

# **Area Completion Project**

### Introduction

The Savannah River Operations Office Area Completion Project (ACP) is responsible for waste units and surface water and groundwater remediation. In its efforts to remediate contaminants in the environment, thereby reducing risks to human health and the environment, ACP approaches environmental restoration by utilizing effective project management, continuous communications, and strong working relationships with the regulators. Deployment of numerous cost-effective technologies expedites the cleanup process for the Department of Energy (DOE).

Remediation under ACP began in early 1993 and continues at an aggressive pace with 352 of the 515 inactive waste units completed, with 1,980 associated cleanup milestones met.

## Safety

Under ACP management, the Site's management and operations (M&O) contractor continues to demonstrate its commitment to maintaining a safe environment for its workers by continuing to maintain a record-setting safety performance, including 8.5 million safe hours and 10 safe years, which means there have been no "lost time" injuries since 1997.

To maintain its safety performance, personnel participate in Behavior-Based Safety (BBS) by serving on Local Safety Improvement Teams, by becoming active BBS observers, or by volunteering for a BBS observation of his/her own activities. Every employee is encouraged to practice STAR (Stop, Think, Act and Review) while participating in activities for which safety is a concern. The contractor has effectively demonstrated that a team-oriented approach to safety can be a successful method of maintaining a safe workplace.

### **Field Remediation**

The focus is on cleaning up contamination that exists in the environment. The approach is to treat or immobilize the source of the contamination to mitigate transport through soil and groundwater and clean up or slow the movement of contamination that has already migrated from the source. From capping waste sites to installing efficient groundwater treatment units, field work is a top priority. Field work includes closure of inactive seepage basins, rubble pits, rubble piles, and disposal facilities. Major groundwater cleanup systems operate in A/M, C, F, H, and T areas as well as in the Mixed Waste Management Facility, the Chemical, Metals, and Pesticides Pits, and in the Nonradioactive Waste Disposal Facility.

# **Technology Deployment**

Remediation is being executed in a fashion that completes environmental cleanup and facility decommissioning area by area until all areas at SRS are completed by 2031. Units at which waste is left in place will be under institutional controls that feature access restrictions, inspection, maintenance, and long-term stewardship monitoring. Typically, soils will be remediated to an acceptable residual risk for industrial workers. Groundwater will be addressed in a manner such that required cleanup levels, approved by regulators, will be achieved over time.

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Numerous ground-breaking technologies have been pioneered to increase the effectiveness of its remediation efforts and to reduce risk. These technologies range from solvent cleanup methods, such as Dynamic Underground Stripping, to waste site geosynthetic capping. The geosynthetic cap is very effective in preventing rainwater infiltration and is more cost effective as well.

A variety of natural remedies are utilized, such as phytoremediation (using natural vegetative processes), bioremediation (using naturally occurring microbes), and natural remediation (using natural processes to address contamination). These technologies are proving to be a cost-efficient means of reducing risk to human health and the environment.

# **Project Management & Strategy**

An important aspect of project management is the effective development and control of project scope, schedule, and costs. Additionally, an area completion strategy is being used to accelerate whole areas in M, P, R, and D areas, with T Area already completed using the strategy.. Specific approaches to environmental restoration include the following strategies:

- Accelerate the completion of high-risk waste sites to protect workers, the public and the environment
- Implement an area completion strategy as a means of bringing closure to whole areas of the site
- Deploy and utilize cost-effective technologies and natural remedies such as bioremediation, phytoremediation, and natural attenuation
- Transition complete sites to long-term stewardship
- Maintain an accurate, approved baseline of scope, schedule, and cost using a formal change control method

# **Regulatory Communications**

Site contractors and DOE are working with the U.S. Environmental Protection Agency (USEPA), and the South Carolina Department of Health and Environmental Control (SCDHEC) to reduce risk and accelerate SRS environmental cleanup.

Two major federal laws drive environmental cleanup: the Resource Conservation and Recovery Act (RCRA), which establishes a system for tracking and managing hazardous wastes from generation to disposal; and the Comprehensive Environmental Response, Compensation, and Recovery Act (CERCLA), or Superfund, which addresses the protection and cleanup of the environment from known operable units. SRS is meeting the integrated requirements of these two laws through a Federal Facility Agreement (FFA) with DOE, USEPA Region 4, and SCDHEC. The FFA, effective August 16, 1993 specifies how SRS will address contamination or potential contamination at waste units in accordance with RCRA and CERCLA requirements. The FFA is required under CERCLA.

ACP effectively executes work with USEPA, and SCDHEC through the implementation of a Core Team process. This relationship greatly enhances communication and productivity to streamline the CERCLA documentation process. The Core Team process also facilitates waste unit issue resolution at an early stage.

In 2003, the parties signed an MOA to accelerate cleanup at SRS. The parties have worked together to develop a Comprehensive Cleanup Plan, a Program Performance Management Plan, and an End State Vision that includes both inactive waste sites and facilities to be decommissioned that are potential source of environmental contamination.

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### **Public Involvement**

SRS values communication with its stakeholders. For this reason, SRS has built strong working relationships not only with its regulators but also with other public stakeholders such as the SRS Citizens Advisory Board (CAB) and Citizens for Environmental Justice. Once a waste unit has been fully characterized, cleanup alternatives evaluated, and a preferred method proposed, SRS solicits comments from the general public, which includes representatives from the media, legislators, educators, and other citizens. During the public comment period, SRS also seeks comments from the CAB. The CAB is an independent group of citizens that regularly makes recommendations to the DOE, USEPA, and SCDHEC regarding cleanup of the SRS. Once comments on how to address a waste unit are received from the public and the CAB, a Record of Decision is issued that documents the selected remedial alternative.

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