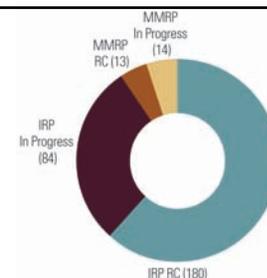


<b>FFID:</b>	MD321382135500	<b>Media Affected:</b>	Surface Water, Sediment, Soil, Groundwater
<b>Location (Size):</b>	Edgewood and Aberdeen, Maryland (72,516 acres)	<b>Funding to Date:</b>	\$ 606.2 million
<b>Mission:</b>	Develop and test equipment and provide troop training	<b>Est. CTC (Comp Year):</b>	\$ 264.1 million (FY 2043)
<b>HRS Score:</b>	31.45 (Michaelsville Landfill); placed on NPL in October 1989 53.57 (Edgewood Area); placed on NPL in February 1990	<b>IRP Sites (Final RIP/RC):</b>	264 (FY2014)
<b>IAG Status:</b>	IAG signed in March 1990	<b>MMRP Sites (Final RIP/RC):</b>	27 (FY2017)
<b>Contaminants:</b>	VOCs, SVOCs, metals, PCBs, explosives, petroleum products, pesticides, radiation, CWM, UXO, potential biological warfare materiel, propellants	<b>Five-Year Review Status:</b>	Completed
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-95



**Progress To Date**

Studies have identified many areas of contamination at Aberdeen Proving Ground (PG), including chemical munitions and manufacturing waste sites. RCRA facility assessments identified 319 solid waste management units, which were combined into 13 study areas. Remedial investigations (RIs) identified high levels of organic contaminants in most study areas. Completed removal actions include removal of soil contaminated with metals, polychlorinated biphenyls (PCBs), petroleum hydrocarbons, trichloroethylene (TCE), and DDT; removal of underground storage tanks; removal of unexploded ordnance; closure of Nike missile silos, an adam site vault, and pilot plant sumps; and cleanup of open dump sites. The potential risk to human health and the environment was significant enough for EPA to place two areas of Aberdeen PG on the NPL in 1989 and 1990. DoD and EPA signed an interagency agreement (IAG) in 1990 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Aberdeen PG for realignment. In FY95, the installation converted its technical review committee, responsible for communicating cleanup progress with the community, into a Restoration Advisory Board. To ensure continuous monitoring and improvement, Aberdeen PG completed five-year review reports in FY99 and FY04.

Aberdeen PG has signed 26 Records of Decision (RODs), which selected cleanup actions for environmental restoration sites. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Aberdeen PG for FY05 through FY08 is summarized below.

In FY05, Aberdeen PG awarded performance-based contracts (PBCs) for Bush River Study Areas Operable Units (OUs) 2 and 3, Edgewood Area Groundwater, and the Westwood Study Area. The installation also completed a ROD for Cluster 3 Bush River lead-contaminated soil. Additionally, Aberdeen PG completed draft feasibility studies (FSs) to evaluate cleanup alternatives for Bush River groundwater and land disposal units. The installation also completed the final RAD risk assessment, RI/FS, proposed plan (PP), and draft ROD for Westwood Study Area.

In FY06, Aberdeen PG completed four RODs. The installation determined that no further cleanup actions were necessary for 31 sites in the Other Aberdeen Areas. Aberdeen PG also completed construction of Carroll Island and Grace Quarters shoreline stabilization. Aberdeen PG also completed a removal action at the Hog Point Area A. Additionally, Aberdeen PG completed the final cleanup report for Carroll Island OU A Disposal Pits. The installation issued the final FS for Lauderick Creek Area Cluster 9 Groundwater, and completed waste and contaminated soil removal at five cleanup sites in the Westwood Study Area. Aberdeen PG awarded a PBC for the former G Street Salvage Yard, assessed the potential risks to human health at the Western Boundary Study Area OU 2, and completed a design for cleanup for five sediment sites in OAA. Under the MMRP, Aberdeen PG completed a historical record review.

In FY07, Aberdeen PG and EPA signed RODs for the J-Field Former White Phosphorus Pit and the Canal Creek G-Street Former Salvage Yard. The installation also completed three RODs: one for the Edgewood Groundwater Clusters 9 and 19; one for the Known Distance Range, Pistol Range, and 23 Other Aberdeen Area sites; and one for the Westwood Study Area's remaining sites. In Addition, Aberdeen PG completed a PP for Edgewood Groundwater Clusters 9 and 19. The installation also completed cleanup completion reports for the Lauderick Creek Cluster 5 Concrete Slab Test Site and the Carroll Island/Graces Quarters OU B. Aberdeen PG awarded a PBC for the Canal Creek Study Area. Under the MMRP, Aberdeen PG issued the final site inspection (SI) report and the final work plan for an expanded SI for the 5400 Block.

In FY08, Aberdeen PG completed a PP for two dump sites in the Aberdeen Area, revised monitoring plans for Michaelsville Landfill and the Western Boundary Study Area, and completed a draft RI for Western Boundary Study Area OUs 2 and 3. Aberdeen PG also signed a ROD for Canal Creek 10 sites and completed cleanup actions at the G-Street Soil OU, Canal Creek 13 Soil sites, and J-Field White Phosphorus Pits. Aberdeen PG awarded a PBC for O-Field OU 4 and completed cleanup of the Westwood WW90 Fill Area. In addition, the installation completed the excavation of contaminated soils at the Known Distance Range and Pistol Range. Aberdeen PG discovered two new MMRP sites in the Aberdeen Area.

**FY09 IRP Progress**

Aberdeen PG completed the ROD for three soil sites at the Canal Creek. Additionally, Aberdeen PG completed RIs for Wright Creek, Dove's Cove and Western Shore for the Other Edgewood Study Area. Aberdeen PG began an SI at the G-Street RAD site resulting in the complete removal of RAD markers in Canal Creek. The installation completed the final ROD for Old Dumps at Woodrest and Swan Creek.

Regulatory issues delayed the PPs and RODs for the Bush River and King's Creek and the ROD for the Shell Washout Wastewater Ditch Building 700B.

**FY09 MMRP Progress**

Aberdeen PG awarded the contract and began the RI. The installation completed the SI for two new MMRP sites.

**Plan of Action**

Plan of action items for Aberdeen Proving Ground are grouped below according to program category.

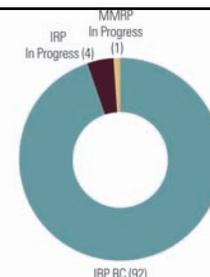
**IRP**

- Complete ROD for additional soil sites at the Canal Creek in FY10.
- Begin SI at newly discovered RAD site at G-Street in FY10.
- Complete PP and ROD for King's Creek, and PPs for the remaining Bush River soils in FY10.
- Complete RODs for Wright Creek, Dove's Cove, Western Shore, the Old O-Field area, and Boone Creek at the Other Edgewood Study Area in FY10-FY11.
- Complete removal action at the I-Field Munitions Dump in Other Edgewood Study Area in FY10-FY11.

**MMRP**

- Begin fieldwork for the RI at the Edgewood Area and award contract for the RI at the Aberdeen Area in FY10.

<b>FFID:</b>	AK017002432300	<b>Funding to Date:</b>	\$ 289.8 million
<b>Location (Size):</b>	Adak, Alaska (76,800 acres)	<b>Est. CTC (Comp Year):</b>	\$ 102.5 million (FY 2041)
<b>Mission:</b>	Provided services and materials to support aviation activities and operating forces of the Navy	<b>IRP Sites (Final RIP/RC):</b>	96 (FY2012)
<b>HRS Score:</b>	51.37; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2014)
<b>IAG Status:</b>	FFA signed in November 1993	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Heavy metals, PCBs, VOCs, petroleum products, SVOCs, explosives, UXO, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-4
<b>Media Affected:</b>	Surface Water, Sediment, Groundwater, Soil		



**Progress To Date**

Beginning in the early 1940s, Adak Naval Air Facility (NAF) served as a key operations and supply location for U.S. military forces. A study identified 32 sites at the installation, including landfills, unexploded ordnance areas, and polychlorinated biphenyl (PCB) spill sites, which have contaminated groundwater, surface water, sediments, and soil. Twenty sites were recommended for further investigation. In addition, a RCRA facility assessment identified 76 solid waste management units (SWMUs), 73 of which are managed as CERCLA sites. DoD and EPA signed a federal facility agreement (FFA) in November 1993, outlining how they were going to proceed with cleanup. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1994. In September 1995, the BRAC Commission recommended closure of Adak NAF. Operational Naval forces departed the island on April 1, 1997, and Engineering Field Activity Northwest assumed command functions. The installation closed in September 1997. The installation completed a community relations plan in FY90 and revised the plan in FY95, FY99, and FY03. In FY96, Adak NAF converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY08.

The installation has signed Records of Decision (RODs), which selected cleanup actions for Operable Units (OUs) A and B1. Adak NAF also signed two No Further Action RODs, which determined that no further cleanup activities were necessary for SWMUs 4, 27, and several sites originally included in OU B. The installation also signed a Decision Document (DD), which selected cleanup actions for 10 of the 14 free-product petroleum sites at OU A. In FY04, Adak NAF transferred approximately 47,000 acres for private reuse. The installation completed environmental cleanup on an additional 24,300 acres, which were transferred to the Department of the Interior in FY04. In FY02, Adak NAF conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Adak NAF for FY05 through FY08 is summarized below.

