

Hydrology - SCDNR Open-File Report 3

Hydrogeologic Investigation and Establishment of a Permanent Multi-Observational Well Network in Aiken, Allendale, and Barnwell Counties, South Carolina – Phase VIII

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ABSTRACT

The Lower Savannah River Project was established in 1986 to improve our understanding of the hydrogeologic conditions in west-central South Carolina. Six progress reports have been written since 1987. This report covers the period from July 1, 1994 to June 30, 1995. During the current phase, work focused on locating and procuring suitable sites for future well clusters; drafting well-construction specifications and bid packages; drilling monitoring wells at site C-7; and completing two comprehensive reports.

Land was acquired for three future well-cluster sites: C-11, C-13, and C-15. Site C-11 will be located at the Oakwood Fire Tower in Aiken County. This land was made available through the South Carolina Forestry Commission. Land for site C-13 was donated by the Wildlife Division of the South Carolina Department of Natural Resources and will be located at Little Hell Landing on the Savannah River flood plain southwest of Millet in Allendale County. Site C-15 will be located at Gillisonville in northern Jasper County. A 0.9-acre parcel of land was purchased from Westvaco, Inc. for this site.

Well specifications and bid packages were drawn up for the construction of seven monitoring wells at site C-10, three at C-13, and two at C-15. Specifications for continuously coring a well at site C-11 were also completed.

Specific-capacity values of nine wells at site C-7 range from 0.3 to 20.6 gpm/ft (gallons per minute per foot of drawdown). Specific-capacity values of four wells at site C-1 range from 0.5 to 8.6 gpm/ft. Two deep Cretaceous wells were drilled at site C-7, one each in the Midville and Dublin aquifer systems. An upward hydraulic gradient exists between the aquifers.

Two comprehensive reports were completed during this phase of the project: 1) a compilation and interpretation of data collected from the project since its inception in 1986; and 2) a detailed description of the hydrogeologic framework of west-central South Carolina and the hydrologic characteristics of the aquifers and confining units.

Copies of this report are available in the SCDNR's Columbia office.