

INTRODUCTION

Defense Supply Center Richmond (DSCR), located along the I-95 corridor in southern Chesterfield County, Virginia, has been a consistent, dependable supplier of quality goods and services to those defending freedom around the world since it was activated in 1942.

Designated as the lead center for aviation within the Defense Logistics Agency (DLA), the center serves within the Department of Defense (DOD) supply chain as the primary source of supply for the nearly 850,000 repair parts and operating supply items.



While these items and parts have an extremely wide range of applications, our core mission is to supply products with a direct application to aviation. These items include a mix of military-unique items supporting over 1,300 major weapons systems and other items readily available in the commercial market.

With over 600 acres and approximately 120 warehousing, utility and administrative buildings totaling over 6.7 million square feet, DSCR is host for a number of other DOD, Federal and state organizations. The largest of these tenants are the 350-acre Defense Distribution Depot Richmond, Virginia; the Defense Distribution Mapping Activity; the Virginia Army National Guard vehicle maintenance activity; and the Defense Reutilization and Marketing Office. The center and its tenant activities employ nearly 3,000 civilians, Service members, and contractor personnel, whose mission is to provide critical material support across the DOD and other Federal agencies, including the National Aeronautics and Space Administration.

BACKGROUND

DSCR was promulgated to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List (NPL) in 1987. In 1990, the DLA, the DSCR, the United State Environmental Protection Agency (USEPA) and the Commonwealth of Virginia entered into a Federal Facilities Agreement (FFA), which guides restoration activities at the site. Thirteen operable units (OUs), which consist of both soil and groundwater impacted by past site operations, have been identified at the facility.

DSCR currently has Records of Decision (RODs) in place for three OUs and Interim RODs in place for two OUs. The other sites are in various stages of the CERCLA process, and Feasibility Studies (FS) are currently being completed for several OUs. Several other very important documents, which will be integral to DSCR's

Restoration Program moving forward, are near completion. Some of these integral documents are:

- Management Action Plan (MAP)
- Supplemental Feasibility Study (SFS) and Conceptual Site Model (CSM)
- Facility-Wide Land Use Control and Implementation Plan (LUCIP)

These documents, which are briefly described below, will be key elements in progressing toward site closeout at all operable units.

PROGRAM SUMMARY:

DLA has adopted a performance-based strategy to address their environmental restoration obligations at DSCR. This strategy is outcome based (rather than process-based) and will define the performance objectives and metrics to be included in future RODs and NPL deletion notices. An integral part of the success of this strategy is a firm understanding of the nature and extent of environmental conditions at the facility. In order to gain a more complete understanding of these conditions, DSCR has worked to develop a conceptual site model (CSM) for the site.

The CSM consists of a network of detailed data on the nature and extent of environmental conditions and provides the technical basis for developing appropriate response completion objectives for the site. The field investigation portion of the SFS, which was conducted in FY 04, collected extensive data to be incorporated in the CSM. The SFS and CSM documents will serve as the cornerstone for determining future remediation activities at the site. Significant progress was made on both of these documents in 2004, and they are scheduled to be finalized in 2005.

ACCOMPLISHMENTS:

Fast Track Cleanup and Innovative Technologies

DSCR recently performed a time critical removal action (TCRA) to address contaminated soil at one of its sites (OU 4). The project involved the identification and excavation of soils impacted by past fire-training activities at DSCR. The project team was able to utilize several administrative and technical strategies in order streamline this project.

Recent groundwater monitoring was indicative of a continuing source (in the vicinity of OU 4) of chlorinated volatile organic compounds (CVOCs) to downgradient groundwater. During the SFS field investigation, ground-penetrating radar (GPR) was used to identify geophysical anomalies,



Ground Penetrating Radar (GPR) survey used to identify geophysical anomalies at OU 4.



Direct Push Technology (DPT) sampling used to identify source material at OU 4.

which were likely associated with the former fire-training pits. A membrane interface probe (MIP) was also used to screen for elevated concentrations of CVOCs in the subsurface. The compilation of data collected in the SFS allowed the team to roughly interpret potential source areas to downgradient groundwater.