In FY05, Adak NAF completed closure documentation for 19 petroleum release sites. The installation also completed post-closure care restoration work (vegetative cap maintenance) at two landfills. The installation completed feasibility studies (FSs) to evaluate cleanup alternatives at the four remaining sites. Adak NAF completed proposed plans (PPs) and began DDs for three of the remaining sites. The installation completed the focused FS, PP, and DD for the remaining petroleum sites.

In FY06, Adak NAF continued long-term management (LTM) at 29 CERCLA and petroleum release sites under the OU A ROD. The installation completed DDs and cleanup for three petroleum release sites and completed characterization at another site.

In FY07, Adak NAF continued LTM at 29 CERCLA and petroleum release sites under the OU A ROD. The installation also completed a conditional site closure at one petroleum release site, and continued free-product removal at three petroleum release sites. Under the MMRP, the installation resolved OU B1 ROD disputes.

In FY08, Adak NAF completed a second five-year review report. The installation also continued LTM at 29 CERCLA and petroleum release sites under the OU A ROD. Adak NAF continued free-product removal at three petroleum release sites and completed an FS for the remaining petroleum release site. Regarding MMRP sites, the installation completed fieldwork at Lake Jean (LJ) site 01 and the Munitions and Explosives of Concern Rifle-Grenade Range, and completed fieldwork for the remedial investigation (RI) and FS at OU B2. The State of Alaska granted conditional closure for 17 OU B1 sites.

**FY09 IRP Progress**

Adak NAF completed fieldwork for the main road pipeline decommissioning project. The installation also completed free-product removal at one petroleum release site and continued removal at the remaining two sites. The installation continued LTM and institutional control inspections, which minimize the potential for human exposure, at CERCLA and petroleum release sites. Adak NAF completed an FS for the Area 303 petroleum release site. The cost of completing

environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed the completion of the PP and DD for Area 303. Regulatory issues also delayed completion of the partial delisting of 55 CERCLA sites from the NPL.

**FY09 MMRP Progress**

Adak NAF completed an RI and risk assessment at OU B2.

Regulatory issues delayed the FS at OU B2 and the partial delisting of 55 CERCLA sites from the NPL. Technical issues delayed cleanup at the three remaining OU B1 sites.

**Plan of Action**

Plan of action items for Adak Naval Air Facility are grouped below according to program category.

**IRP**

- Complete additional site characterization at the main road pipeline in FY10.
- Complete partial delisting of 55 CERCLA sites in FY10.
- Continue free-product removal at two petroleum sites in FY10.
- Complete PP and DD for the Area 303 petroleum release site in FY10.
- Continue LTM, institutional control inspections, and well abandonment at CERCLA and petroleum release sites in FY10.

**MMRP**

- Complete FS for OU B2 in FY10.
- Complete partial delisting of 55 CERCLA sites from the NPL in FY10.
- Complete cleanup at the three remaining OU B1 sites in FY10.

<b>FFID:</b>	GU917002755700	<b>Funding to Date:</b>	\$ 64.2 million
<b>Location (Size):</b>	Agana, Guam (1,809 acres)	<b>Est. CTC (Comp Year):</b>	\$ 6.1 million (FY 2009)
<b>Mission:</b>	Provided services and material support for transition of aircraft and tenant commands	<b>IRP Sites (Final RIP/RC):</b>	39 (FY2009)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Asbestos, paints, solvents, liquids and sludges, heavy metals, VOCs, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-8-17
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

In July 1993, the BRAC Commission recommended closure of Agana Naval Air Station (NAS). The installation formed a BRAC cleanup team in FY93 to develop a process for cleanup at Agana NAS. The installation was closed on March 31, 1995. In FY92 the installation published a community relations plan, and established three information repositories. In FY93 the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community.

To date, Agana NAS has found three parcels suitable to lease, along with an interim lease and a joint use agreement with the Guam International Airport Authority (GIAA). In addition, five parcels of the installation, totaling 1,179 acres, have been transferred to the Government of Guam and GIAA. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Agana NAS for FY05 through FY08 is summarized below.

In FY05, Agana NAS completed a study at Site 1 and began an evaluation with regulators to determine landfill monitoring network design. The installation also completed proposed plans (PPs) and recommended cleanup actions for Sites 1 and 38, and 28 Operable Unit 2 sites. Additionally, the installation completed construction of the monitoring well and two rounds of sampling at Site 37. The installation completed the site inspection (SI) fieldwork sampling and analysis to determine further response actions required at Building 15-46A. Three public meetings and two BRAC cleanup team meetings were held. The BRAC cleanup team performed a review of the PPs; EPA and Guam EPA attended the public meetings and provided cooperative regulator support.

In FY06, Agana NAS completed monitoring of the well network installation at Site 1. The installation completed polychlorinated biphenyl (PCB) cleanup at Agana Power Plant Site 37 and included these actions in the remedial investigation (RI) report. Agana NAS completed fish monitoring at the Agana Swamp, and determined that further cleanup action was needed at Building 15-46A. The installation held one RAB and one BRAC cleanup team meeting.

In FY07, Agana NAS completed maintenance and inspection activities at Site 1. The installation also completed one round of fish tissue sampling at the Agana Swamp in association with the Agana Power Plant, a focused feasibility study to evaluate cleanup alternatives, the RI report, and a PP to present land use controls (LUCs), which restrict use or access to Site 35. The installation completed the final SI report and began the removal of the sewer pipeline and sludge at Site 39. Agana NAS held one public meeting for Site 35, three RAB meetings, and two BRAC cleanup team meetings.

In FY08, Agana NAS completed the post-removal action maintenance and monitoring plan, maintenance inspection activities, documentation, and abandonment work at Site 1. The installation also completed pipeline removal at Site 39. Agana NAS held one open house for Site 35, three RAB meetings, and three BRAC cleanup team meetings.

**FY09 IRP Progress**

Agana NAS completed Decision Documents (DDs), which documented the selected remedy by establishing LUCs at 14 sites. The installation also completed no further action DDs for 16 sites. The installation also began long-term management (LTM) at Site 1. This is the last narrative for this installation, as cleanup is complete at all sites.

Regulatory issues delayed the LUC work plan for Site 38.

**FY09 MMRP Progress**

Agana NAS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Agana Naval Air Station are grouped below according to program category.

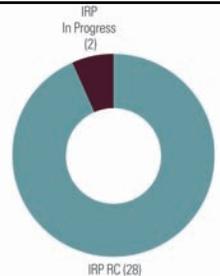
**IRP**

- Continue LTM at Site 1 in FY10.
- Complete LUC work plan for Site 38 in FY10.
- Determine whether Site 35 is suitable for transfer in FY10.
- Complete removal completion report for Site 39 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	TX657172460500	<b>Funding to Date:</b>	\$ 70.3 million
<b>Location (Size):</b>	Fort Worth, Texas (706 acres)	<b>Est. CTC (Comp Year):</b>	\$ 14.8 million (FY 2018)
<b>Mission:</b>	Manufacture aircraft (F-16, partial F-22, and the F-35 Joint Strike Fighter) and associated equipment; testing electronics	<b>IRP Sites (Final RIP/RC):</b>	30 (FY2006)
<b>HRS Score:</b>	39.92; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in August 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Waste oils and fuels, heavy metals, VOCs, cyanide, DNAPL, TCE, PCBs, paint residues, spent process chemicals, solvents	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-160
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Air Force Plant No. 4 (AFP 4) has been a primary manufacturing plant for military aircraft and related equipment since 1942. The installation is adjacent to, and shares an airfield with Fort Worth Joint Reserve Base Naval Air Station (former Carswell Air Force Base [AFB]). Studies have confirmed trichloroethylene (TCE) contamination in the surface water, soil, and in groundwater underneath six spill sites and four landfills (LFs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in August 1990 to outline how they were going to proceed with cleanup. In FY95, AFP 4 converted its technical review committee, responsible for communicating cleanup progress with community, into a Restoration Advisory Board (RAB). To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY04 and FY09.

To date, AFP 4 has signed Records of Decision (RODs), which select cleanup actions at all sites. In FY05, AFP 4 conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at AFP 4 for FY05 through FY08 is summarized below.

In FY05, the installation conducted operation and maintenance (O&M) and long-term monitoring of treatment systems. The installation completed fieldwork near the creek, LFs, and Lake Worth, and submitted the final focused feasibility study, which evaluated cleanup alternatives, to regulators. The installation also partnered with the North Central Texas Council of Governments for Lake Worth restoration, and hosted a site tour with the Texas Commission on Environmental Quality.

In FY06, AFP 4 continued O&M and long-term monitoring of treatment systems. EPA inspected the treatment systems and approved the final interim cleanup action completion report. The installation worked to decrease treatment system costs and held discussions concerning optional discharge of treated water. The installation also completed the preliminary closeout report necessary for transfer of the Carswell Golf Course parcel by the Air Force Real Property Agency. AFP 4 and the Texas

Commission on Environmental Quality held a public meeting to discuss the implementation plan for Lake Worth.

