Debris Progress Report
October 2007

APPALACHIAN POWER COMPANY

ROANOKE, VIRGINIA

CLAYTOR LAKE HYDROELECTRIC PROJECT

FERC NO. 739

PROGRESS REPORT: DEBRIS STUDY

OCTOBER 2007

Prepared by:

Kleinschmidt

Energy & Water Resource Consultants

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TABLE OF CONTENTS

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1.0 INTRODUCTION

As relicensing efforts have evolved over the past 20 years, an essential part of the relicensing process now involves working with all the stakeholders in the process in identifying what the important environmental issues are, determining if sufficient information exists to evaluate the operational impacts of the project on these environmental issues, and developing studies to gather any missing information.

With FERC's adoption of the Integrated Licensing Process (ILP) as their default licensing process, which is the process that the Claytor Lake Hydroelectric Project relicensing effort is undertaking, even more emphasis is now placed on development of good relationships with stakeholders early in the process. The ILP process requires the upfront involvement of the project owner, agency and NGO stakeholders as well as FERC in developing (through creation of the PAD) the known information about the project, defining the issues, determining what additional information is needed and developing appropriate study work scopes. To assist in handling and evaluating the large amounts of information that the study efforts produce, a series of working groups to deal with specific issues are developed. As studies progress, the working groups want to be kept abreast of new information as it is developed, requiring periodic communication via email and/or meetings to present interim findings. The purpose of this progress report is to meet a requirement of the ILP process and provide all parties with an update of study progress.

2.0 PROJECT GOAL AND SCOPE

The goal of the Debris Study is to complete the study objectives and use the results to work with the stakeholders to develop a Debris Management Plan. The study plan was developed through stakeholder meetings and the study plan was subsequently approved by FERC.

3.0 STUDY OBJECTIVES AND PROGRESS

Study efforts are ongoing and are on schedule. The summary provided below lists each study objective and the current status of progress made toward its completion.

1. **Determine amount and type of debris that accumulates on the surface of Claytor reservoir.**

   This objective is being accomplished by on-site surveys and through review of information available from stakeholders. On-site surveys were conducted in late spring and late summer. An additional survey is planned for the first week of November to coincide with recent high flows. An additional survey is planned for the winter or the next high flow event. Surveys have included a boat based crew cruising the shoreline to identify areas of debris accumulation, characterize the type of debris, and provide photo documentation. Aerial photographs of the lakeshore were also obtained to assist in the identification of debris accumulation areas and provide a qualitative assessment of the size of the accumulations.

   Kleinschmidt is also working with stakeholders to obtain records of debris accumulation efforts and general observations pertaining to debris on the lake. Contacts include the Friends of Claytor Lake and marina operators.

2. **Characterized debris to the most practical level (*i.e.* woody versus man-made/trash, cut trees versus root-wads intact, relatively new versus historic, etc.) and attempt to**

determine where the debris entered the lake (*e.g.* from the New River upstream of Claytor Lake or directly from the lakeshore).

The on-site survey and historic removal efforts have provided information on the type of debris present. Locations of debris accumulation documented by the on-site surveys and identified by local entities are being assessed to determine the likely source of debris. This effort focuses on the New River and Peak Creek, as identified through discussions with local entities. In addition, local shoreline activity that may be contributing to debris accumulation (*e.g.*, shoreline clearing) is also being considered as appropriate.

3. **Determine the relationship between debris types and amounts to flow event duration and magnitude.**

To the extent possible, the historic debris removal efforts are being correlated to the daily average flows as recorded by USGS Gage No. 03168000 located on the New River at Allisonia, VA just upstream of Claytor Lake.

4. **Assess various methods and/or programs for reducing debris accumulations on the reservoir and for removing accumulated debris.**

A literature review and web search has been conducted to identify the various methods used for managing debris on other reservoirs. This includes removal techniques and collection systems. Additionally, a review of debris management plans at other FERC licensed projects has been conducted to determine how this issue is addressed at other hydroelectric facilities.

5. **Define what types of woody debris are considered beneficial fish habitat that should not be removed.**

A literature review on the benefits of debris (particularly woody debris) was conducted to provide insight regarding beneficial fish habitat. This also included information on current practices to establish or enhance fish habitat by using debris or other structures. An on-site review of potentially beneficial debris types is being coordinated with VDGIF.

4.0 SCHEDULE

The study is currently on schedule. The third on-site survey will be completed in early November and the final survey is expected to occur during the early winter. Information is being assembled for inclusion in the draft study report and preliminary results will be presented at the initial study report meeting scheduled for November 28, 2007. After the report is submitted for review by the stakeholders. The information will be used to develop a Debris Management Plan.