

FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D.C. 20426

April 30, 2009

OFFICE OF ENERGY PROJECTS

Project No. 739-018
Claytor Project
Appalachian Power Company

Teresa P. Rogers, Supervisor
Environmental and Regulatory Affairs
Appalachian Power Company
P.O. Box 2021
Roanoke, VA 24022-2121

Reference: Comments on Preliminary Licensing Proposal

Dear Ms. Rogers:

Pursuant to 18 CFR § 5.16(e), this letter contains staff comments on your Preliminary Licensing Proposal (PLP) for the Claytor Project No. 739, filed on February 2, 2009.

The Integrated Licensing Process (ILP) regulations, at §§ 5.16(b)(1) and (2), require that you describe, in the PLP, (a) the existing and proposed project facilities, and (b) the existing and proposed project operation and maintenance plan, including measures proposed to protect, mitigate, and enhance environmental resources affected by the project. The ILP regulations, at §5.16(b)(3), also require that the PLP include an environmental analysis, by resource area, of the continuing and incremental effects, if any, of the preliminary licensing proposal, including the results of studies conducted under the approved study plan.

In general, your PLP adequately describes the existing and proposed project facilities and operations, as well as the existing environment in the project area. However, the PLP lacks sufficient detail in the required environmental analysis and many of the proposed measures are very loosely defined or do not reflect modifications to your initial proposals resulting from ongoing stakeholder workgroup efforts. Our specific comments on the PLP are discussed in Appendix A.

In addition, we request that the mapping data generated during the prefiling studies be provided to us in electronic shapefile format such as ArcView shapefile or a similar GIS

format. All files in .shp format must be accompanied by files with the following extensions: .dbf, .prj, and .shx. Specifically, we request these data for the bathymetry maps; the wetlands, riparian, woody debris, littoral, bald eagle habitat maps; native and exotic aquatic bed maps; and erosion and sedimentation maps.

If you have any questions, please contact John Smith at (202) 502-8972, or by e-mail at john.smith@ferc.gov.

Sincerely,

Ann F. Miles, Director
Division of Hydropower Licensing

cc: Mailing List
Public Files

Enclosure: Appendix A

P-739-018
Appendix A

APPENDIX A

Comments on the Preliminary Licensing Proposal (PLP)

Proposed Action

1. Under §5.16(b)(3), the PLP is to clearly describe proposed protection, mitigation and enhancement (PM&E) measures for each resource affected by the project proposal. While you propose, in the PLP, a number of environmental measures and several resource management plans, the proposed measures lack detail and clarity. In addition, the proposed plans appear to be in the very early stage of development and do not reflect the modifications to your initial proposals resulting from the ongoing stakeholder workgroup meetings. Your proposed management plans, which are to be filed with the license application, should contain (a) the details of the specific measures to be implemented, including conceptual drawings for any facilities or structures to be constructed, (b) schedules for implementing the measures identified in the plans, (c) the consultation record for the plans, and (d) an estimated cost for each measure in the plans.

2. In the fourth paragraph of section 2.1.1 of the PLP, the volume of Claytor Lake is given as 203,650 acre feet. In table 3 of the Sedimentation Study Report, the volume is given as 203,394 acre feet. Please clarify the correct volume in the license application.

3. On page 2-4, section 2.1.1, please include the length of the transmission line in the license application.

4. On page 2-4, section 2.1.2, you describe the extent of the project boundary for the Claytor Project. The project boundary will need to be better defined in the license application and conform to 18 C.F.R. §§4.39 and 4.41 (2008), including showing all project features (existing and proposed) on the map, relative to the project boundary.

Environmental Analysis

Proposed Action and Action Alternatives

5. The format of the environmental effects discussion should follow that of a Commission NEPA document. Also, the sections discussing the environmental effects of your proposed measures need to be more thorough. As a general rule, the environmental analysis section for each issue within a resource area should be structured as follows. First, you should provide a statement connecting the issue to operation and maintenance of the project. Second, you should identify what measures you propose, and others recommend, for addressing the issue. Finally, discuss and quantify, to the extent possible, the environmental effects of the proposed and recommended measures. The discussion of environmental effects should be based on the information in the record, as well as that which is available in the literature and of relevance to the issue being

discussed. Additional information on how to address environmental effects can be found in the Commission's guidelines for preparing environmental documents. See <http://www.ferc.gov/industries/hydropower/gen-info/guidelines/eaguide.pdf>.

