WATER QUALITY IN DOWNSTREAM WEST CHANNEL STUDY PLAN

PARR HYDROELECTRIC PROJECT (FERC NO. 1894)

Prepared for:

South Carolina Electric & Gas Company
Cayce, South Carolina

Prepared by:

Kleinschmidt

Lexington, South Carolina
www.KleinschmidtUSA.com

September 2013

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1.0 INTRODUCTION

The Parr Fairfield Hydroelectric Project (FERC No. 1894) ("Parr Fairfield Project" or "Project"), owned and operated by the South Carolina Electric & Gas Company ("SCE&G" or "Licensee"), is seeking a new license from the Federal Energy Regulatory Commission ("FERC"), as their current license is set to expire on June 30, 2020. The Parr Fairfield Project consists of two developments, including the Parr Hydro Development and the Fairfield Pumped Storage Development.

The Parr Reservoir, located in Fairfield and Newberry counties, South Carolina, is a 4,400 acre impoundment formed by the Broad River and the Parr Shoals Dam and serves as the lower reservoir for the Fairfield Pumped Storage Development. Monticello Reservoir, a 6,800 acre impoundment is formed by a series of four earthen dams and serves as the upper reservoir for the pumped storage development. While the stretch of the Broad River downstream of the Parr Shoals Dam (Parr Dam) is not included in the Project Boundary Line (PBL), Project operations do influence this area. For this reason, this downstream area, specifically the west bank area of the Broad River immediately downstream of the Parr Dam, is being examined for water quality.

The Project is currently involved in a relicensing process which involves cooperation and collaboration between SCE&G as licensee and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. The collaboration and cooperation is essential to the identification of and treatment of operational, economic, and environmental issues associated with a new operating license for the Project. SCE&G has established several Technical Working Committees (TWCs) with members from among the interested stakeholders with the objective of achieving consensus regarding the identification and proper treatment of these issues in the context of a new license. A Water Quality TWC was formed to address any potential water

quality issues associated with the Project, and is comprised of a variety of stakeholders, including the U.S. Fish and Wildlife Service ("USFWS"), the National Marine Fisheries Service ("NMFS"), the South Carolina Department of Health and Environmental Control ("SCDHEC") and the South Carolina Department of Natural Resources ("SCDNR"), among others. During issues scoping, the TWC identified the west bank area of the Broad River below the Parr Dam as a potential area in need of water quality study. SCDNR expressed concern over the water quality, specifically dissolved oxygen (DO) levels, in this area of the Broad River during the warmer months. While existing water quality data does not display a dissolved oxygen issue over the Project Area generally, SCDNR wants to examine this west bank area more closely.

2.0 STUDY OBJECTIVES

The objective of this survey is to assess the water quality, specifically DO levels, of the west channel of the Broad River, immediately downstream the Parr Dam.

3.0 GEOGRAPHIC AND TEMPORAL SCOPE

The Broad River immediately downstream of the Parr Dam is naturally divided by Hampton Island, creating an eastern and western channel along the length of the island, approximately 1.25 miles. Water quality will be monitored at three sites along the western channel, including just downstream of the Parr Dam, midway down Hampton Island near the Highway 213 bridge, and at the lower extent of the western channel, just upstream of the confluence. A fourth site will be monitored as a control, and will be located along the eastern channel, at the approximate mid-point of the island. The monitoring sites are shown below in Figure 1.

The study will take place beginning April 1, 2015 and extend through November 30, 2015.

