Appendix J:
Formerly Used Defense Sites Environmental Restoration Progress

The Formerly Used Defense Sites (FUDS) program reduces risks to human health and the environment that is attributable to activities that occurred on real properties formerly owned, leased, possessed, or used by the Department of Defense (DoD) or its Components, and were transferred from DoD control prior to the enactment of the Superfund Amendments and Reauthorization Act (SARA). The FUDS program communicates with regulatory agencies, tribes, and the public to ensure proper characterization and cleanup of past DoD lands.

Applicable Requirements

Environmental restoration activities at FUDS properties comply with all legally-binding national requirements, including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 United States Code [U.S.C.] §9601 et seq.), the National Oil and Hazardous Substances Pollution Contingency Plan, and §211 of SARA in accordance with the Defense Environmental Restoration Program (DERP) statute (10 U.S.C. §2701 et seq.). Cleanup efforts also are consistent with Executive Orders 12580 and 13016 and various National Defense Authorization Acts (NDAAs).

FUDS cleanup activities comply with internal DoD requirements, such as the Management Guidance for the DERP (28 September 2001), DoD Instruction 4715.7: Environmental Restoration Program, and DoD Financial Management Regulation (FMR) 7000.14-R. The U.S. Army Engineering Regulation 200-3-1 provides specific policy and guidance consistent with these requirements for management and execution of the FUDS program, and the Munitions Response Site Prioritization Protocol (MRSPP) Final Rule (5 October 2005, Part 179.6, *Federal Register* Vol. 70, No. 192) implements the requirements established in the NDAA for FY2002. Objective 3.3 of the 2007 Defense Installations Strategic Plan also outlines specific goals, metrics, and outcomes for the FUDS program.
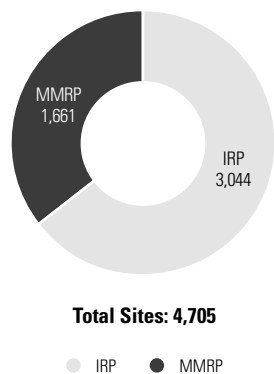
Current Management Practices

DoD funds the cleanup of DoD-generated contamination on FUDS properties. The Office of the Secretary of Defense designated the Army as the Executive Agent with responsibility for meeting all environmental restoration requirements at FUDS. The Secretary of the Army delegates program management and execution of the program to the U.S. Army Corps of Engineers (USACE). USACE Districts perform the cleanup activities in consultation with the U.S. Environmental Protection Agency (EPA) and state environmental and health offices.

Execution of the FUDS program differs from execution of cleanup on active installations in several ways. For example, DoD no longer owns FUDS properties. Additionally, there are no installation commanders at FUDS properties; the USACE District Commanders serve that role.

Under the oversight of District Commanders, USACE evaluates each FUDS property identified for eligibility for cleanup response. Eligibility involves a real estate and historical background information search to determine if the property was under jurisdiction of DoD at the time of actions leading to contamination prior to the enactment of SARA. USACE also determines if there are known or potential contaminants or hazards on the property attributable to past DoD activities.

Once USACE establishes a property's eligibility, it assigns the site to one of three programs: the Installation Restoration Program (IRP), the Military Munitions Restoration Program (MMRP), or the Building Demolition and Debris Removal (BD/DR) program. Because of the small size of the BD/DR program, BD/DR sites are grouped with IRP sites. As illustrated in Figure J-1, 4,705 sites are listed in the FUDS inventory in FY2008. Of those sites, 3,044 IRP sites and 1,661 munitions response sites (MRSs) comprised the total FUDS inventory.

Figure J-1 Number of IRP Sites* and MRSs at FUDS Properties

Total Sites: 4,705

◯ IRP   ● MMRP

* IRP includes BD/DR sites.

Performance Evaluation Criteria

DoD evaluates IRP and MMRP progress at FUDS properties based on program-specific goals and metrics.

Installation Restoration Program

The IRP encompasses identification, investigation, and remedial actions to address the release of hazardous substances, pollutants, and contaminants. USACE evaluates IRP projects at FUDS properties using the Relative Risk Site Evaluation to categorize sites for cleanup based on the degree of contamination, whether the contamination is migrating, and whether a receptor is present.

