

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 349-150 - Alabama  
Martin Dam Hydroelectric Project  
Alabama Power Company

October 3, 2008  
Mr. Jerry L. Stewart  
Alabama Power Company  
600 North 18<sup>th</sup> Street  
P.O. Box 2641  
Birmingham, AL 35291

**Reference: Study Requests, Comments on Preliminary Study Plan, and Requests  
for Additional Information**

Dear Mr. Stewart:

We have reviewed the Martin Dam Project Pre-Application Document (PAD), the transcripts of the scoping meetings held on September 11, 2008, and participated in a project site visit on September 10, 2008. We recommend that you consider our proposed modifications described in Schedule A for three of your preliminary study plans filed on June 5, 2008 and September 19, 2008.

We have also determined that additional information is needed to adequately assess project-related effects on environmental resources. Please provide the additional information requested in Schedule B by November 17, 2008.

If you have any questions, please contact Lee Emery at (202) 502-8379, or via email at: [lee.emery@ferc.gov](mailto:lee.emery@ferc.gov).

Sincerely,

Mark Pawlowski, Chief  
Hydro East Branch 2

Enclosures: Schedules A & B  
cc: Mailing List, Public Files

## **Schedule A**

### **Comments on Preliminary Study Plan, Project No. 349-150**

Based on our review of your revised preliminary study plans, filed September 19, 2008, and on your original preliminary study plans filed on June 5, 2008, we have identified the following modifications to the preliminary study plans. Please address our requests in your proposed study plan due for filing with the Commission on November 17, 2008.

#### **Cultural Resources Programmatic Agreement and Historic Properties Management Plan Study Plan**

In your revised Study Plan 15, criterion 6.0, you describe the methodology that is proposed for the Cultural Resources Programmatic Agreement and Historic Properties Management Plan study plan. Prior to conducting steps 1-7, please define the area of potential effects (APE) for the project. The APE should be defined in consultation with the Alabama State Historic Preservation Officer and the federally-recognized tribes who have an active interest in the project. At a minimum, the defined APE should contain the lands described in criterion 5.0, *STUDY AREA AND STUDY SITES*.

Also, since the Martin Dam Project, which was constructed in 1926, represents an important engineering development for Alabama at that time, there is a strong likelihood that the project would be eligible for listing in the National Register of Historic Places (National Register). Therefore, criterion 6.0 should contain methodology to determine the project's National Register eligibility.

#### **Lake Martin Assessment of Fish Density and Species Composition Associated with Various Shoreline Types**

In Appendix R, Study Plan 2, you propose to study the effectiveness of structures and materials used in shoreline alterations in providing shoreline refuge and habitat for aquatic species. Your reference to aquatic species includes fish and macroinvertebrates, but excludes other aquatic or semi-aquatic species potentially using the shoreline habitat. The scope of your study should be expanded to include aquatic and semi-aquatic organisms, including amphibians, reptiles, and mammals. Also, please provide maps of the areas studied, in both hardcopy and electronic shapefiles in a format compatible with ArcGIS.

#### **Rare, Threatened, and Endangered (RTE) Species Surveys**

In Appendix R, Study Plan 5, you propose to conduct a study to determine the location, abundance, and potential impact of the project on RTE species occurring in the project boundary. In addition, you provide a list of RTE species that includes two botanical species occurring within the Tallapoosa Basin. You also provide preliminary

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studies completed for RTE species occurring within the project boundary. However, you do not provide information regarding preliminary or planned studies for RTE botanical species. Therefore, please modify your current study on RTE species surveys to include botanical RTE species within the project boundary. Your data collection should also include areas under the primary transmission lines associated with the project. Please provide maps of the areas studied, in both hardcopy and electronic shapefiles in a format compatible with ArcGIS.

**Schedule B**  
**Additional Information, Project No. 349-150**

Based on our review of the data presented in your PAD and our observations during the project scoping meetings and site visit, we have identified additional information that we will need to address project impacts as part of our environmental analysis of the Martin Dam project. Your responses to our additional information request should be filed with the Commission on November 17, 2008, when you file your proposed study plan for the project.