In FY07, the installation continued O&M and long-term monitoring of treatment systems. AFP 4 started the implementation plan for Lake Worth, which included additional street sweepings to remove residual low-level polychlorinated biphenyls (PCBs). The installation continued sampling and testing of fish in Lake Worth for PCBs. Additionally, the installation completed and signed the explanation of significant differences for the East Parking Lot Groundwater Plume ROD and received EPA Region 6 concurrence. AFP 4 began an MMRP preliminary assessment (PA). The RAB held two meetings.

In FY08, AFP 4 continued O&M and long-term monitoring of treatment systems. The installation completed pilot treatment of highly contaminated areas at Building 181, Chrome Pit 3, LF 3, and LF 3 Seep to address high-level volatile organic compounds (VOCs). The installation inspected land use controls (LUCs) on former Carswell AFB BRAC property, which restrict use of and access to the site. AFP 4 completed the MMRP PA. The RAB conducted a meeting and site visit.

**FY09 IRP Progress**

AFP 4 completed its second five-year review report. The installation continued operating cleanup systems and inspection of LUCs on former Carswell AFB BRAC property. AFP 4 also implemented a cleanup optimization process to include long-term monitoring. Additionally, the installation completed studies of fish in Lake Worth. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

The installation conducted two RAB meetings, including a site tour of cleanup systems and the industrial facility.

**FY09 MMRP Progress**

AFP 4 completed a second inspection of the Gun Butt and determined that it is eligible for the cleanup program. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

**Plan of Action**

Plan of action items for Air Force Plant No. 4 are grouped below according to program category.

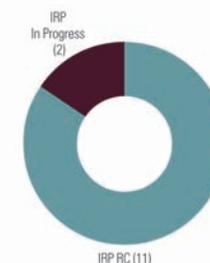
**IRP**

- Complete cleanup optimization process in FY10.
- Finalize explanation of significant differences with the ROD in FY10.
- Continue RAB meetings as necessary in FY10.
- Address EPA comments on five-year review report in FY10.
- Address vapor intrusion request on former Carswell AFB BRAC property in FY10.

**MMRP**

- Remove the Gun Butt in FY10.

<b>FFID:</b>	AZ957172462900	<b>Funding to Date:</b>	\$ 87.5 million
<b>Location (Size):</b>	Tucson, Arizona (2,174 acres)	<b>Est. CTC (Comp Year):</b>	\$ 40.7 million (FY 2030)
<b>Mission:</b>	Research, design, and manufacture of missiles	<b>IRP Sites (Final RIP/RC):</b>	13 (FY2010)
<b>HRS Score:</b>	57.86; placed on NPL in September 1983	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA negotiations underway	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Paint sludges, paint thinners, heavy metals, solvents, machine coolants, machine lubricants, TCE, VOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-12
<b>Media Affected:</b>	Groundwater		



## Progress To Date

Air Force Plant No. 44 (AFP 44), located adjacent to Tucson International Airport (IAP), began operations in 1951 to manufacture Falcon air-to-air missiles, and has supported several other missile systems. Contaminants identified at AFP 44 include solvents, machine coolants and lubricants, paint sludges and thinners, and heavy metals. The installation is part of the Tucson IAP Area, which EPA placed on the NPL in September 1983 due to the potential significant risk to human health and the environment. A federal facility agreement (FFA) between DoD and EPA, to outline how they are going to proceed with cleanup, is currently under negotiation. In FY95, the installation converted its Restoration Advisory Board (RAB), responsible for communicating cleanup progress with the community, into a Unified Community Advisory Board. In FY04, AFP 44 updated and finalized the community relations plan. To ensure continuous monitoring and improvement, AFP 44 completed a five-year review report for six soil sites in FY04.

To date, the installation has signed Records of Decision (RODs) for three soil vapor extraction sites, three soil excavation sites, and one groundwater cleanup site. The RODs selected cleanup actions for these sites. The installation also signed a ROD requiring no further cleanup action for four sites. In FY05, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at AFP 44 for FY05 through FY08 is summarized below.

In FY05, AFP 44 completed the Site 3 permanganate injection, an oxidant that converts trichloroethylene (TCE) into carbon dioxide. Future monitoring results will determine the effectiveness of the injections. The installation conducted soil gas monitoring for Sites 3 and 5; the results indicated that most of the wells do not contain contaminants. AFP 44 continued operation and maintenance (O&M) of the groundwater cleanup system.

In FY06, AFP 44 submitted closure documents for Sites 3 and 5, and addressed comments from EPA Region 9 and the Arizona Department of Environmental Quality. AFP 44 reinjected more permanganate at Sites 2 and 3 because of the rebound of TCE concentrations in the monitoring wells. The

installation used soybean oil and lactic acid to clean up the chromium and TCE source areas that migrated from Solid Waste Management Unit D, the former chromium plating area in Building 801. The installation continued O&M of the groundwater cleanup system.

In FY07, AFP 44 revised closure reports for Sites 3 and 5 based on the new Arizona cleanup level. The installation reduced the mass of the contaminated source areas for Sites 2 and 3 and completed the soil cleanup under Building 801. The installation continued O&M of the groundwater cleanup system.

In FY08, AFP 44 conducted a focused remedial investigation (RI) and optimized the cleanup process to evaluate the extent of 1,4-dioxane contamination for both AFP 44 and other potential Tucson IAP Area source areas and to evaluate cleanup systems for the Shallow Groundwater Zone. The installation found that 1,4-dioxane concentrations are decreasing at Sites 2 and 3. AFP 44 also issued an explanation of significant differences to the 1985 ROD to install an advanced oxidation process system that destroys 1,4-dioxane and TCE. The installation updated the cleanup levels to maximum contaminant level. AFP 44 completed the final permanganate injections for Sites 2 and 3 source areas. The installation evaluated the site concentrations beneath the surface and determined that sites could be closed without land use controls that restrict use of access to the site. AFP 44 completed a preliminary assessment (PA) of all MMRP sites. The installation identified and began evaluations on a small pistol range.

## FY09 IRP Progress

EPA rescinded the Safe Drinking Water Act Administrative Order after AFP 44 installed the advanced oxidation process system and demonstrated that this system was operating successfully. The installation also completed and submitted the draft FFA to EPA Region 9 and the Arizona Department of Environmental Quality. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Work on the focused RI and cleanup process optimization projects continued, however regulatory issues delayed their completion.

## FY09 MMRP Progress

AFP 44 completed a PA at two small pistol ranges. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

Administrative issues delayed the limited field investigation at the small pistol range.

## Plan of Action

Plan of action items for Air Force Plant No. 44 are grouped below according to program category.

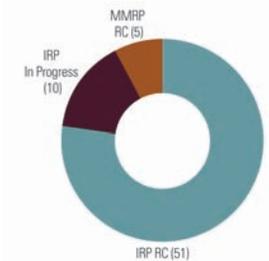
### IRP

- Complete RI of 1,4 dioxane in FY10.
- Complete the cleanup process optimization and determine cleanup actions for the Shallow Groundwater Zone in FY10.
- Complete FFA in FY10.
- Close Sites 1, 2, and 3 in FY10.
- Complete focused RI in FY10.

### MMRP

- Begin the site inspection for two new sites in FY10.

<b>FFID:</b>	CO857172553700	<b>Funding to Date:</b>	\$ 43.8 million
<b>Location (Size):</b>	Waterton, Colorado (464 acres)	<b>Est. CTC (Comp Year):</b>	\$ 20.3 million (FY 2020)
<b>Mission:</b>	Research, develop, and assemble missiles and missile components; test engines	<b>IRP Sites (Final RIP/RC):</b>	61 (FY2011)
<b>HRS Score:</b>	42.93; placed on NPL in November 1989	<b>MMRP Sites (Final RIP/RC):</b>	5 (FY2005)
<b>IAG Status:</b>	None	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	PCBs, PAHs, BTEX, chlorinated organic solvents, VOCs, SVOCs, metals, n-nitrosodimethylamine, pesticides	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-47
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Former Air Force Plant (AFP) PJKS supported the military by researching, developing, and assembling missiles, missile components, and engines. Past operations contaminated groundwater beneath the installation with trichloroethylene (TCE), TCE degradation products (dichloroethene and vinyl chloride), and n-nitrosodimethylamine (NDMA), and soil with polychlorinated biphenyls (PCBs) and polyaromatic hydrocarbons (PAHs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. In FY01, Lockheed Martin Corporation, the operator of the facility, purchased AFP PJKS. In FY96, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community.

To date, AFP PJKS has identified Installation Restoration Program (IRP) sites, which are grouped into six operable units. The installation has removed 12 of 14 underground storage tanks and closed two sites. In FY03, regulators determined no further cleanup action necessary for 12 sites. In FY05, AFP PJKS conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at AFP PJKS from FY05 through FY08 is summarized below.

