



United States Department of the Interior



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May 7, 2012

Laura Quinn-Willingham
Environmental Project Branch 2
Division of New Reactor Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
Mail Stop: T-6 C32
Washington, DC 20555

RE: Bell Bend Nuclear Power Plant
USFWS Project #2009-0501

Dear Ms. Quinn-Willingham:

This documents ongoing consultation between the Fish and Wildlife Service (Service), Nuclear Regulatory Commission, U.S. Army Corps of Engineers, and Pennsylvania Power and Light regarding PPL's proposed construction and operation of the Bell Bend Nuclear Power Plant (BBNPP) in Salem Township, Luzerne County, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

This letter details our comments on the *Indiana Bat Biological Evaluation and Management Plan for the Proposed Bell Bend Nuclear Power Plant Site*, dated November 2011. This biological evaluation (BE) was prepared by Normandeau Associates, Inc. for the project applicant. We understand the Nuclear Regulatory Commission will be using the BE to develop a biological assessment for the purpose of initiating formal consultation with the Service due to the anticipated adverse effects of the project on the federally-listed, endangered Indiana bat (*Myotis sodalis*). These comments are provided to assist the Nuclear Regulatory Commission in working with the applicant to ensure the resulting biological assessment adequately addresses effects on the Indiana bat.

Project Description and Effects Analysis

The BE identifies the limit of disturbance associated with the BBNPP (Fig. 6), as well as the extent of existing forest cover and anticipated forest loss (Fig. 3). Based on Figure 6 in the BE, it appears that several forested areas will be isolated and potentially precluded from Indiana bat use by a combination of forest clearing and disturbance due to construction, operation and maintenance activities. However, the BE does not include a site plan depicting the location of various project features, including roads, transmission lines, buildings, parking lots, staging areas, *etc.* Nor does it indicate how long construction activities will occur within the limit of

disturbance. This makes it particularly difficult to determine the potential direct and indirect effects on Indiana bats that may be using forest habitat adjacent to the limit of disturbance. The biological assessment should include detailed site plans, as well as information on construction timing, sequencing and duration so project effects on the Indiana bat and its habitat can be evaluated.

Specifically, the BE indicates the BBNPP will result in 233.5 acres of forest loss, and 2.8 acres of forest loss due to isolation and fragmentation. However, the BE fails to consider that additional forest acreage may be temporarily or permanently lost as suitable foraging and roosting habitat for Indiana bats due to isolation and fragmentation. This would be expected to occur if the remaining forest is isolated from other forest by large, open areas (e.g., parking lots, buildings, fields) or if construction and operation activities will disrupt bats trying to use these remaining forest fragments located in the midst of the BBNPP site.

Currently, there is a relatively large area of forest in the western half of the project area; this forest is contiguous with forests to the north and south of the project area. However, proposed forest clearing will fragment the on-site forest, leaving an assortment of small and large forest fragments that are surrounded by 300- to 1000-foot open areas during and after construction. Without knowing what will occur during and after construction in open spaces surrounding the fragmented forest blocks, it is difficult to evaluate the potential for short-term or long-term forest habitat degradation or loss due to nearby activities. The biological assessment should address this deficiency in consultation with the Service, and any additional impacts due to forest fragmentation and isolation should be offset through permanent forest conservation.

In addition, the BE fails to consider the effects of forest loss on a landscape scale. As the project is located within the swarming area of three Indiana bat hibernacula, development of the BBNPP would be expected to remove forest habitat for Indiana bats associated with those hibernacula. We recommend that the applicant assess recent aerial photographs to determine how much of the 10-mile radius depicted in Figure 5 is currently in hardwood and mixed-hardwood forest cover. This should be compared to forest impacts from the project, as a percentage of existing forest cover that would be lost due to development of the BBNPP.

Conservation Measures

The BE describes several conservation measures that will be implemented by the applicant to minimize and partially offset adverse effects on the Indiana bat. Trees will be cut from November 16 to March 31, when bats are expected to be hibernating. However, the BE indicates that this seasonal restriction may not be applied when "danger trees" greater than 5 inches d.b.h. must be cut. Prior to danger tree removal, the applicant proposes to have a qualified biologist evaluate the tree to determine whether or not Indiana bats will be harmed. As the BE does not specify how this evaluation would occur, we recommend that this conservation measure be modified as follows:

Danger Tree Removal – When it is determined that a "danger tree" of 5 inches d.b.h. or greater must be removed between April 1 and November 15, a qualified Indiana bat surveyor will observe the tree for bat emergence beginning at least 30 minutes before

sunset. If no bats are observed emerging from the tree and no bats are heard on the tree, the tree will be cut that evening, immediately following the emergence survey. While lighting may be necessary to safely fell the tree, no lighting will be used until after the emergence survey is completed. If any bats are observed, the USFWS will be consulted prior to the cutting of the tree.