Mobile laboratory saves time and streamlines excavation process.

A more focused investigation was conducted in June 2004, to better delineate the suspected pits. Several samples were collected and the results indicated that CVOC source material was present at several locations in the vicinity of the suspected pits. A plan was developed to remove the impacted soil, to the extent practicable, under a TCRA. The TCRA approach was utilized due to the potential high mobility of the contaminants in the soils above the water table. This approach was outlined in a Principal Threat Source Material Removal Site Evaluation Report and Action Memorandum, in July 2004.

Under the time-critical approach, the removal action was planned within six months from the time of identification of the material to be removed. Field Activities for excavating and removing the impacted soil at OU 4 were initiated in November 2004. A mobile lab was on-site to test soils in “real-time” and help guide the excavation. Over 1,400 tons of material was excavated during the removal action. This material is currently stockpiled on site and will be appropriately disposed of off-site according to federal and state regulations.



Stockpiling of soil on impermeable plastic liners during the OU 4 Removal Action.

The excavations were compacted with “clean” backfill from an off-site source. Future plans for the area will likely include installation of an overflow parking lot to be used in emergency situations.

DSCR has also implemented an ActiveProject® Web site that can be used by the project team members (e.g., DSCR project managers, contractors, regulators) to view documents and analytical data as they become available. This technology is very useful and saves time and resources, because data can be shared without having to be transmitted in hard copy or email. The project team plans to make further enhancements to the data sharing web-site, to maximize its project management potential.

Partnerships Addressing Environmental Cleanup Issues Between DOD and Other Entities

Through the FFA, representatives from both USEPA Region III and the Virginia Department of Environmental Quality (VDEQ) are actively involved in the restoration program at DSCR. These representatives are responsible for reviewing CERCLA documents submitted by DSCR. Additionally, they are involved in weekly teleconferences with the team, attend quarterly planning meetings, and are members of the Restoration Advisory Board (RAB).

Community Involvement



Community members ask questions at DSCR Environmental Fair.

DSCR established a RAB in January 2002, which currently holds monthly meetings. The RAB consist of 11 community members, a DSCR co-chair, a USEPA representative and a VDEQ representative. In 2004, the RAB was briefed on many of the ongoing and upcoming restoration projects being conducted at DSCR. A notice soliciting additional RAB participation and an application were published in the Fall Community Newsletter. DSCR strives to maintain an active and interested RAB. DSCR also holds an annual environmental fair, where the public is invited to learn more about the various environmental programs at DSCR.

Opportunities for Small and Disadvantaged Business in Environmental Restoration

DSCR awarded the contract for operation and maintenance of their treatment systems to a small business, 8-a certified by the Small Business Administration. This contract, which is valued at greater than \$500,000, was awarded through the United Stated Army Corps of Engineers (USACE), Norfolk District. Under this contract, the company is responsible for the day-to-day operation of the treatment systems for groundwater at OUs 8 and 9 at DSCR.



Dual-phase extraction well for OU 8 treatment system

Reducing Risk to Human Health and Environment

DSCR has implemented several initiatives that will be helpful in providing continual protection of both human health and the environment. As discussed above, a removal action was initiated in 2004 to remove CVOC impacted soil from OU 4, which appeared to be a continual source to downgradient groundwater. Another project, which was implemented in 2004, was the OU 8 Rebound Study. This project involves shutting down the OU 8 dual-phase extraction system and monitoring to see if concentrations increase or “rebound” as a result. This will allow the team to determine the overall effectiveness of the OU 8 system at reducing long-term concentrations of CVOCs in groundwater. The year-long rebound study was initiated in January 2004.

DSCR has also undertaken several site management initiatives, which will enable the team to select the most appropriate remedial actions moving forward. The Restoration Program undertook a comprehensive update of its MAP in FY 04. The MAP, which is scheduled for completion in early FY 05, is a working document that outlines the plan for protecting human health and the environment and achieving site-closeout at each operable unit. Significant progress was also made on the SFS and CSM in 2004. The SFS and CSM will be extremely useful in selecting appropriate remedial actions for protecting human health and environment at the site by evaluating the nature and extent of environmental conditions throughout the facility.