In FY05, the installation conducted two rounds of groundwater monitoring and submitted the report, completed the groundwater study, and prepared an engineering evaluation and cost analysis to convert the successful bedrock pilot study into an interim corrective measure. Regulators approved the combined soils investigation report. As part of this report, AFP PJKS received regulatory approval for no further cleanup action at 13 sites, as did the combined soils interim corrective measure study and implementation work plan. The installation prepared a work plan detailing additional activities to be conducted as part of the bedrock pilot study. Regulators also approved the D 1 Landfill Area interim measure work plan. AFP PJKS conducted a study to evaluate NDMA distribution using an experimental analytical method with a lower detection limit than the currently accepted method. The installation held quarterly RAB meetings.

In FY06, AFP PJKS conducted two rounds of groundwater monitoring and submitted the report. The installation also completed the combined soils interim corrective measure study report. AFP PJKS completed implementation of the combined soils interim corrective measures, which resulted in the closure of seven sites. The installation conducted additional pilot study cleanup activities to reduce TCE concentrations. Additionally, the installation implemented two interim corrective measures to address groundwater source areas. AFP PJKS held quarterly RAB meetings.

In FY07, AFP PJKS conducted two rounds of groundwater monitoring and submitted the report, which included an updated planning process. Additionally, the installation collected quarterly performance monitoring data on the two groundwater interim corrective measures. AFP PJKS installed interim corrective measures for two of the remaining source areas and also selected interim corrective measures for the five remaining source areas.

In FY08, AFP PJKS conducted two rounds of groundwater monitoring and submitted the report. AFP PJKS also installed interim corrective measures in the remaining five groundwater source areas. The installation continued the feasibility study (FS) work plan to evaluate cleanup alternatives. AFP PJKS held regular RAB meetings.

**FY09 IRP Progress**

AFP PJKS successfully completed the D 1 Landfill Area interim measure, which resulted in the closure of two sites. The installation also continued to operate the interim corrective measures in the seven bedrock groundwater source areas. AFP PJKS conducted two rounds of groundwater monitoring and submitted the report. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues delayed the FS.

The installation held regular RAB meetings.

**FY09 MMRP Progress**

AFP PJKS conducted no MMRP actions.

**Plan of Action**

Plan of action items for Air Force Plant PJKS are grouped below according to program category.

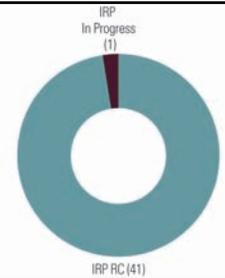
**IRP**

- Complete FS in FY10.
- Continue to operate groundwater cleanup systems and collect performance data in FY10.
- Continue groundwater monitoring in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	AL421382000800	<b>Funding to Date:</b>	\$ 62.9 million
<b>Location (Size):</b>	Childersburg, Alabama (2,235 acres)	<b>Est. CTC (Comp Year):</b>	\$ 5.3 million (FY 2041)
<b>Mission:</b>	Manufactured explosives	<b>IRP Sites (Final RIP/RC):</b>	42 (FY2012)
<b>HRS Score:</b>	36.83; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in December 1989	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Nitroaromatic compounds, heavy metals, munitions-related wastes, VOCs, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-1
<b>Media Affected:</b>	Groundwater		



## Progress To Date

The mission of Alabama Army Ammunition Plant (AAP) was to manufacture explosives. Studies conducted at Alabama AAP since FY83 identified various sites as potential sources of contamination. Prominent site types include: a former ammunition production and burning ground for explosives; industrial wastewater conveyance systems, ditches, and a red water storage basin; landfills; underground storage tanks; polychlorinated biphenyl (PCB)-containing transformers; and a former coke oven. The groundwater, surface water, sediment, and soil are contaminated with nitroaromatic compounds, heavy metals, and explosives waste. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in December 1989 to outline how they were going to proceed with cleanup. In FY94, Alabama AAP formed a BRAC cleanup team to develop a process for site cleanup. During FY95, the installation attempted to establish a Restoration Advisory Board (RAB) to discuss cleanup progress with the community, but received no applications for RAB membership. To ensure continuous monitoring and improvement, Alabama AAP signed five-year review reports in FY02 and FY08.

To date, Alabama AAP has signed three Records of Decision (RODs). The installation closed 35 groundwater monitoring wells in FY99. In FY03, Alabama AAP completed the early transfer of property to the City of Childersburg. Also in FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Alabama AAP for FY05 through FY08 is summarized below.

In FY05, the installation completed the draft proposed plan (PP) for soils.

In FY06, Alabama AAP completed a work plan addendum for additional groundwater sampling.

In FY07, Alabama AAP received final approval letters from EPA on the remedial investigation (RI) and feasibility study (FS) to evaluate cleanup alternatives for Area B Soils. Due to Alabama Department of Environmental Management concerns of the

possibility of semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOC) contaminants, the installation provided additional information on the RI sampling data. Alabama AAP also conducted groundwater sampling at the installation and in nearby off-site potable wells. The installation conducted meetings to discuss groundwater progress with regulators.

In FY08, Alabama AAP prepared a five-year review report, which EPA signed. The installation also conducted additional sampling to address the Alabama Department of Environment Management's concerns relating to SVOCs and VOCs at the South Georgia Road Dump. The installation also updated the FS and PP for Area B Soils, Sediment, and Surface Water to include the sampling results at the South Georgia Road Dump. Additionally, Alabama AAP provided a detailed groundwater sampling plan for EPA and the Alabama Department of Environmental Management to review. Alabama AAP held a public meeting to address the PP for Area B Soils, Sediment, and Surface Water.

## FY09 IRP Progress

Alabama AAP prepared the ROD for Area B Soils, Sediment, and Surface Water. The installation also finalized the RI for groundwater. In addition, Alabama AAP completed a round of groundwater monitoring. The cost of completing environmental restoration has changed significantly due to regulatory and technical issues.

Regulatory issues delayed the completion of the ROD for Area B Soils, Sediment, and Surface Water, and completion of the FS for groundwater.

## FY09 MMRP Progress

Alabama AAP has identified no MMRP sites.

## Plan of Action

Plan of action items for Alabama Army Ammunition Plant are grouped below according to program category.

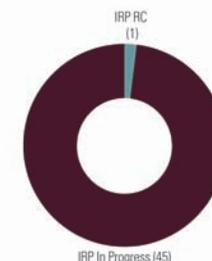
### IRP

- Complete the ROD for Area B Soils, Sediment, and Surface Water in FY10.
- Begin the FS for Area B Groundwater in FY10.
- Begin the PP and ROD for Area B Groundwater in FY11.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA917002323600	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Alameda, California (2,675 acres)	<b>Funding to Date:</b>	\$ 400.8 million
<b>Mission:</b>	Maintained and operated facilities and provided services for naval aviation activities and operating forces	<b>Est. CTC (Comp Year):</b>	\$ 136.9 million (FY 2019)
<b>HRS Score:</b>	50.0; placed on NPL in July 1999	<b>IRP Sites (Final RIP/RC):</b>	46 (FY2018)
<b>IAG Status:</b>	FFA signed in FY01	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	BTEX, chlorinated solvents, radium, heavy metals, herbicides, pesticides, petroleum hydrocarbons, PAHs, PCBs, VOCs, SVOCs, explosives, propellants	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-20



## Progress To Date

Prominent site types at Alameda Naval Air Station (NAS) include landfills, offshore sediment areas, plating and cleaning shops, pesticide control areas, a radium dial paint shop, transformer storage areas, and a former oil refinery. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1999. In FY01, DoD and EPA signed a federal facility agreement (FFA) outlining how they were going to proceed with cleanup. In September 1993, the BRAC Commission recommended closure of Alameda NAS and the installation closed in 1997. The installation formed a BRAC cleanup team in FY93 to develop a process for cleanup of sites. Alameda NAS completed a BRAC cleanup plan prioritizing sites for cleanup in FY94. In addition, the installation approved a community land reuse plan in FY96. In FY98, the installation received funding for technical assistance for public participation to help with the Operable Unit (OU) 1 remedial investigation (RI) review, the first technical assistance for public participation grant in the United States. The installation received additional technical assistance for public participation funding in FY03 and FY04. In FY03, the installation formed a Restoration Advisory Board (RAB) responsible for communicating cleanup progress with the community. In FY03 and FY09, Alameda NAS updated its community relations plan.

Alameda NAS completed 15 Records of Decision (RODs) which selected cleanup actions for Marsh Crust, Sites 1, 14, 15, 17, 20, 25, 26, 27, 28, 29, 30, and 31; and OUs 1 and 5. Cleanup progress at Alameda NAS for FY05 through FY08 is summarized below.

In FY05, Alameda NAS signed a No Further Action ROD at Site 29 (Skeet Range), which determined that no further cleanup activities were necessary. The installation conducted a removal action at Site 30 to address a potential risk caused by polyaromatic hydrocarbons (PAHs) in the soil. Additionally, the installation used innovative technology to complete a removal action on a portion of Site 5. The base removed a subsurface vault and tank containing petroleum hydrocarbons from the Least Tern Area. The installation also completed the RI and feasibility study (FS) to evaluate cleanup alternatives for OU 1 (Sites 6, 7, 8, and 16); completed a removal action at Site 16 and one area at Site 5; and completed FSs for OUs 4B (Site

17) and 6 (Site 28). The RAB held 12 meetings, reviewed environmental documents, and conducted a tour of the northwestern area. The BRAC cleanup team met monthly to discuss documents and strategies for site closure.