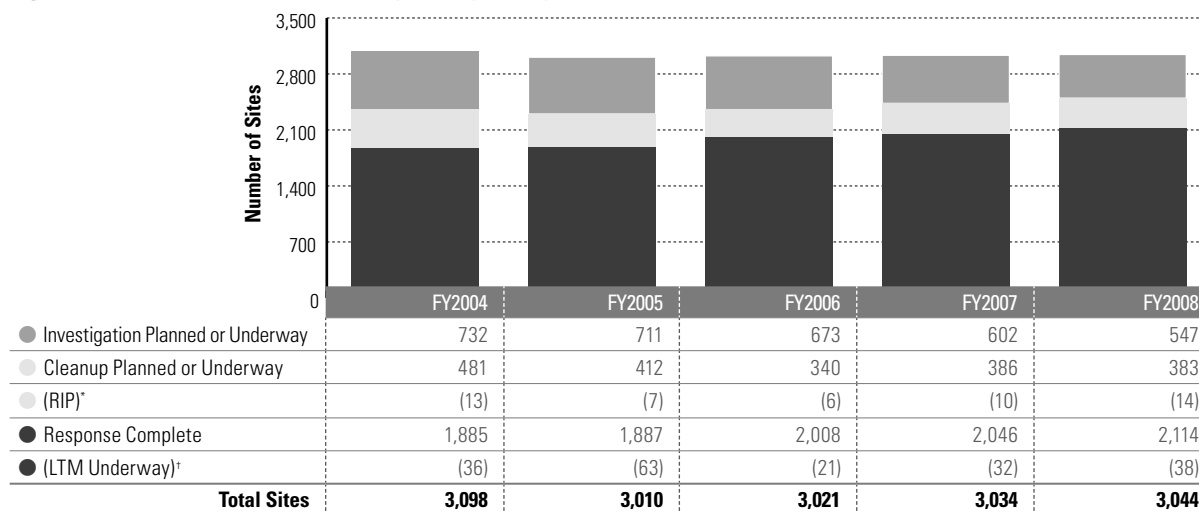DoD has set the following goals for IRP sites at FUDS properties:

▸ Reduce risk or achieve remedy in place (RIP) or response complete (RC) at all medium relative risk sites by the end of FY2011

▸ Reduce risk or achieve RIP/RC at all low relative risk sites by the end of FY2020

▸ Achieve RIP/RC at all FUDS properties by the end of FY2020.

USACE is working aggressively to achieve the risk reduction goal at the remaining high relative risk sites, which generally pose significant challenges due to their complexity. By the end of FY2008, USACE had reduced risk at 50 percent of medium relative risk sites and at 52 percent of low relative risk sites. Additionally, USACE had achieved RIP/RC at 61 percent of FUDS properties by the end of FY2008.

In FY2008, USACE had 3,044 FUDS IRP sites in its inventory, as illustrated in Figure J-2. Of these 3,044 IRP sites, 547 had an investigation planned or underway, 383 had cleanup planned or underway (including 14 sites that had achieved RIP), and 2,114 had achieved RC (including 38 sites with long-term management [LTM] underway). As expected, the number of IRP sites with investigations and cleanup planned or underway has decreased since FY2004, while the number of sites achieving RC has increased.

Figure J-2 DoD IRP Site Status at FUDS Properties by Cleanup Phase

	FY2004	FY2005	FY2006	FY2007	FY2008
● Investigation Planned or Underway	732	711	673	602	547
◯ Cleanup Planned or Underway	481	412	340	386	383
◯ (RIP)*	(13)	(7)	(6)	(10)	(14)
● Response Complete	1,885	1,887	2,008	2,046	2,114
● (LTM Underway)†	(36)	(63)	(21)	(32)	(38)
Total Sites	**3,098**	**3,010**	**3,021**	**3,034**	**3,044**

* RIP is a subset of Cleanup Planned or Underway.
† LTM is a subset of Response Complete.

Military Munitions Response Program

The MMRP was established in 2001 to address unexploded ordnance, discarded military munitions, and munitions constituents on DoD installations and FUDS properties. Starting in FY2008, USACE will no longer report Risk Assessment Code scores for MRSs. Instead, USACE will use the MRSPP to assign a relative priority to each site based on potential hazards and site conditions. USACE evaluates each MRS by considering three types of potential risks: explosive hazard, chemical warfare materiel, and human health and the environment.
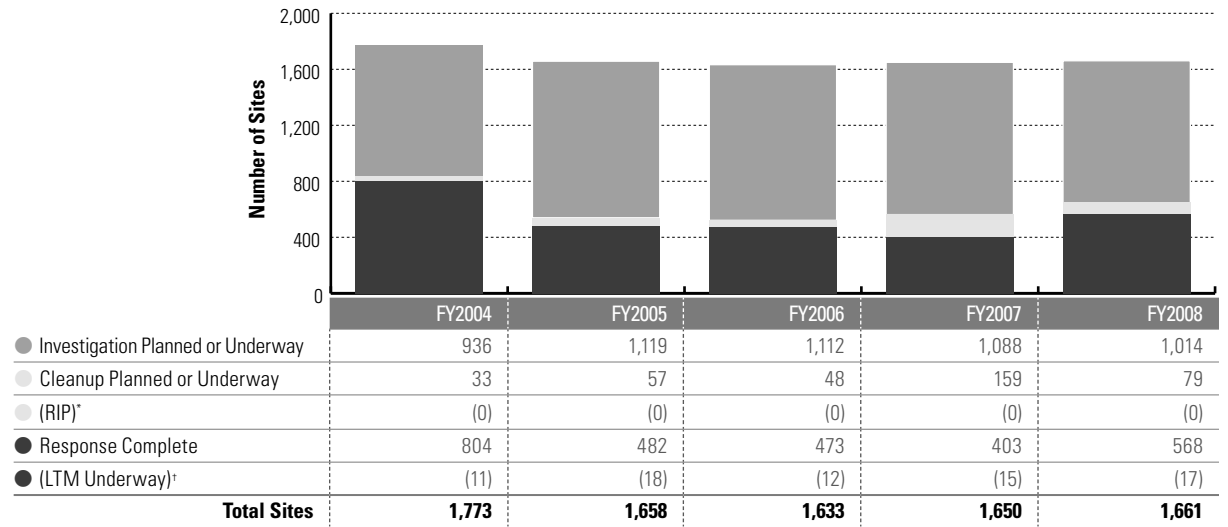
By the end of FY2008, USACE had completed preliminary assessments (PAs) at 99 percent of MRSs on FUDS properties, with only a few sites not meeting the FY2007 goal to complete PAs at all MRSs. Additionally, USACE must complete site inspections (SIs) at all MRSs by the end of FY2010. As of FY2008, 58 percent of MRSs at FUDS properties had completed SIs.