GEOLOGY AND SOILS

6. On page 4-11, in the second paragraph it is stated that of the natural shoreline, 62 percent of the banks are actively eroding and 38 percent of the banks are stable. In the Erosion Study Report, Appendix III, is the 38 percent of the banks that are stable shown on the GEOMORPH drawings as having no outline? Do the outlined areas on the GEOMORPH drawings correlate to the percentages described in the second paragraph on page 4-11? Please clarify this in the application.

7. On page 4-11, in the first paragraph it is stated that approximately 34 percent of the shoreline has some form of erosion control or structure. In the second paragraph it is stated that of the natural shoreline, 38 percent of the banks are stable. Of the 38 percent of the banks observed to be stable, are 34 percent protected with some form of erosion control or structure and four percent not protected? Please clarify this in the application. Also, please include the lengths of the shoreline types in addition to the referenced percentages.

8. On page 4-15 you state that there are locations where the influence of varying discharges from the dam can be observed on shoreline bank erosion. Later in the same paragraph on page 4-16 it is stated that areas of rapid erosion were not a consequence of fluctuations from project operation. On page 4-24 you indicate that erosion of susceptible riverbanks was primarily within the first 20 miles downstream of the dam. Please clarify in the application whether the erosion downstream of the project is a consequence of project operation and if so, identify the specific locations of the project-influenced erosion sites.

WATER RESOURCES

9. On page 4-32, section 4.3.2.1, you indicate that the New River, upstream and downstream of the project, experiences a total water withdrawal of 340 million gallons per day. Please identify the geographic scope for this withdrawal.

10. On page 4-39, you state that the 2008 Integrated Report is the most current report approved by the EPA. However, in the same paragraph you say that a draft of the 2008 report while currently available has not yet been approved by the EPA. Does the first reference refer to the 2006 report rather than the 2008 report? Please clarify which report(s) is currently available and approved by EPA.

11. On page 4-57 you reference Karrickhoff et al., (1979) in Appalachian (2008a), however, your list of references on page 5-1 does not include an entry for Appalachian (2008a). Please include the reference for Appalachian (2008a).

12. On page 4-58 you state that “[t]he problems associated with re-suspended PCBs and some pesticides will decrease as the regulatory ban on their use leads to less accumulation in the environment. Current concentrations will eventually be buried or diluted completely” and that [p]roject operations are not likely to have any effect on water quality downstream due to contaminated sediment in Claytor Lake.” Please provide information from your environmental studies and literature references that support these statements.

13. On page 4-60 you state that the project would not affect groundwater resources, however, you do not provide any analysis supporting your conclusion. Whether the project would affect groundwater resources was an issue raised during scoping and should be analyzed in more detail.

FISH AND AQUATIC RESOURCES

14. On page 4-69, the second paragraph references section XX. Please revise this paragraph so that the actual reference is included.

15. In paragraph 3 on page 4-69, you state that optimal dissolved oxygen levels are usually at or above 5 milligrams per liter (mg/l), while tolerable or suboptimal levels are from 2 to 5 mg/l and that the preferred temperature for adult striped bass is most often cited between 18 and 24°Celsius (°C), but may be as low as 15 to 16°C. Please provide a reference(s) for these dissolved oxygen levels and temperature preferences.

16. On page 4-77, section 4.3.3.2 you describe the current mode of operation during the April 15 to June 15 fish spawning season to be maintaining the reservoir level at or above 1,844 feet. Later on in the section you describe the proposed mode of operation to be maintaining reservoir levels between 1,845 and 1,846 feet from April 15 through October 15 which includes the fish spawning season. You state that this 1-foot limitation is currently a voluntary measure. However, if your proposed 1-foot fluctuation limit is made a requirement of a future license, it would represent an enhancement over current conditions which appear to allow a drawdown to 1,844 feet during the fish spawning season. Therefore, the application should present a discussion of the effects of a 2-foot fluctuation limit on near-shore aquatic resources such as fish spawning (see the discussion in the littoral habitat study) and the benefits of implementing the proposed 1-foot fluctuation limit.

17. In the first paragraph on page 4-78, you state that during high inflow periods, reservoir levels may exceed 1,847 feet. In anticipation of these events, Appalachian may

reduce the reservoir elevation to 1,841 feet. The PLP indicates that these events occur for a short duration on an infrequent basis. In order to document the effects of reducing the reservoir elevation to 1,841 feet, the application should provide a more detailed explanation of the timing (seasonality), duration (average and range), and frequency of these operating variances. In addition, the application should reference the results of the littoral habitat study and address the acreages and types of habitats that could be affected by these drawdowns.