In FY06, Alameda NAS signed RODs for Sites 15 and 26. The installation also completed the proposed plan (PP) for OU 1 (Sites 6, 7, 8, and 16), and RIs for Sites 20 and 24. The RAB held 11 meetings, applied for a technical assistance for public participation grant, reviewed environmental documents, and conducted a RAB tour of two sites with active cleanup activities. The BRAC cleanup team met monthly to discuss documents and strategies for site closure.

In FY07, Alameda NAS completed RODs for Sites 14, 17, 25, and 28, and OUs 1 (Sites 6, 7, 8, and 16) and 5. The installation completed PPs for Sites 1 and 27. Alameda NAS continued the removal action at Site 5 to address chlorinated solvents in groundwater. The installation began time-critical removal actions at Sites 1, 2, and 32 to address lead and radiologically-impacted soil.

In FY08, Alameda NAS completed RODs for Sites 20, 27, and 31. The installation began cleanup at Sites 14, 26, and OU 5/Installation Restoration (IR) site 02, and completed FSs for Sites 2, 24, and 32. The installation found Public Benefit Conveyance 1 to be suitable to transfer. The RAB conducted two tours of the installation and held monthly meetings. The BRAC cleanup team also met monthly.

## FY09 IRP Progress

Alameda NAS completed RODs for Sites 1 and 30. The installation also completed removal actions for drain lines at Sites 5 and 10. The installation began cleanup at Sites 28 and OU 1. Alameda NAS completed PPs for Sites 2 and 22 and finalized land use control designs for cleanup at Sites 25 and 26, which restrict use or access to the sites. The installation finished the design for cleanup actions and began cleanup at Site 27. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed the completion of the Site 35 ROD, and delayed the design for cleanup at Site 1 and cleanup actions at Site 28 and OU 1. Technical issues delayed the

completion of cleanup and removal actions at Site 17 and OU 2C.

The installation updated the community relations plan. The BRAC cleanup team met monthly to discuss further strategies for site closure, and the RAB held 11 meetings.

## FY09 MMRP Progress

Alameda NAS has identified no MMRP sites.

## Plan of Action

Plan of action items for Alameda Naval Air Station are grouped below according to program category.

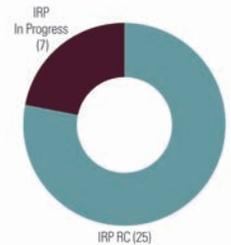
### IRP

- Install and launch cleanup systems at OU 1 in FY10-FY11.
- Update RI/FS for Site 32 in FY10-FY11.
- Conduct radiological surveys for the base in FY10-FY11.
- Complete RODs for Sites 2, 24, and 35 in FY10-FY11.
- Complete FSs and PPs for OUs 2A and 2B in FY10-FY11.
- Complete design and begin cleanup activities at Sites 1, 17, and 28; and OU 2C in FY11.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	GA417302369400	<b>Media Affected:</b>	Groundwater, Sediment, Soil
<b>Location (Size):</b>	Albany, Georgia (3,579 acres)	<b>Funding to Date:</b>	\$ 43.5 million
<b>Mission:</b>	Acquire, supply, and dispose of materials needed to sustain combat readiness of Marine Corps forces worldwide; acquire, maintain, repair, rebuild, distribute, and store supplies and equipment; conduct training	<b>Est. CTC (Comp Year):</b>	\$ 8.4 million (FY 2040)
<b>HRS Score:</b>	44.65; placed on NPL in December 1989	<b>IRP Sites (Final RIP/RC):</b>	32 (FY2008)
<b>IAG Status:</b>	FFA signed in July 1991	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	VOCs, PCBs, heavy metals, pesticides, PAHs, SVOCs, TCE	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-20



**Progress To Date**

The Albany Marine Corps Logistics Base (MCLB) is used to acquire, supply, and dispose of materials needed to sustain combat readiness of Marine forces worldwide. The sites at the installation are grouped into six operable units (OUs), including groundwater throughout the base (OU 6) and a site-screening group. Sites include disposal areas, storage areas, and landfills. Contaminants include trichloroethylene (TCE), polychlorinated biphenyls (PCBs), and heavy metals. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in December 1989. DoD and EPA signed a federal facility agreement (FFA) in July 1991 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Albany MCLB for realignment. The installation formed a technical review committee in FY89. In FY92, Albany MCLB completed a community relations plan. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY06.

To date, Albany MCLB has signed a No Further Action Record of Decision (ROD) for OU 2, which determined no further cleanup activities were necessary at the OU 2 site. The installation has also signed RODs, selecting cleanup actions for OUs 1, 3, 4, 5, and 6. In addition, the installation has signed an interim ROD at Solid Waste Management Unit (SWMU) 3. In FY02, Albany MCLB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Albany MCLB for FY05 through FY08 is summarized below.

In FY05, Albany MCLB implemented the groundwater cleanup systems. The installation completed cleanup at the two SWMUs and completed an explanation of significant differences for the OU 6 ROD. Additionally, the installation completed the design for cleanup of source areas and awarded the contract for the construction of the landfill cap.

In FY06, Albany MCLB completed injections into the groundwater and performed two rounds of monitoring to determine the effectiveness of the treatments. The installation completed a five-year review report that determined all selected

cleanup actions remained in place and were protective. The installation started construction of the landfill cap.

In FY07, Albany MCLB monitored the effectiveness of the groundwater treatments and continued to monitor cleanup using natural processes.

In FY08, Albany MCLB performed an optimization review of the groundwater monitoring program. The installation continued to monitor cleanup using natural processes.

**FY09 IRP Progress**

Albany MCLB continued to monitor cleanup using natural processes.

Contractual issues delayed construction of the landfill cap. Regulatory issues delayed the optimization review.

**FY09 MMRP Progress**

Albany MCLB has identified no MMRP sites.

**Plan of Action**

Plan of action items for Albany Marine Corps Logistics Base are grouped below according to program category.

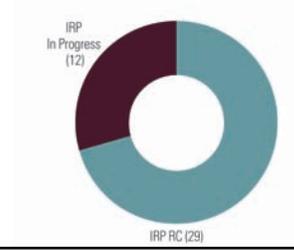
**IRP**

- Continue cleanup using natural processes in FY10.
- Complete construction of the landfill cap in FY10.
- Complete optimization review and implement recommendations in FY10.
- Update the community relations plan in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	WV317002369100	<b>Funding to Date:</b>	\$ 37.5 million
<b>Location (Size):</b>	Mineral County, West Virginia (1,628 acres)	<b>Est. CTC (Comp Year):</b>	\$ 38.3 million (FY 2038)
<b>Mission:</b>	Research, develop, and produce solid propellant rocket motors for DoD and NASA	<b>IRP Sites (Final RIP/RC):</b>	41 (FY2016)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in January 1998	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, RDX, HMX, perchlorate, silver, SVOCs, explosives, propellants, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-182
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The Allegany Ballistics Laboratory was used for research, development, and production of solid propellant rocket motors for DoD and NASA. Contaminants found at the installation included volatile organic chemicals (VOCs), RDX, HMX, perchlorate, and silver. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1994. DoD and EPA signed a federal facility agreement (FFA) in January 1998 to outline how they were going to proceed with cleanup. In FY94, the installation established an administrative record and two information repositories. In FY95, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board. In FY99, the installation issued a draft community relations plan. To ensure continuous monitoring and improvement, the installation completed a five-year review report for Sites 1, 5, and 10 in FY08.

Previous studies identified environmental restoration sites at this government-owned, contractor-operated installation. A confirmation study recommended further investigation at eight sites. A later study identified 119 solid waste management units (SWMUs) and 12 areas of concern, with 61 SWMUs recommended for further cleanup action. The installation has signed Records of Decision (RODs), which selected cleanup actions for Sites 1 (groundwater), 5, and 10. In addition, the installation has signed a No Further Action ROD, which determined that no further cleanup activities were necessary at Sites 2, 3, 4B, and 7. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination under the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Allegany Ballistics Laboratory for FY05 through FY08 is summarized below.

In FY05, Allegany Ballistics Laboratory completed sampling at Site 1 Soils, and began the remedial investigation (RI) and associated assessment of potential risks to human health and the environment. The installation completed RIs and feasibility studies (FSs) to evaluate cleanup alternatives for Sites 2 and 5. The installation also finalized the cleanup plan for Site 3; completed a soil removal action at Site 12; and signed a ROD for Site 10 (groundwater).

In FY06, Allegany Ballistics Laboratory completed an optimization study of the groundwater cleanup system serving Sites 1 and 5. The installation also finalized the RI for Site 1 Soils, and sub-divided the site into four separate areas. The installation signed a ROD and constructed a barrier wall to filter groundwater at the Site 5 landfill.

In FY07, Allegany Ballistics Laboratory completed the RODs for Site 3 and Site 10 Soils.

In FY08, Allegany Ballistics Laboratory completed a debris characterization and removal investigation at Site 1. The installation also completed the assessment of potential risks to the environment from surface water and sediment at Site 1. Additionally, the installation completed RODs for Sites 2 and 4B. Allegany Ballistics Laboratory completed an RI for Site 12.