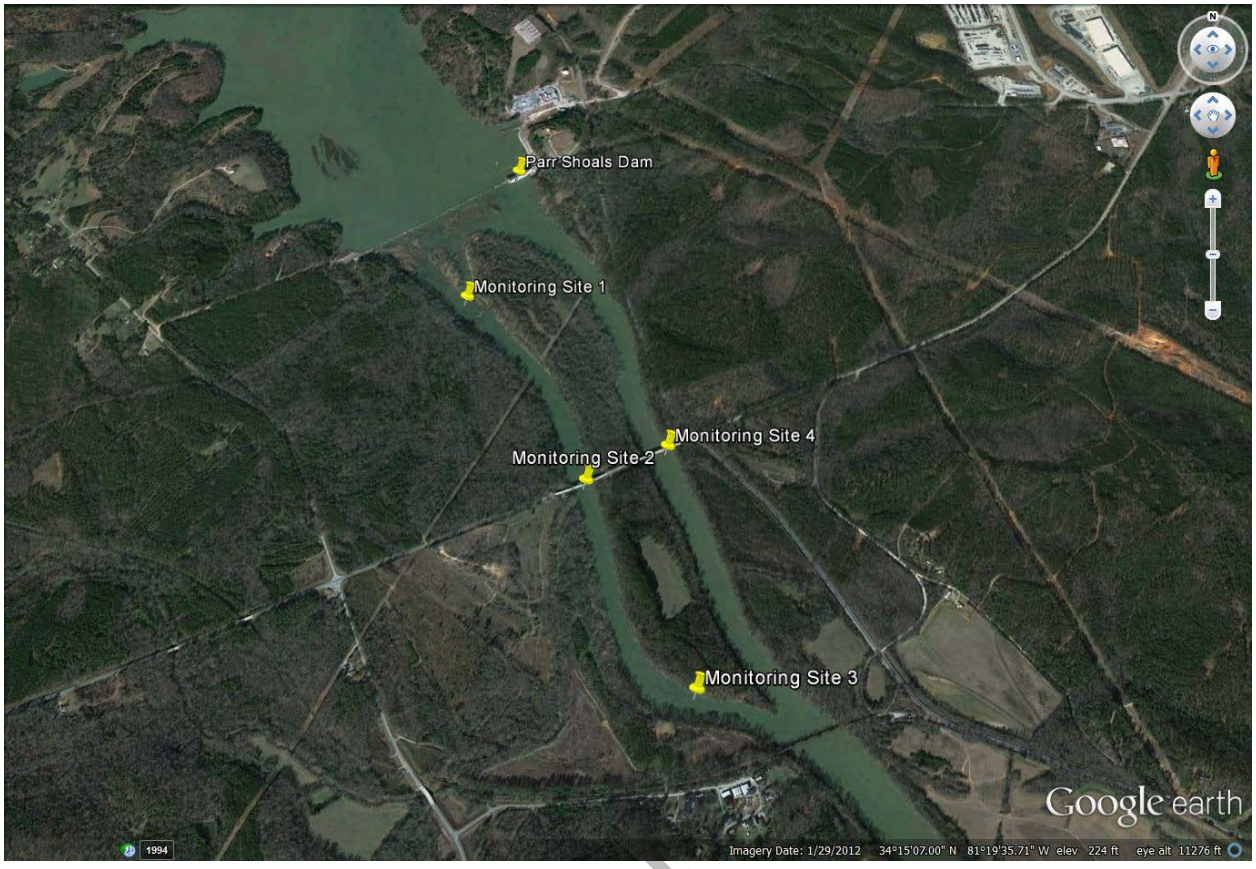

FIGURE 1 WATER QUALITY IN DOWNSTREAM WEST CHANNEL MONITORING SITES

4.0 COLLECTION METHODS AND ANALYSIS

Water quality will be monitored in the west channel area of the Broad River for temperature and DO using a HOBO U26 Dissolved Oxygen Logger (or similar type instrument). The loggers will be deployed at the four monitoring sites and attached to floats and weights to allow for suspension at approximate mid-depth in the river channel. The loggers will be calibrated according to the manufacturer's specifications and will be set to collect temperature and DO data on hourly intervals. Data will be downloaded on a monthly basis using manufacturer's software and compiled at the end of the monitoring season.

Additionally, a calibrated YSI meter will be used to collect DO, water temperature, and conductivity once a month when data is downloaded from the HOBO loggers at each monitoring site. A separate calibrated pH meter will also be used once a month to collect pH readings at each monitoring site.

5.0 SCHEDULE

The loggers will be deployed at the four monitoring sites on or around April 1, 2015 and will collect data for approximately eight months. The loggers will be checked monthly during the study period. This study may be extended based on a review of the results from the initial eight month period as determined by the Water Quality TWC.

Within 120 days of the close of field work, a final report summarizing the study findings will be issued. Study methodology, timing and duration may be adjusted based on consultation with resource agencies and interested stakeholders.

6.0 USE OF STUDY RESULTS

Study results will be used as an information resource during the discussion of relicensing issues with all Water Quality TWC relicensing stakeholders.