

**APPENDIX H**  
**SOLID AND HAZARDOUS WASTE FACILITIES SUMMARY**

## **Appendix H**

### **Solid and Hazardous Waste Facilities Summary**

#### ***South Carolina***

##### *Barite Hill/Nevada Goldfields (EPA ID: SCN000407714)*

The Barite Hill/Nevada Goldfields (Barite Hill) site is a retired gold mining site that was actively mined from 1991 through 1995. Barite Hill is a relatively remote site located approximately three miles south of McCormick, South Carolina, between US 378 and US 221 on the northern side of Road 30 in McCormick County, South Carolina. Nevada Goldfields originally owned the site until the company filed for Chapter 7 bankruptcy in 1999; at that time, the site was handed over to SCDHEC. The site encompasses 795.2 acres, of which 659.7 acres are designated as a buffer area with a maximum disturbance area of 135.5 acres.

The facility used a cyanide solution to extract gold from ore. There are seven processing ponds and one sediment pond as well as a 10-acre acid pit that contained 60 million gallons of 2 to 2.2 pH water and contained a high dissolved metal content. According to the U.S. Department of Energy (DOE) (2010), former site operations resulted in contamination of the acid pit, ponds, sediment, surface water, and soils. Metals were also detected in the sediment and surface water of Hawk Creek and its tributaries, potentially resulting in public exposure by consumption of fish caught in the creek. In the spring of 2007, the EPA approved a remedial action plan and clean-up and monitoring programs commenced in the fall of 2007. A long-term monitoring program is currently being coordinated with the ongoing remediation (USEPA 2010a).

##### *Sangamo-Weston, Inc./Twelve-Mile Creek/Hartwell Lake (EPA ID: SCD003354412)*

The Sangamo-Weston, Inc./Twelve-Mile Creek/Hartwell Lake (Sangamo) site was operated as a capacitor manufacturing plant from 1955 through 1987. Located in Pickens, South Carolina, the 224-acre site includes its plant site and six satellite dumps, all in the Twelve-Mile Creek Basin. Effluents containing polychlorinated biphenyl (PCB) were deposited as solids, sludge, and liquid waste in the disposal dumpsites.

Groundwater from the dump sites flows north to west-northwest toward two branches of an unnamed tributary to Twelve-Mile Creek. To the south, the groundwater flows into Town Creek. PCBs from the plant site were discharged with effluent directly into Town Creek, a tributary of Twelve-Mile Creek, which is a major tributary of Hartwell Lake. Construction of all physical structures necessary to achieve clean up goals has been completed with remedial actions continuing until all clean-up goals have been reached. The potentially responsible party (PRP) is leading site clean-up activities with oversight by EPA (USEPA 2010b).

##### *Savannah River Site (EPA ID: SC1890008989)*

The Savannah River Site (SRS) is an industrial complex managed by the DOE that is dedicated to environmental management and cleanup, nuclear weapons stockpile stewardship, and nuclear materials disposition in the support of the U.S. nuclear non-proliferation efforts. The Savannah River and Georgia border the site to the west. The site's center is approximately 23 miles southeast of Augusta, Georgia, and 20 miles south of Aiken, South Carolina. The site lies within Aiken, Allendale, and Barnwell counties, South Carolina. There are more than 1,000 facilities at

the site concentrated in 10 percent of the site's 310-square-mile area. The Savannah River and Georgia border the site along its western edge.

Several facilities at the SRS are potentially contaminated with hazardous and radioactive materials. According to the DOE (2010), groundwater contamination has resulted from the migration of contaminants from some of these structures through the soil, and the potential off-site migration of these contaminants poses a major public health concern. In response, the Savannah River Site Environmental Restoration program is developing remedial solutions using public input and concurrence. More than 90 Areas of Concern are being characterized or remediated and approximately 478 potential areas are undergoing preliminary evaluation. Long-term surveillance and maintenance is typically required for waste sites previously remediated to meet regulatory requirements.

## ***Georgia***

### *Alternate Energy Resources, Inc. (EPA ID: GAD033582461)*

The Alternate Energy Resources (AER) site is an abandoned commercial hazardous waste storage and treatment facility that was operated from 1975 through 2000. The 2.6-acre site is located on Walden Drive in Augusta, Georgia, in an area that is zoned as heavy industrial, with surrounding property zoned as commercial and residential. The owners declared bankruptcy and abandoned the property in December 2000.