**FY09 IRP Progress**

Allegany Ballistics Laboratory completed an FS for Sites 11 and 12. The installation also completed a successful pilot study at SWMU 27A, which is likely to serve as the final remedy for the site, and completed a soil removal at SWMU 37W to close the site. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed the completion of an FS for Site 1 Soils.

**FY09 MMRP Progress**

Allegany Ballistics Laboratory has identified no MMRP sites.

**Plan of Action**

Plan of action items for Allegany Ballistics Laboratory are grouped below according to program category.

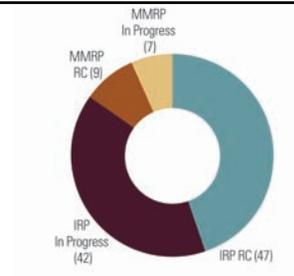
**IRP**

- Complete FS for Site 1 Soils in FY10.
- Conduct RI/FS at SWMU 27A in FY10-FY11.
- Begin design for cleanup at Site 1 Soils in FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	GU957309951900	<b>Funding to Date:</b>	\$ 123.1 million
<b>Location (Size):</b>	Yigo, Guam (15,000 acres)	<b>Est. CTC (Comp Year):</b>	\$ 113.6 million (FY 2014)
<b>Mission:</b>	Provide troops, equipment, and facilities in the Pacific	<b>IRP Sites (Final RIP/RC):</b>	89 (FY2014)
<b>HRS Score:</b>	50.00; placed on NPL in October 1992	<b>MMRP Sites (Final RIP/RC):</b>	16 (FY2014)
<b>IAG Status:</b>	FFA signed in March 1993	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Metals, pesticides, PAHs, PCBs, VOCs, SVOCs, radioactive materials, phenols, BTEX	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-66
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

The mission of Andersen Air Force Base (AFB) is to provide troops, equipment, and facilities in the Pacific. Preliminary assessments (PAs) have identified landfills (LFs), waste pits (WPs), fire training areas (FTAs), hazardous waste storage areas (HWSAs), and spill sites. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1992. DoD and EPA signed a federal facility agreement (FFA) in March 1993 to outline how they were going to proceed with cleanup. The 2005 BRAC Commission recommended Andersen AFB for realignment. In 1995, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board. To ensure continuous monitoring and improvement, Andersen AFB completed a five-year review report in FY04.

Sites identified at Andersen AFB are grouped into six operable units (OUs). To date, the installation has signed Records of Decision (RODs) for the Marianas Bonins OU, the Urunao OU, and LFs 8 and 13; the RODs selected cleanup actions for these sites. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Andersen AFB for FY05 through FY08 is summarized below.

In FY05, the installation converted 33 areas of concern (AOCs) (the northeast sites) into Installation Restoration Program (IRP) sites. Andersen AFB completed the cleanup system design for the Urunao Dump Site (DS). The installation also signed a ROD requiring no further cleanup action at the Harmon OU. The installation continued groundwater monitoring at the Main Base and Marianas Bonins OUs. Under the MMRP, the installation began the PAs for all sites.

In FY06, Andersen AFB completed the interim cleanup actions and cleanup verification report for the Ritidian DS. The installation also completed the interim cleanup actions at LF 14 and started the interim cleanup actions at LFs 19 and 20. Andersen AFB completed a remedial investigation (RI) and feasibility study (FS), which evaluated cleanup alternatives for former AOC Disposal Areas (DAs) 52, 53, 54, and FTA 2. Andersen AFB also finalized the PA and site inspection (SI) for

33 former AOCs, and added 2 solid waste management units to the IRP inventory. The installation awarded funding for the construction of cleanup systems at the Urunao DSs. Under the MMRP, the installation developed a relative priority for cleanup at each site.

In FY07, Andersen AFB signed four RODs and submitted two other RODs for signature. The installation also developed an exit strategy for the FTA 2 soil vapor extraction cleanup system. Under the MMRP, Andersen AFB completed a PA.

In FY08, Andersen AFB submitted the RI/FS for WPs 1 and 2 to regulators. The installation also signed RODs for LFs 8 and 13. Additionally, Andersen AFB began RI/FSs and proposed plans for Main Base LFs 14 and 18; WP 3; FTA 2; HWSA 1; operations support buildings Site 1, 2, and 3; and Building 18006. The installation executed cleanup actions at the Urunao DS and began the second five-year review report for the Marianas Bonins OU. Under the MMRP, Andersen AFB began SIs at all identified sites.

**FY09 IRP Progress**

Andersen AFB installed cleanup systems at Urunao DSs 1 and 2. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed the signing of RODs for LFs 14 and 18; WP 3; FTA 2; HWSA 1; operations support buildings Site 1, 2, and 3; and Building 18006. Regulatory issues also delayed the completion of the RI/FS for FTA 3 and LF 19 and the second five-year review report of the Marianas Bonins OU ROD.

**FY09 MMRP Progress**

Administrative issues delayed completion of the SIs.

**Plan of Action**

Plan of action items for Andersen Air Force Base are grouped below according to program category.

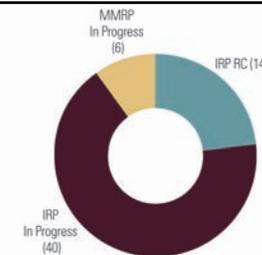
**IRP**

- Begin RI/FS for AOC 81, FTA 3, Building 18006, and LF 19 in FY10.
- Conduct long-term management at LF 2, 8, 10, and 17; WPs 1 and 7; and FTA 2 in FY10.
- Complete cleanup completion report for Urunao DSs 1 and 2 in FY10.
- Conduct groundwater sampling rounds 28 and 29 in FY10.
- Complete second five-year review report for Marianas Bonins OU in FY10.
- Finalize ROD for LFs 14 and 18; WP 3; FTA 2; HWSA 1; Building 18006; and operations support buildings Site 1, 2, and 3 in FY10.
- Transfer environmental restoration responsibilities to Navy Base Guam in FY10.

**MMRP**

- Complete SIs in FY10.

<b>FFID:</b>	MD357182400000	<b>Funding to Date:</b>	\$ 81.5 million
<b>Location (Size):</b>	Camp Springs, Maryland (4,300 acres)	<b>Est. CTC (Comp Year):</b>	\$ 44.8 million (FY 2016)
<b>Mission:</b>	Provide Presidential airlift support	<b>IRP Sites (Final RIP/RC):</b>	54 (FY2011)
<b>HRS Score:</b>	50.00; placed on NPL in June 1999	<b>MMRP Sites (Final RIP/RC):</b>	6 (FY2014)
<b>IAG Status:</b>	FFA under negotiation	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	SVOCs, VOCs, PAHs, PCBs, pesticides, metals, explosives, propellants, BTEX	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-97
<b>Media Affected:</b>	Surface Water, Sediment, Soil, Groundwater		



**Progress To Date**

The mission at Andrews Air Force Base (AFB) is to provide Presidential airlift support. Environmental studies at Andrews AFB began in 1985. Historic fuel supply activities, landfills (LFs), and other support and training operations contaminated ground and surface water with metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and pesticides. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in June 1999. DoD and EPA are currently negotiating a federal facility agreement (FFA) to outline how they will proceed with cleanup. The 2005 BRAC Commission recommended Andrews AFB for realignment.

To date, the installation has closed 8 sites under the petroleum program and has signed 21 Records of Decision (RODs) that selected cleanup actions for 22 sites. In FY05, Andrews AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP sites was identified. Cleanup progress at Andrews AFB for FY05 through FY08 is summarized below.

In FY05, Andrews AFB completed remedial investigations (RIs) for fire training (FT) site 04 and Storage Tank (ST) site 10, and submitted draft feasibility studies (FSs) to evaluate cleanup alternatives for LF 05 and ST 14. The installation completed RODs for FT 04, Spill Sites (SSs) 12 and 13, and ST 10. The installation determined that no further cleanup action was necessary for SSs 12 and 13. The installation also successfully completed a performance-based contract (PBC) with the regulatory closure of ST 17 and awarded a PBC to install and operate cleanup systems at ST 14 and SS 22 for three years. Under the MMRP, Andrews AFB began the preliminary assessment (PAs).

In FY06, Andrews AFB completed RIs at LF 05 and ST 14. The installation also signed a ROD for FT 04, and finalized decision documents that selected cleanup actions for four sites: ST 17, 18, 20, and SS 21. Andrews AFB completed Triad field investigation for Waste Pit (WP) 16 and FT 02 and began Triad field investigation for SS 27. Triad investigations use pre-existing criteria to expedite site characterizations. The

installation also awarded a PBC for Triad investigations of SSs 11 and 26, and Area of Concern (AOC) 32.

In FY07, Andrews AFB finalized RIs at FT 03, WP 16, Storm Drain (SD) site 23, and LFs 06 and 07. In addition, the completion of Triad site inspections at SS 11, 26, and 28 (AOC 32). The installation also completed the FSs for LF 05 (Source 4) and ST 14, and signed RODs for six sites: AOC 26, Site 23, STs 14 and 15, SS 22, and WP 16. With the exception of ST 14 and SS 22, each ROD required no further cleanup action. Andrews AFB installed cleanup systems at ST 14 and SS 22 in accordance with the ROD. Additionally, Andrews AFB completed the preliminary design for cleanup at LF 05. The installation awarded two PBCs to implement cleanup systems for FT 02, LF 05, ST 08, and SS 27, which included three years of monitoring. Under the MMRP, the installation finalized PAs at the identified site. In addition, the installation completed a PA and site inspection (SI) for the Skeet and Trap Club (Site TS 345). All RODs included public comment periods, which were announced in local newspapers.