Recreation Resources

1. In section 5.7.1.3, page 5-73, of the PAD, you state that the Alabama Power Company (Alabama Power) owns 13 of the 57 recreation sites located around Lake Martin. However, you did not specify which 13 recreation sites Alabama Power owns, who operates and maintains these sites, or which sites were inside the project boundary. Therefore, please provide the following:

- a. A comprehensive list of who owns, operates, and maintains each of the 57 recreation sites at the Martin Dam Project; and
- b. A description of the location of all Alabama Power-owned recreation sites in relation to the existing project boundary. Also, please identify, if applicable, whether a recreation site is partially inside and partially outside the existing project boundary, and please tell us which features at the site are inside the project boundary and which project features are outside the project boundary. You should show the locations of the recreation sites and the project boundary on a map of the project.

Project Operations and Current License

2. We request clarification on the transmission lines for your proposed project. The current project consists of generating units 1, 2, and 3, each connected to a bank of three 12/115-kilovolt (kV), 14,000 kilovoltampere (kVa) step-up transformers, and unit 4 is connected to a bank of three 12/115-kV, 23,333 kva step-up transformers. The transformers connect to a switching station located at the west end of the dam. The generating plant is connected to the integrated transmission system through nine 115-kv transmission lines which terminate at the switching station. The project also includes two 450-foot-long, 115-kV transmission lines which terminate at the Martin Dam switchyard.

Appendix G of the PAD includes a single line diagram which shows that Martin Dam is connected to five transmission lines that are identified as Sylacouga, Crooked Creek A, Crooked Creek B, North Auburn A, and North Auburn B. The PAD does not

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provide, however, adequate information for us to evaluate whether these five transmission lines should be included as part of the Martin Project.

Please provide a detailed description of all the transmission facilities identified above. You should include a diagram of these transmission facilities which clearly identifies the origination and termination points, as well as the length and rating of each line. You should also include in your discussion the criteria you used to determine that the Sylacouga, Crooked Creek A, Crooked Creek B, North Auburn A, and North Auburn B transmission lines should not be included as part of your project.

3. The PAD is required, by the Commission's regulations at §5.6(2)(v)(A), to include a complete description of the current license requirements, including any amendments to the license made during the license term. Appendix H of the PAD includes a copy of the current license for the Martin Dam Project. However the license appears to be missing several license articles, or has not been updated to include all amendments to the license since it was issued on May 11, 1978. For example license articles beyond Article No. 52 are missing, and Article 56, which refers to a revised water quality monitoring plan, is also missing. Therefore, please provide for the record, a complete license for the Martin Dam Project that meets the requirements of the Commissions regulations stated above.

4. In section 5.3.2, page 5-49, of the PAD, you discuss potential cumulative effects of current project operations of the Martin Dam Project. You indicate that project operations greatly influence downstream flows in the Tallapoosa River, and state that water level fluctuations in the river may affect aquatic habitats in the downstream Tallapoosa River. In order for us to understand the full extent of project effects, please identify where the downstream effects of project operations terminate in the Tallapoosa River (distance from Martin Dam). You should identify the amount of water fluctuations (in feet) at that downstream site, the daily frequency or occurrence of the fluctuation, and any known or potential effects on (a) fish, (b) aquatic resources, (c) wetlands, (d) riparian and littoral habitats and their associated wildlife and botanical species (including invasive species), and/or (e) streambank erosion and sedimentation in this downstream area of the river, or other areas downstream from the project, if any.

5. On September 29, 2008 you filed draft study plans [Study Plan 12(a) through 12(g)] for the Martin Dam Project that show where you propose to model several changes to the rule curve, as well as evaluate the effects of these changes on various resources. Presenting the results of the report in a single table, using a matrix format, would facilitate our review of the final report. Please include in the table each of the modeled rule curve changes and the associated effects on each of the resources evaluated.