The applicant proposes to partially offset the loss of forest habitat through a combination of forest preservation (386 acres), active reforestation (58 acres), and passive reforestation through natural succession (137 acres). All lands proposed for forest conservation are within 1500 feet of Walker Run and the North Branch of the Susquehanna River, and are either within the BBNPP project area or on adjacent, PPL-owned lands. The proposed preservation of existing forest is at a 1.6:1 compensation ratio, although this may approach a 1:1 compensation ratio after short- and long-term impacts on isolated forest blocks are further evaluated. While the BE indicates 386 acres of forest will be protected through a conservation easement, it is silent regarding the long-term fate of the reforested acreage and the acreage that will be allowed to revert to forest via natural succession. In the absence of any permanent protection of these lands, the applicant has not ensured that they will compensate for impacts to Indiana bat habitat.

To ensure adequate long-term protection and management of forest habitat for the Indiana bat, all of the conservation lands (*i.e.*, the entire 581 acres) should be subject to a permanent conservation easement. The conservation easement should be held by a conservation entity that is willing and able to hold and manage the conservation acreage in perpetuity for the benefit of the Indiana bat. The easement holder as well as the conservation easement is subject to Fish and Wildlife Service review and concurrence. A template conservation easement is enclosed. Alternatively, the applicant may want to consider transferring the conservation acreage directly (fee simple) to a conservation entity in consultation with the Service. The conservation easement and associated Resource Management Plan should be finalized prior to any Indiana bat habitat disturbance on the site of the BBNPP. The Resource Management Plan would replace the forest management guidelines on pages 30-31 of the BE, as some of those guidelines (*e.g.*, #6 and #8 on p. 31) would result in suitable but less than optimal roosting habitat for Indiana bats by reducing the number of large-diameter roost trees now and in the future.

In evaluating conservation lands for permanent forest habitat protection, it will be important for the applicant to assess, consider and disclose to the Service, Nuclear Regulatory Commission and prospective easement holder the degree to which those lands may be vulnerable to future habitat loss. These vulnerabilities may result from existing easements, liens, encumbrances or reserved rights related to the surface or subsurface of the property.

With regard to the lands that will be allowed to undergo natural succession to a state of forest cover, we recommend that the applicant implement measures to ensure the success of passive reforestation. This would include monitoring and management to control invasive plants that may interfere with the establishment of a diverse forest of native hardwood tree species. As the effects of forest loss in the BBNPP project area will be permanent, and as it will take decades for a new forest to mature, we recommend that efforts begin immediately to restore forests via reforestation and natural succession. Furthermore, if monitoring indicates a diverse hardwood

forest is not developing via natural succession, efforts should be implemented by the applicant or easement holder to ensure success.

Other Considerations

The project is known to occur within the swarming area associated with three Indiana bat hibernacula, but at this time, no Indiana bat maternity colony use is anticipated due to the negative mist-net survey results from the summer of 2008. As negative mist-net survey results are considered valid for five years, we recommend a re-survey of the BBNPP project area in 2013 in accordance with the most recent Fish and Wildlife Service survey protocols. If female or juvenile Indiana bats are found, further consultation would be warranted as the current BE (and the anticipated biological assessment) relate solely to the effects of the project on bats associated with the above-referenced hibernacula.

With the exception of the Indiana bat, no other federally-listed or proposed endangered or threatened species are known to occur in the project area. However, as the BE acknowledges, the northern long-eared bat (*Myotis septentrionalis*) and little brown bat (*Myotis lucifugus*) were captured during mist-netting in 2008, and both species are undergoing a status review to determine whether or not future listing under the Endangered Species Act may be warranted. If additional species are listed or proposed, or found to occur in the BBNPP project area, further consultation with the Service would be warranted.

This response relates only to endangered or threatened species under our jurisdiction. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

Please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

Please contact Carole Copeyon of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,



Clinton Riley
Field Office Supervisor

Enclosure