In FY08, Andrews AFB completed an FS for FT 03. The installation also began RODs for FT 02 and 03, LF 05, ST 08 and 19, and SS 27. Andrews AFB completed and signed RODs for FT 03 and ST 19. The installation also completed construction of cleanup systems at FT 03, and ST 14 and 19. Under the MMRP, Andrews AFB finished RIs for SSs 11, 26, 27, and 28.

**FY09 IRP Progress**

Andrews AFB completed RODs for FT 02, LF 05, and Site ST 08. No further construction of cleanup systems is required at sites ST 08 and 19. Andrews AFB began the ROD for SS 27 and the FS for LFs 06 and 07. Additionally, Andrews AFB began negotiations with EPA to establish an FFA. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues relating delayed the FS, proposed plan (PP), and ROD for SS 27.

**FY09 MMRP Progress**

Andrews AFB completed the PA and began the SI. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

**Plan of Action**

Plan of action items for Andrews Air Force Base are grouped below according to program category.

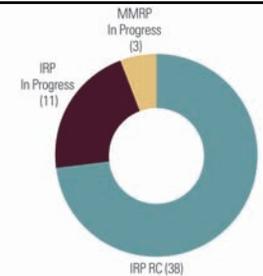
**IRP**

- Complete FS for LFs 06 and 07, and SSs 11, 26, and 28 in FY10.
- Complete FS, PP, and ROD for SS 27 in FY10.
- Install and operate cleanup systems at LF 05, FT 02 and SS 27 in FY10.
- Assume environmental restoration responsibilities from Naval Air Facility Washington in FY10.
- Complete five-year review reports for all Andrews AFB sites in FY10.

**MMRP**

- Complete SI in FY10.

<b>FFID:</b>	AL421382002700	<b>Funding to Date:</b>	\$ 67.9 million
<b>Location (Size):</b>	Anniston, Alabama (600 acres)	<b>Est. CTC (Comp Year):</b>	\$ 33.2 million (FY 2041)
<b>Mission:</b>	Maintain combat vehicles	<b>IRP Sites (Final RIP/RC):</b>	49 (FY2012)
<b>HRS Score:</b>	51.91; placed on NPL in March 1989	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2018)
<b>IAG Status:</b>	IAG signed in June 1990	<b>Five-Year Review Status:</b>	Completed and underway
<b>Contaminants:</b>	phenols, petroleum products, acids, VOCs, caustics, SVOCs, Heavy metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-1
<b>Media Affected:</b>	Groundwater, Surface Water, Soil		



**Progress To Date**

Since 1948, the Army has repaired, rebuilt, and modified combat vehicles and artillery equipment at the Anniston Army Depot (AD) Southeast Industrial Area. Anniston AD also repairs small arms. Painting, degreasing, and plating operations at the installation generated wastes containing volatile organic compounds (VOCs), phenols, heavy metals, and petroleum distillates. The potential risk to human health and the environment was significant enough for EPA to place the Southeast Industrial Area on the NPL in March 1989. DoD and EPA signed an interagency agreement (IAG) in 1990 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Anniston AD for realignment. In FY98, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community, and updated the community relations plan. To ensure continuous monitoring and improvement, Anniston AD completed five-year review reports in FY99 and FY04.

To date, Anniston AD has signed three interim Records of Decision (RODs) and two final RODs, which selected cleanup actions for 39 environmental restoration sites. In FY03, Anniston AD conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Anniston AD for FY05 through FY08 is summarized below.

In FY05, the installation completed Phase III comprehensive groundwater remedial investigation (RI) and submitted it to regulatory agencies for comment. Anniston AD also developed a partnership with Jacksonville State University to compile and analyze data relevant to trichloroethylene (TCE) concentrations in Coldwater Spring. Anniston AD, in partnership with Anniston Waterworks and Sewer Board, also constructed an additional treatment facility at the Coldwater Spring water treatment plant. Under the MMRP, the installation identified an additional site, a former buffer zone for open burning operation. The installation also submitted a site inspection (SI) report for three sites.

In FY06, the installation completed the final design for cleanup and cleanup work plan for the Southeast Industrial Area Soil Operable Unit (OU). Anniston AD also completed the design for cleanup, completed cleanup, and signed the ROD for the

Ammunition Storage Area OU 3 with the Alabama Department of Environmental Management and EPA. Additionally, Anniston AD collected monthly samples from three locations at Coldwater Spring. Under the MMRP, Anniston AD completed the SIs; three sites were evaluated as low priority and recommended for RI. The installation held quarterly RAB meetings to discuss the availability of funding for technical assistance for public participation.

In FY07, Anniston AD completed the comprehensive groundwater Phase III RI for OU 1. Anniston AD also collected monthly samples from three locations at Coldwater Spring and annual samples from nearby private drinking water wells. The installation also completed and submitted the Annual Land Use Control (LUC) Report to evaluate the effectiveness of restrictions on the use of and access to OU 2. The installation purchased the adjacent property pursuant to CERCLA and held quarterly RAB meetings.

In FY08, Anniston AD completed the comprehensive groundwater Phase III FS and contracted a focused FS to evaluate cleanup alternatives for OU 1. The installation also collected monthly samples from three locations at Coldwater Spring and annual samples from nearby private drinking water wells. Anniston AD also signed the ROD for Southeast Industrial Area Soils OU 2 with Alabama Department Environmental Management and EPA. In addition, Anniston AD completed groundwater monitoring under the operational cleanup system for OU 3. Anniston AD also completed and submitted the Annual LUC Report for OU 2 to stakeholders and held quarterly RAB meetings.

**FY09 IRP Progress**

Anniston AD continued sampling of selected groundwater monitoring wells in OU 1. The installation also continued monthly sampling of Coldwater Spring at three locations and yearly sampling of nearby private drinking water wells. Additionally, Anniston AD continued the operation and maintenance (O&M) of the shallow groundwater treatment plant in the Southeast Industrial Area. The installation also continued with LUC maintenance and monitoring for OU 2 and submitted the Annual LUC Report to the regulators. Anniston AD completed groundwater monitoring using natural processes under the operational cleanup system for OU 3. The installation

also began the expanded SI, approved work plans, and started fieldwork at OU 5.

Contractual issues delayed the completion of the expanded SI for OU 5.

The installation held quarterly RAB meetings.

**FY09 MMRP Progress**

Anniston AD conducted no MMRP actions.

**Plan of Action**

Plan of action items for Anniston Army Depot are grouped below according to program category.

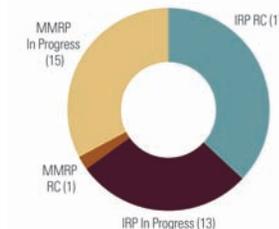
**IRP**

- Complete expanded SI at OU 5 in FY10.
- Continue groundwater sampling at OUs 1 and 3 in FY10-FY11.
- Continue LUC maintenance and monitoring for OU 2 in FY10-FY11.
- Continue O&M of the shallow groundwater treatment plant and complete the focused FS for OU 1 in FY10-FY11.

**MMRP**

- Begin RI for three sites in FY10.

<b>FFID:</b>	TN457172404400	<b>Funding to Date:</b>	\$ 112.2 million
<b>Location (Size):</b>	Coffee and Franklin Counties, Tennessee (40,000 acres)	<b>Est. CTC (Comp Year):</b>	\$ 58.1 million (FY 2035)
<b>Mission:</b>	Conduct aerospace ground tests, engineering analysis, technical evaluations, and simulate operational conditions	<b>IRP Sites (Final RIP/RC):</b>	30 (FY2010)
<b>HRS Score:</b>	50.00; proposed for NPL in August 1994	<b>MMRP Sites (Final RIP/RC):</b>	16 (FY2015)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	VOCs, PCBs, BTEX, PAHs, solvents, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-156
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Arnold Engineering Development Center (EDC) is an advanced aerospace testing, evaluation, and simulation facility. Sites at the installation include a landfill (LF), a chemical treatment plant, the main testing area, a leaching pit, a leachate burn area, and a fire training (FT) area. Chlorinated solvents are the primary contaminants. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1994. In FY95, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB).

The installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Arnold EDC for FY05 through FY08 is summarized below.

In FY05, Arnold EDC completed draft statements of basis describing cleanup at FT 10 and Waste Pits (WPs) 02 and 11. The installation also completed a corrective measures study (CMS) for LF 03 and bench-scale treatability studies for WP 06. Arnold EDC began preliminary assessments (PAs) for all MMRP sites. The installation hosted two site tours, one for RAB members and one for local university students.

In FY06, Arnold EDC completed the interim measure construction effort at Spill Site (SS) 22. The installation also completed a dechlorination interim measure at WP 12. The installation continued CMSs at LF 01 and WPs 02, 06, 08, and 11. The RAB conducted a tour for local university students.