Sources of contamination include soil contamination, a 3,000-gallon chemical spill, a release from a rainwater collection basin, a processing residue spill, and groundwater contamination from an unlined surface impoundment. Site contamination includes trichloroethylene (TCE) and tetrachlorethylene (PCE). Both contaminants were detected in groundwater and soil samples. Additionally, a groundwater plume caused by AER operations affected several domestic drinking wells located between 0.5 and one mile southeast of the site. The EPA is currently conducting a study to establish the required clean-up activities; therefore, physical clean-up activities have not started yet (USEPA 2010c).

### *Monsanto Corporation (Augusta Plant) (EPA ID: GAD001700699)*

The Monsanto Corporation (Monsanto) Augusta Plant site occupies 75-acres and is located in an industrial park in Richmond County, Georgia, three miles southeast of Augusta, Georgia. The site is the location of an active chemical plant that has been operating since 1962. Prayon, Inc. has owned and operated the plant since 1999. Before that, Monsanto ran the site. Both companies are PRPs.

The plant manufactures phosphoric acid, a process that generates several waste products including arsenic trisulfide. Monsanto used two small on-site landfills to dispose of solid waste and sludges containing arsenic trisulfide. EPA placed the site on the NPL in 1984 because of contaminated ground water resulting from facility operations. Arsenic is the primary contaminant of concern.

EPA, GAEPD, and the site's PRPs have investigated site conditions and taken steps to clean up the site in order to protect people and the environment from contamination. Site contamination

does not threaten people living and working near the site. Both residents and businesses use the public water system for drinking water. EPA deferred the site to the Resource Conservation and Recovery Act (RCRA) program under state oversight in 1998. By treating ground water and undertaking Five-Year Reviews, EPA, Georgia EPD and the site's PRPs continue to protect residents and the environment from site contamination.

*Peach Orchard Road PCE Ground Water Plume (EPA ID: GAN000407499)*

The Peach Orchard Road PCE groundwater plume site includes seven municipal wells and nine potential contaminant sources from both active and inactive dry cleaning facilities located within areas zoned for residential and commercial use. The site is located on each side of Peach Orchard Road south of Rock Creek, west of old Savannah Road, north of Windsor Spring Road, and east of Richmond Hill Road. The contaminated area is comprised of a tetrachlorethylene groundwater plume covering an estimated 350 acres of a 900-acre well field. The affected wells include municipal, private, and industrial water supply sources.