18. On page 4-79 you discuss the effects of the annual 5-foot drawdown on aquatic habitat particularly with respect to mussel habitat. As a result of the analysis which demonstrated a high mortality rate for mussels exposed to the drawdown, Appalachian proposes to discontinue the drawdown. However, your analysis did not examine any alternatives to a 5-foot drawdown. The application should include an analysis of the effects of alternative drawdown strategies (different drawdown depths, durations, or timing) on mussel mortality. A table showing the vertical distribution (number of mussels within increments of the 5-foot drawdown zone) of mussels identified during the drawdown study would be helpful (assuming that information was collected).

19. The discussion describing the effects of reservoir stratification on fishery habitat (pages 4-84 through 4-86) should provide references to the appropriate figures or tables from the Aquatic Resources Assessment Report that support the conclusions being made in the PLP.

20. The discussion describing the effects of current project operation on downstream habitat (pages 4-86 through 4-89) should provide greater detail of the instream flow incremental methodology (IFIM) study results. Summary information from the IFIM study should be presented in the application such as a table showing the maximum weighted usable area (WUA) and percent of maximum WUA for each life stage evaluated for several selected flows. The application should describe the effects of alternative operation scenarios (such as year-round run-of-river, seasonal peaking, etc.) on habitat for the various species life stages evaluated.

21. On page 4-94 and 4-102 you discuss the presence of invasive aquatic plants throughout the reservoir. However, there is no mention of where in the reservoir these invasive plants are the dominant species of the aquatic bed. This information would be useful to determine the spatial extent of the invasive aquatic plants.

22. On page 13, section 5.2.1, of the Native and Exotic Aquatic Vegetation Study you state that re-sampling of the 50 transects and periodic delineation of the aquatic beds will indicate shift or spread of the invasive species, and this data will be used to guide the control measures. However, these methods are not mentioned in the PLP or the Aquatic Vegetation Management Plan, nor is the threshold that would initiate control measures of the invasive species defined.

TERRESTRIAL RESOURCES

23. On page 4-107 you state that discontinuing the annual 5-foot drawdown for 2 weeks in November or December will increase perennial vegetation in the wetland communities. However, there is no mention of the potential for wetland communities to change classification (i.e., emergent wetlands converting to scrub shrub wetlands, etc.) and how this could affect the riparian zone and wildlife associated with these wetland communities.

24. On page 4-109 there is no mention of the effects of the invasive plants on the native plants or wildlife species. Explain the impacts that invasive plants have on the native aquatic plants and wildlife that utilize aquatic vegetation beds. On page 13 of the Native and Exotic Aquatic Vegetation Study observations of wildlife utilizing the aquatic beds are referenced in Appendix A of the study. However, these observations are not included in Appendix A and should be included in the application. If the invasive aquatic plant species may affect these wildlife species, explain this in the application.

RARE, THREATENED, AND ENDANGERED SPECIES

25. Please clarify the discontinuity in the page numbers in section 4.3.5.1.

26. Section 4.3.5.2 should include an analysis of the effects of project operation on mussel habitat downstream of the Claytor Project due to fluctuating water levels from peaking operation and altered temperature regimes. You should refer to the results of the IFIM study and temperature modeling study to address these issues.

RECREATION, AESTHETICS, & LAND USE

27. Section 4.3.6, *Recreation, Aesthetics, and Land Use*, provides much information on existing conditions at the project. However, there is limited analysis in section 4.3.6.2 of environmental effects associated with the proposed measures. This analysis should address the effects of proposed recreation measures on other resources and issues at the project, such as debris management and erosion/sedimentation.

28. You propose recreation improvements at Allisonia, Appalachian's picnic area, and the New River access below the dam. It would help participants and FERC staff to understand your proposed measures if you provide conceptual level drawings of your proposed measures. These drawings should also indicate where the recreation facilities are in relation to the project boundary in order for staff to assess any necessary boundary revisions.

29. Please explain the agreements you have with the Virginia Department of Game and Inland Fisheries (Virginia DGIF) for the Allisonia and New River access facilities. It

appears as though Virginia DGIF is responsible for the day-to-day operation and maintenance of the facilities. Are there annual funding requirements for these facilities?

CULTURAL RESOURCES

We appreciate the opportunity to review and comment on the draft Historic Properties Management Plan (HPMP), which was circulated to the Virginia state historic preservation officer (SHPO), the Eastern Band of Cherokee Indians, the Virginia Council on Indians, and FERC staff in February 2009. We recommend the following items be addressed in the final HPMP.

