

DOE Requests Temporary Authorization for the Injection of Humate in Southern Sector of the M-Area Hazardous Waste Management Facility at the Savannah River Site

The U. S. Department of Energy at the Savannah River Site (SRS) has requested from the South Carolina Department of Health and Environmental Control (SCDHEC) a temporary authorization to inject humate in the Southern Sector of the M-Area Hazardous Waste Management Facility (HWMF).

The M-Area HWMF corrective action program addresses four sectors of the contaminant plume based on geography, subsurface conditions, and ongoing activities. SRS is proposing this temporary authorization, consistent with SCDHEC regulations, for the enhanced attenuation of volatile organic compounds (VOCs) in the Southern Sector using a humate amendment via three injection wells.

The Southern Sector has elevated trichloroethylene (TCE) concentrations that have been undergoing treatment using recirculation wells. To determine if the humate amendment might be a viable option as a recommended corrective action, groundwater will be extracted from the lower portion of the Lost Lake Aquifer Zone (LLAZ) using screen zone SSR001B of airlift recirculation well SSR001. At the surface, the groundwater will be amended with dissolved humate, a macronutrient fertilizer, and an anti-foam agent, and injected into three upgradient wells to distribute these amendments in the LLAZ.

Eight existing groundwater monitoring wells will be used to monitor the extraction zone (the lower LLAZ) and the injection zone (the upper LLAZ). Monitoring will be conducted during amendment injection, during amendment distribution, and after the distribution period.

The overall injection, well operation, and monitoring associated with this activity is scheduled for approximately four years. At the end of the field deployment, a performance status report will be submitted to the SCDHEC. The results will be used to support the final corrective action recommendations for the Southern Sector and could also have applicability to other portions of the overall M-Area VOC plume.

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The SRS Environmental Bulletin

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