6. The Lake Martin Project storage reservoir is estimated to provide around 49 percent of the total storage in the Alabama-Coosa-Tallapoosa (ACT) River Basin. Aside from briefly mentioning, in section 4.4 (*Current and Proposed Project Operations*), on page 4-7, of the PAD, the association between the development of a drought contingency flow

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release for the Martin Dam Project and a flow modeling effort that was part of ACT, there is little discussion in the PAD clearly delineating how the proposed operation of the Martin Dam Project would affect minimum flows required in the downstream Alabama River. In addition, in Appendix R, the MIG2—Water Quality and Quantity Draft Study Plans, you state that Alabama Power will develop a white paper for the project that details its (a) water withdrawal policy, (b) the current known water withdrawals from the Martin Dam Project, (c) ecological and navigational flow requirements in the Tallapoosa River Basin, and (d) drought contingency operations at the Martin Dam Project.

To assist staff in assessing the project's effects on flows in the Tallapoosa and Alabama rivers, as well as potential effects on other uses in the basin, please describe in detail how the current operation of the project interacts with downstream navigation in the Tallapoosa and Alabama rivers. Also, please provide more specific detail about what constitutes "ecological flow requirements," which is described as a component of the forthcoming "white paper." In addition, you should describe how the proposed operation of the Martin Dam Project would affect items (a) to (d) that you plan to address in the "white paper."

### Aquatic Resources

7. In section 5.11 of the PAD, you provide brief descriptions of various ongoing management programs for the Martin Dam Project. The voluntary fish habitat enhancement program, mosquito control program, and aquatic plant management program were three of the programs described. However, the information provided is not sufficient for us to adequately evaluate the effects associated with these programs, or how these programs would be affected by continued project operations. Therefore, please provide the following information:

- a. a detailed explanation of Alabama Power's participation in the ongoing fish habitat, mosquito, and aquatic plant management programs;
- b. (i) the entities, aside from Alabama Power, involved in the three ongoing management programs identified above, (ii) the annual cost of the programs, if any, (iii) whether you propose to continue these programs, and who may be involved, and (iv) a description of the success to date since the inception of these programs; and
- c. the treatment methods used to control mosquitoes in the project area, the amount of acreage treated by year, and the frequency of treatment.

In Appendix N of the PAD, you provide a copy of the Exotic Species & Aquatic Plant Management Program Issue Report for the Coosa (P-2146) and Warrior (P-2165) projects. This report, which you indicate will be used as the basis to develop a similar program at Lake Martin, includes a discussion of your aquatic plant and mosquito control

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programs at the aforementioned projects. This report, while providing some good information on the number of acres of nuisance plants treated by year, types of vegetation treated, and a listing of nonindigenous aquatic plants targeted for treatment at the Coosa Project, does not present specific information pertaining to your Martin Dam Project. Therefore, please provide information on (a) the species of invasive aquatic plants occurring at Lake Martin, (b) the acreage treated annually, (c) the location of treated areas and any known, existing invasive plant beds (should be included on the map requested as part of question 12 below), and (d) the methods used to control or remove invasive aquatic plants (including identifying any chemical treatments used and the frequency of application).

In addition, you mention in Appendix R, Study Plan 3 (*Erosion and Sedimentation*), that an Aquatic Vegetation Control Group periodically inspects Lake Martin for nuisance aquatic vegetation and treats infected areas accordingly. Please identify the members of the Aquatic Vegetation Control Group, the frequency of meetings, and provide a description of the group's decision-making process to take action on nuisance aquatic vegetation

8. In section 5.3, page 5-46, of the PAD, you describe information related to the collection of benthic macroinvertebrates. You indicate that benthic macroinvertebrates were collected from four sites in the upstream portion of Lake Martin between May and October 1994. However, you do not provide any location information. Therefore, please show, on a map, the four sampling locations on Lake Martin where the data for benthic macroinvertebrates was collected.

You also provide an assessment of project effects on benthic macroinvertebrates in the PAD. We understand this assessment does not constitute your final analysis of project effects on benthic macroinvertebrates. Nonetheless, our experience has been that, in determining the effects hydropower projects have on benthic macroinvertebrates, some states (e.g., Georgia), use an EPT (*Ephemeroptera*, *Plecoptera*, and *Trichoptera*) Index system to evaluate taxa richness, as well as to make a community assessment of the current populations (e.g., Biotic Integrity ratings of fair, good, excellent) (*See Georgia Department of Natural Resources. 2002. Draft Standard Operating Procedures: Freshwater Macroinvertebrate Biological Assessment. Georgia Department of Natural Resources, Water Protection Branch, Atlanta, Georgia*). We recommend that you use this, or a similar type of system, in your analysis of project effects on benthic macroinvertebrates. Such a system would be helpful in our review of your final assessments, as it provides quantitative rather than qualitative data.

