques as an alternative to natural draft cooling towers. Utilizing dry cooling technology at BBNPP would significantly reduce the consumptive use; however, this technology has not been utilized for nuclear power plants to date and most likely the cost would be prohibitive. Nonetheless, SRBC staff has outstanding comments pertaining to this issue that have not been resolved at this time.

Water Withdrawal. In accordance with the standard contained in SRBC regulations, the surface water withdrawal and the groundwater withdrawal may not cause significant adverse impacts to the water resources of the basin. In its evaluation, SRBC staff may consider effects on streamflows and other users; water quality degradation that may be injurious to any existing or potential water use; effects on fish, wildlife, or other living resources or their habitat; and effects on low flows of perennial or intermittent streams. SRBC staff also considers the reasonable foreseeable water needs of a project.

SRBC staff evaluates each proposed withdrawal to determine the need for a protective passby flow condition, which restricts the ability to take water during low flow conditions. SRBC staff undertakes that evaluation using criteria that are applicable to all surface water and groundwater withdrawals influencing surface water. This protocol, adopted in 2003, enables SRBC to evaluate the impact of the withdrawal and involves looking both upstream and downstream to assess cumulative impact, taking into account all other withdrawals and discharges and their impacts on the resource, particularly during low flow periods.

Early in the review process, PPL chose to pursue alternative analyses (using Instream Flow Incremental Methodology [IFIM]) in hopes of supporting its contention that the routine passby requirement (20 percent average daily flow) is not needed to protect aquatic resources and downstream water uses. A panel of experts representing PPL, SRBC, and water resource agencies of SRBC’s member jurisdictions, including the Pennsylvania Fish and Boat Commission (PFBC), U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS) and the Pennsylvania Department of Environmental Protection (PADEP), was convened and reviewed the design of aquatic studies and an IFIM study developed by PPL to assess the potential adverse impacts of BBNPP water withdrawals on the Susquehanna River.

Because a passby flow is the “trigger” for projects to cease their withdrawal during low flows, upstream storage is typically necessary for projects pursuing non-interruptible withdrawals to allow continued operations during all flow conditions. Should SRBC determine that the requested surface water withdrawal cannot be approved without a passby condition, PPL would need to provide for water storage upstream of BBNPP to assure that all sections of the Susquehanna River are protected during periods of low flow.

PPL has completed most of the aquatic studies needed to analyze the passby flow requirement and have submitted them to SRBC in the JPA, and in a subsequent submission on April 27, 2012. Other aquatic studies are being conducted during the summer of 2012, including a mussel survey and a smallmouth bass study. SRBC staff's review of the IFIM study, in coordination with agencies of its member jurisdictions, is ongoing and may be complete to support SRBC action in March 2013.

The groundwater withdrawal application for dewatering major excavations during construction of BBNPP is currently undergoing review. The review process typically requires 12 months to complete. One of SRBC staff's concerns is that appropriate measures are taken to protect wetlands in the vicinity of the excavations. SRBC staff also will analyze the impact of the power block and resultant excess fill on groundwater withdrawal requests. With the withdrawal application, PPL also has submitted an aquifer testing waiver request. This waiver request is also under review.

General Comments. In its ongoing review, SRBC has provided a number of comments on the applications to PPL. Detailed comments related to the technical review are documented in correspondence between PPL and the SRBC, copies of which are distributed to other interested agencies, including the NRC.

In addition to providing written comments, SRBC staff has regularly participated in conference calls and periodic meetings with PPL, and it is staff's understanding that PPL is actively working to resolve the comments and concerns raised in the letters. PPL has finalized the scope of all remaining aquatic studies so that fieldwork can be accomplished during favorable flow conditions this summer. PPL anticipates that data and reports will be submitted to SRBC in the September 2012 time frame.

Considering the schedule that PPL will submit information required by SRBC's review process and the time necessary to coordinate with other agencies of our member jurisdictions, it is unlikely that the SRBC could act on the PPL applications during 2012. However, staff recommendations should be nearing completion before yearend, which would allow for SRBC commissioner action at its first 2013 quarterly meeting (March 2013).

SRBC appreciates the opportunity to comment on the referenced request for participation for the BBNPP project. If you have any questions regarding the above, please feel free to contact Paula Ballaron at (717) 238-0423, extension 222.

Sincerely yours,



James L. Richenderfer, Ph.D., P.G.
Director, Technical Programs

cc: Michael Canova; USNRC
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