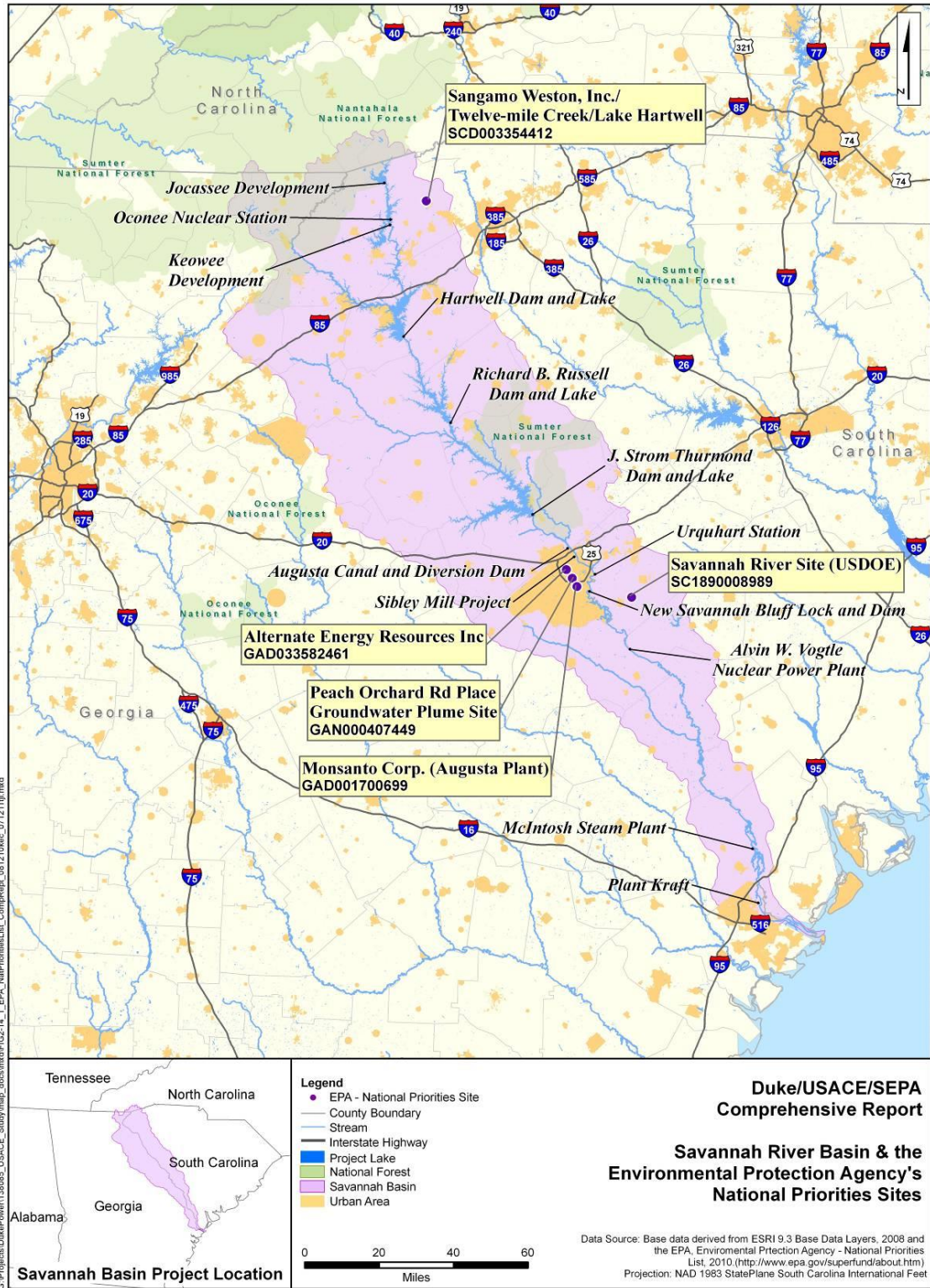
In 1996, the groundwater contamination was first detected during routine sampling of the Augusta-Richmond Utilities Department municipal well. Following the initial detection, PCE has been detected in six additional municipal wells and numerous monitoring wells installed in the area. Sampling by the Georgia Environmental Protection Division shows that PCE concentrations have been generally increasing over time. In 1999, the City of Augusta permanently closed one well and designated the remaining five contaminated wells as standby wells. The EPA conducted a remedial investigation and feasibility study to establish proper clean-up activities in 1997. Cleanup activities began at the site in 2009 (USEPA 2010d).

Table N-1 describes the general location of the solid and hazardous waste facilities within the study area. An overview of the sites is shown in Figure N-1.

**Table N-1 Solid and Hazardous Waste Facilities**

<b>EPA ID</b>	<b>Site Name</b>	<b>City</b>	<b>State</b>
SCN000407714	Barite Hill/Nevada Goldfields	McCormack	SC
SCD003354412	Sangamo-Weston, Inc./Twelve-Mile Creek/Hartwell Lake	Pickens	SC
SC189000898	Savannah River Site	Aiken	SC
GAD001700699	Monsanto Corporation Augusta Plant	Augusta	GA
GAD033582461	Alternate Energy Resources, Inc.	Augusta	GA
GAN000407499	Peach Orchard Road PCE Ground Water Plume	Augusta	GA

**Figure N-1 Solid and Hazardous Waste Facility Locations**



## References

- U.S. Department of Energy. 2010. Environmental Management. Savannah River Site 2. Environmental Restoration. [Online] URL: <http://www.em.doe.gov/bemr/bemrsites/sars2.aspx> (Accessed June 2010).
- U.S. Environmental Protection Agency. 2010a. Region 4 Superfund Barite Hill/Nevada Goldfields. [Online] URL: <http://www.epa.gov/region4/waste/npl/nplsc/baritehillsc.html>. (Accessed August 11, 2010).
- U.S. Environmental Protection Agency. 2010b. Region 4 Superfund Sangamo Weston, Inc./Twelve-Mile Creek/Lake Hartwell PCB Contamination. [Online] URL: <http://www.epa.gov/region4/waste/npl/nplsc/sangamsc.html> (Accessed August 11, 2010).
- U.S. Environmental Protection Agency. 2010c. Region 4 Superfund Alternate Energy Resources. [Online] URL: <http://www.epa.gov/region4/waste/npl/nplga/alterga.htm> (Accessed August 12, 2010).
- U.S. Environmental Protection Agency. 2010d. Region 4 Superfund Peach Orchard Road PCE Ground Water Plume. [Online] URL: <http://www.epa.gov/region4/waste/npl/nplga/pchorchdga.htm> (Accessed August 12, 2010).