9. In Appendix P of the PAD, you describe the issues raised during the issue identification workshop. You indicate that one of the issues raised relates to effects of project operation on the commercial fishery in Lake Martin. However, the PAD provides little information regarding the lake's commercial fishery. Therefore, please describe the commercial fishery occurring in the lake, and identify (a) species harvested and annual

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commercial value for each species harvested, and (b) types of gear used to harvest the fish. We will need this information to help identify and evaluate any potential effects associated with continued project operation on the commercial fishery in the lake

### Terrestrial Resources

10. In Appendix Q, page 5, and Appendix R, page 2 (Study Plan 5—Rare, Threatened, and Endangered Species Surveys), of the PAD, you mention that dam removal projects may be pursued as part of any potential restoration efforts for aquatic species, including RTE species. We suspect you would be looking at some old, low-head dams on tributaries entering Lake Martin or at sites adjacent to the project boundary. However, you do not adequately describe these potential restoration efforts for RTE species in the PAD. Therefore, please provide more details on potential on-site and off-site restoration and enhancement areas for RTE species. Your descriptions should include (a) specific locations and habitat types of each potential site, (b) land ownership of the site, (c) estimated cost of the site if not within the project boundary, (d) estimated cost of dam removal, if applicable, and (e) target RTE species for which the area would be restored. Please provide maps of the areas, in both hardcopy and electronic shapefiles in a format compatible with ArcGIS.

The Commission typically prefers on-site enhancement measures to off-site measures. Your discussion and explanation of this issue in your study plans should show a clear and direct nexus of project effects on these RTE species that would justify any future enhancement efforts for these RTE species.

11. In the PAD, you do not provide information regarding plant communities occurring under the primary transmission lines within the project boundary and the methods, if any, of maintaining these transmission line rights-of-way. Therefore, please provide specific descriptions of the plant communities and associated wildlife species occurring under the transmission lines, and describe your methods for maintaining the transmission line rights-of-way. We need this information to evaluate potential effects of continued operation and maintenance of transmissions lines on botanical and wildlife species occurring in, and near, the transmission line rights-of-way. Also, please provide maps of the habitats located in the transmission line routes, in both hardcopy and electronic shapefiles in a format compatible with ArcGIS

12. In the PAD, you provide a list of noxious weeds and invasive plants potentially occurring within the project vicinity. The list, which was developed from a study conducted by Whetstone in 2006, lists seven primary species. Please provide the complete Whetstone report so we can see a complete list of all species collected during the study, including any maps that are part of the report. Also, during the site visit, Commission staff and Alabama Department of Conservation and Natural Resources personnel noticed a plant species that is not represented on the list. Therefore, please provide an updated list of noxious weeds and invasive plants occurring within the project

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boundary, and the abundance of each species listed. Please provide maps of the areas where the invasive plant species are located. The maps should be in both hardcopy and electronic shapefiles in a format compatible with ArcGIS.

13. In Draft Study Plan 7, *Lake Martin Wildlife Management Program*, you indicate that implementing the wildlife management program would provide information on forest types within the project boundary. Alabama Power owns about 8,800 acres of land within the project boundary. In the PAD, you broadly describe the forest communities occurring in the project area, but provide little detail. Therefore, please provide specific forest stand data showing (a) cover type, (b) composition, (c) age, and (d) structure for forest stands located within the project boundary. In addition, please describe current and future forest and wildlife management objectives for forests within the project boundary. You should provide maps of the forested areas within the project boundary, in both hardcopy and electronic shapefiles in a format compatible with ArcGIS. We need this information about forests located within the project boundary to evaluate any potential project effects on terrestrial resources.

Document Content(s)

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