30. Page 2-10 of the draft HPMP and page 4-62 of the PLP note that two of the potentially eligible archaeological sites, 44PU167 and 44PU168, are “sufficiently protected,” but it is not clear how they are protected. In addition, the HPMP should include a brief description of all potentially eligible sites within the Area of Potential Effects (APE).

31. On page 4-60 of the PLP, the APE at the project is described to include all shoreline within the 1,850-foot contour line. Page 2-1 of the draft HPMP states that the APE for the project includes all lands within the project boundary as well as locations outside the project boundary where project operation or project-related activities, such as recreational enhancements, could affect properties listed in or eligible for inclusion in the National Register of Historic Places. Appendix B is said to include maps defining the APE but they were not included in the draft HPMP. Please submit these maps with the final HPMP and clarify the areas where the APE should be expanded beyond the 1,850-foot contour line to include proposed recreational enhancements.

32. Page 3-1 describes project management, preservation goals, and priorities. It may be helpful to describe the philosophy guiding management of the Claytor powerhouse and dam, which are recommended as eligible for the National Register of Historic Places; for example, do you intend to manage these properties under the continuity of use philosophy?

33. Page 4-1 states that you will consult with FERC, the SHPO, and the Eastern Band of Cherokee Indians on ways to resolve the adverse effects of erosion on two eligible archeological sites. The draft HPMP does not describe specific mitigation measures, but notes that methods may include forms of shoreline protection or archaeological data recovery. Ideally, this consultation would be completed and specific mitigation measures, along with standards, procedures, and a schedule for implementation, would be included in the final HPMP. At the very latest, these details should be determined prior to the implementation of the Programmatic Agreement. This section could also explain how you intend to manage the Claytor powerhouse and dam to protect these properties’ eligibility, consistent with section 3.

34. Site maps for the four potentially eligible archaeological sites within the APE, 44PU162, 44PU164, 44PU167, and 44PU168, were included in your Phase II Archaeological Testing study report dated January 2009. These, along with a general location map, are typically included as appendices in the final HPMP.

35. Appendix D of the draft HPMP provides a list of “Activities that Do Not Adversely Affect Historic Properties.” The list includes routine operation, maintenance, and enhancement activities that may be required to maintain and operate the project and do not require review by the SHPO. We agree that it is useful to develop this list with the SHPO, but find the title to be misleading. For example, the list includes reservoir water level fluctuations which can adversely affect historic properties. We recommend changing the title to “List of Activities that Do Not Require Prior Consultation with the SHPO.” In addition, this list contains a number of maintenance activities that would affect the Claytor powerhouse and dam. Please clarify how you would ensure that these measures do not affect the integrity of the eligible properties, e.g., that you will follow the Secretary of Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.

Appendix A – Draft Management Plans

36. In section 3.A. the draft Water Management Plan states that the Claytor Reservoir elevation level may be reduced to 1,844 feet NGVD at any time without prior notice as this is within normal operating levels. However, the proposed reservoir levels detailed in table 1 of the plan indicate that reservoir levels would be maintained between 1,845 feet NGVD and 1,846 feet NGVD from April 15 through October 14. Please note that an allowance to reduce reservoir levels to 1,844 feet without prior notice could be interpreted as a violation with any license requirement establishing the reservoir levels in table 1.

37. The management of maintenance drawdowns (section D) should be spelled out in greater detail including such things as the length of time for consultation, drawdown durations, and how drawdowns would be scheduled to avoid critical resource periods.

License Application Exhibits

38. The Commission’s regulations, at §5.18(a)(5)(iii), require that the relicense application meets the requirements of §4.51. Therefore, you must include, in your license application, Exhibits A, B, C, D, F, and G.

39. The description of project operation, in Exhibit B, must include details of how operation of the project is expected to change with the implementation of any proposed PM&E measures.

40. Exhibit D must provide an estimate of the costs to develop the license application, including administrative and study costs. Also, you must provide an estimate of the capital cost, as well as any annual operation and maintenance (O&M) costs, associated with each of your proposed PM&E measures. If any of the proposed PM&E measures would lead to the project's operation being modified, you should include a detailed explanation of how the cost of the measure was developed (*e.g.*, what proportion of the total costs is attributed to operational changes, capital, and/or annual O&M).

41. The exhibit F and G map(s) included in the license application should conform to 18 C.F.R. §§ 4.39 and 4.41 (2008). Also, the Commission recently removed the Non-Internet Public designation for Exhibit G maps [*see* 121 FERC ¶ 61,107 (issued October 30, 2007)]. Please refer to the following guidelines when preparing Exhibits F and G; http://www.ferc.fed.us/industries/hydropower/gen-info/guidelines/drawings_guide.pdf.

Document Content(s)

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