Fact Sheets

SRS

Central Shops Burning/Rubble Pit (631-5G) and Heavy Equipment Wash Basin

Background

The Central Shops Burning/Rubble Pit 631-5G and the Heavy Equipment Wash Basin are located approximately 0.7 miles south of the intersection of Road C and Road 5, in the central part of the Savannah River Site (SRS). These two units were grouped together as one waste site because environmental professionals suspected that the source of contamination found in the groundwater plume beneath Pit 631-5G might be associated with the Heavy Equipment Wash Basin. Pit 631-5G was constructed for the disposal of various waste materials and measured approximately 385 feet long by 35 feet wide by 10 feet deep. The Heavy Equipment Wash Basin consists of the wash basin, which received water from the Building 713-N wash facility, discharge lines from the wash facility and wash down areas, spray irrigation fields, National Pollution Discharge Elimination System (NPDES) Outfall CS002, and groundwater.

Pit 631-5G was used to burn wastes, including hazardous substances such as organic solvents, from 1951 to 1973. From 1973 to 1978, it was used for the disposal of inert solid wastes. Disposal activities ceased in 1978, and the area was covered with soil.

The Heavy Equipment Wash Basin received discharge water from equipment and vehicle wash operations conducted at several locations around the heavy equipment maintenance buildings in the Central Shops Area. These wash areas were used to clean soil and grease from equipment. Wastewater from these operations was collected in a sump and then discharged to the wash basin in the early years of operation; it was discharged to the NPDES Outfall N-002 in more recent years. The discharge water then flowed to the unnamed tributary near the entrance to the Central Shop Burning/Rubble Pit 631-5G. Historic information indicates that the wash basin water was spray-irrigated to reduce the basin's content.

Environmental Concerns

SRS conducted preliminary soil gas and soil sampling surveys that detected organic chemical compounds and mercury contamination at the 631-5G pit. Between 1996 and 1998, additional characterization activities were performed and a volatile organic compound (VOC) plume was found. SRS environmental professionals suspected that the Heavy Equipment Wash Basin might be contributing to the plume, so Pit 631-5G and the basin were combined into one operable unit.

Additional characterization was initiated using groundwater CPT and soil sampling.

SRS performed Geological Bore Hole sampling and installed three piezometers to determine groundwater flow elevations and identify potential contamination at deeper levels.

Environmental Actions and Plans

In 1996, SRS performed a site characterization of the burning/rubble pits in Central Shops to identify unit-specific constituents. As a result of focused characterization activities and the discovery of the VOC plume, Pit 631-5G was decoupled from the other two Central Shops Burning/Rubble Pits, 631-1G and 631-3G, and combined with the Heavy Equipment Wash Basin as an operable unit.

SRS submitted a RCRA Facility Investigation and Remedial Investigation (RFI/RI) Work Plan to the United States Environmental Protection Agency (USEPA) and South Carolina Department of Health and Environmental Control (SCDHEC) that was approved in August 2001. Site characterization activities were completed using cone penetrometer technology (CPT) and rotosonic sampling of the groundwater, monitoring wells, and soil gas sampling. It was determined that the Heavy Equipment Wash Basin was not the source of the VOC plume. Consequently, the Heavy Equipment Wash Basin and Pit 631-5G are being addressed as surface units and the groundwater has been separated into a Central Shops Groundwater OU. A Rev 1 RFI/RI and Baseline Risk Assessment was submitted to the USEPA and SCDHEC and approved in August 2003.