In FY2008, USACE had 1,661 MRSs in its inventory, as illustrated in Figure J-3. Of these 1,661 sites, 1,014 had an investigation planned or underway, 79 had cleanup planned or underway, and 568 had achieved RC (including 17 sites with LTM underway). As expected, the number of MRSs with investigations and cleanup planned or underway has decreased since the previous year, while the number of sites achieving RC has increased.

Cost-to-Complete Estimates

In FY2008, USACE estimated cost-to-complete (CTC) efforts at IRP sites at $2.8 billion and MRSs at $13.5 billion, as illustrated in Figure J-4. CTC estimates at FUDS IRP sites have consistently decreased since FY2004, as USACE continues to achieve its cleanup objectives. CTC estimates at FUDS MRSs have fluctuated since FY2004, as USACE continues to better characterize FUDS properties through PAs and SIs. Appendix G: Restoration Budget Overview provides additional information on funding for FUDS properties.
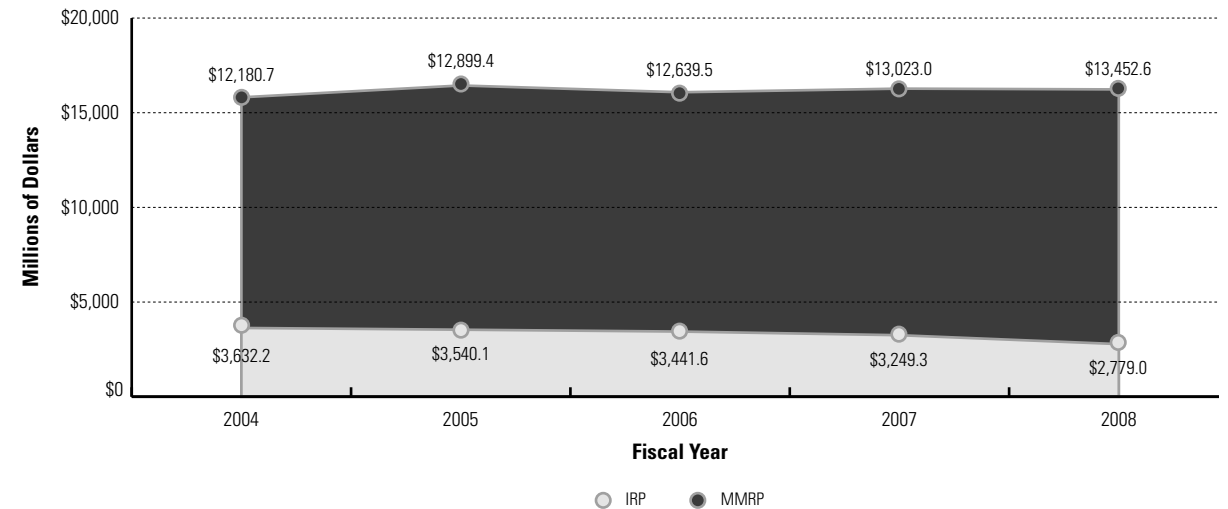
Figure J-3 DoD MRS Status at FUDS Properties by Cleanup Phase

	FY2004	FY2005	FY2006	FY2007	FY2008
● Investigation Planned or Underway	936	1,119	1,112	1,088	1,014
● Cleanup Planned or Underway	33	57	48	159	79
● (RIP)*	(0)	(0)	(0)	(0)	(0)
● Response Complete	804	482	473	403	568
● (LTM Underway)†	(11)	(18)	(12)	(15)	(17)
Total Sites	**1,773**	**1,658**	**1,633**	**1,650**	**1,661**

* RIP is a subset of Cleanup Planned or Underway.
† LTM is a subset of Response Complete.

Figure J-4 DoD IRP and MMRP CTC Estimates at FUDS Properties*

* Funding represents site-level data and does not include management and support costs not directly attributable to specific sites.