In FY07, Arnold EDC completed interim measure expansion at LF 01. The installation also completed the interim measure design of a thermal treatment cleanup study to address the potential groundwater contamination source area at WP 08. Arnold EDC completed CMSs for WPs 06, 08, and 12, and SS 19. Under the MMRP, the installation completed a PA. Arnold EDC also completed a wide area assessment using light detection and ranging terrain data collection to identify military munitions features.

In FY08, Arnold EDC partnered with the Tennessee Department of Environment and Conservation and Tennessee Army National Guard to prioritize the cleanup of contaminated areas at SS 19. Arnold EDC completed RCRA facility investigation reports for SSs 25 and 26. Additionally, the installation completed CMS reports for LF 01, SSs 25 and 26, and WP 08. The installation prepared draft statements of basis for LF 03, Site Storm Drain (SD) 05, SS 19, and WP 02. Arnold EDC awarded a project to treat groundwater contamination at WP 08. Under the MMRP, Arnold EDC also conducted a site inspection (SI) at historical ranges. The RAB toured the MMRP Site TG 28 and received an SI briefing from the installation.

**FY09 IRP Progress**

Arnold EDC began construction of a thermal treatment system at WP 08. The installation implemented the dig and haul corrective measures project for dioxin-contaminated soils and removed polyaromatic hydrocarbon (PAH) soils from the Old Camp Forrest Incinerator and Area S Foundations. The installation also replaced existing gas leachate lines with larger lines at LF 03. Arnold EDC started a project to implement alternative cleanup measures at LF 01, and SSs 25 and 26. The installation drafted statements of basis for LF 03, SS 22, and WP 06. Tennessee Department of Environment and Conservation reissued a hazardous waste management permit with updated corrective action requirements. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Arnold EDC began development of a draft work plan, an explosive safety submission, and an engineering evaluation/cost analysis (EE/CA) for cleanup at 4 of the 11 sites.

Arnold EDC briefed the RAB and the Tennessee Department of Environment and Conservation on the final SI recommendations, and solicited public comments; no comments were received.

**Plan of Action**

Plan of action items for Arnold Engineering Development Center are grouped below according to program category.

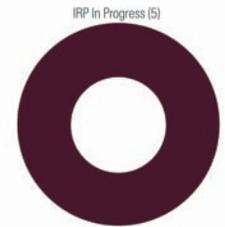
**IRP**

- Complete construction of the thermal treatment system at WP 08, and begin cleanup of perchloroethylene (PCE)-contaminated groundwater in the targeted thermal treatment zone in FY10.
- Submit construction completion report for SS 19 to the Tennessee Department of Environment and Conservation for review and concurrence in FY10.
- Complete alternative cleanup measures at LF 01, and SSs 25 and 26 in FY10.
- Draft statements of basis for LF 01, SSs 19, 25, and 26, SD 05, and WP 08 in FY10.
- Request funding for and implement recommendations from the Environmental Restoration Program Optimization Team of the Air Force Center for Engineering and the Environment in FY10.
- Treat groundwater contamination at WP 08 in FY10.

**MMRP**

- Finalize work plan, explosive safety submission, and EE/CA documents, and begin cleanup at Small Arms Ranges 31 and 32 and Sites TG 27 and 28 in FY10.
- Submit final cleanup report to the Tennessee Department of Environment and Conservation for review and concurrence in FY10.
- Develop approval documents for no further cleanup action at all sites in FY10-FY11.

<b>FFID:</b>	NJ257282844900	<b>Est. CTC (Comp Year):</b>	\$ 2.1 million (FY 2017)
<b>Location (Size):</b>	Pleasantville, New Jersey (280 acres)	<b>IRP Sites (Final RIP/RC):</b>	5 (FY2011)
<b>Mission:</b>	Provide Air National Guard training	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	39.65; placed on NPL in August 1990	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>IAG Status:</b>	FFA signed in May 1993	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-36
<b>Contaminants:</b>	VOCs, SVOCs, lead, copper, pesticides, metals, PCBs		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 2.1 million		



## Progress To Date

Atlantic City Air National Guard (ANG) Base is home to the 177th Fighter Squadron whose mission is to maintain fighter aircraft on continuous peacetime air defense alert to preserve U.S. air sovereignty. The installation is part of the Federal Aviation Administration (FAA) Technical Center covering approximately 5,100 acres which includes the FAA Williams J. Hughes Technical Center, Atlantic City ANG Base, Atlantic City International Airport, and U.S. Coast Guard Air Station Atlantic City. All of the property is federally owned except for 84 acres, which is owned by the South Jersey Transportation Authority and includes the airport terminal and support facility areas. Sites included a salvage yard, fire training facility, jet fuel farm, fuel mist test facility, and landfill. Volatile organic compounds (VOCs), metals, and pesticides have been detected in groundwater. EPA placed the FAA facility on the NPL in August 1990 because of its proximity to the South Branch of Doughty's Mill Stream, which flows into the Upper Atlantic City Reservoir, a source of drinking water for local residents. In addition, a sole-source aquifer underlying the FAA facility contributes 85 to 90 percent of the watershed for the Upper Atlantic City Reservoir. DoD and EPA signed a federal facility agreement (FFA) in May 1993 to outline how they were going to proceed with cleanup. The 2005 BRAC Commission recommended Atlantic City ANG Base for realignment.

Environmental studies have identified five Installation Restoration Program (IRP) sites on the Atlantic City ANG Base property consisting of 280 acres under permit from the FAA. In FY05, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Atlantic City ANG Base for FY05 through FY08 is summarized below.

In FY05, Atlantic City ANG Base started a remedial investigation (RI) at four sites.

In FY06, Atlantic City ANG Base continued the RI at four sites.

In FY07, Atlantic City ANG Base continued the RI at four sites.

In FY08, Atlantic City ANG Base continued the RI at four sites and started a feasibility study (FS) to evaluate cleanup alternatives.

## FY09 IRP Progress

Atlantic City ANG Base received and began to incorporate state comments for the RI. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues delayed the FS at four sites.

## FY09 MMRP Progress

Atlantic City ANG Base has identified no MMRP sites.

## Plan of Action

Plan of action items for Atlantic City Air National Guard Base are grouped below according to program category.

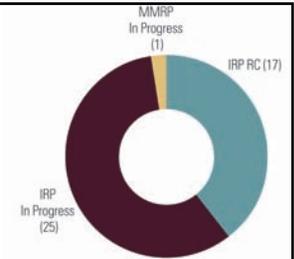
### IRP

- Finalize FS for four sites in FY10.
- Finalize a Record of Decision, selecting cleanup actions for four sites in FY11.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	WA017002729100	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Silverdale, Washington (7,201 acres)	<b>Funding to Date:</b>	\$ 91.8 million
<b>Mission:</b>	Provide support base for Trident submarines	<b>Est. CTC (Comp Year):</b>	\$ 35.5 million (FY 2040)
<b>HRS Score:</b>	30.42 (Bangor Ordnance Disposal), placed on NPL in July 1987; 55.91 (Bangor Naval Submarine Base), placed on NPL in August 1990	<b>IRP Sites (Final RIP/RC):</b>	42 (FY2001)
<b>IAG Status:</b>	FFA signed in January 1990	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2013)
<b>Contaminants:</b>	Residual TNT, RDX, Otto fuel, VOCs, SVOCs, metals, explosives, propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-179



**Progress To Date**

From the early 1940s until it was commissioned as a submarine base in 1977, Bangor Naval Submarine Base (NSB) stored, processed, and shipped munitions. Past chemical releases at the installation are primarily related to the detonation, demilitarization, and disposal of explosive ordnance and associated activities. The installation conducted an initial assessment study in FY83 to identify sites requiring further investigation because of suspected soil and groundwater contamination. The potential risk to human health and the environment was significant enough for EPA to place the Bangor Ordnance Disposal Area on the NPL in July 1987 and the Bangor NSB in August 1990. In January 1990, DoD, EPA, and the State of Washington signed a federal facility agreement (FFA) for the installation to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Bangor NSB for realignment. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY00 and FY05, and updated the community relations plan in FY08.

This installation grouped sites into operable units (OUs). To date, the installation completed eight Records of Decision, selecting cleanup actions for environmental restoration sites. Bangor NSB also has submitted construction completion documents for OUs 1, 2, and 7 were submitted to EPA and the Washington Department of Ecology. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination under the Military Munitions Response Program (MMRP); one MMRP site has been identified. Cleanup progress for Bangor NSB for FY05 through FY08 is summarized below.

In FY05, Bangor NSB completed an optimization study at OUs 1, 2, and 8, and presented an alternate remedy and systems shutdown to regulators. The installation completed a second five-year review report. The installation also completed the Pogy Road cleanup and discontinued product recovery at OU 8.

In FY06, the installation completed repairs to Site 201 and negotiated with regulators to implement recommendations from the OUs 1, 2, and 8 optimization study. Bangor NSB also discontinued sampling at Site 26. The installation finished sampling at OUs 1, 2, and 7, and did not detect perchlorate.

Under the MMRP, Bangor NSB completed a preliminary investigation and report at Site EO 300.

In FY07, Bangor NSB implemented an internal optimization study at Sites 200 and 204 (OU 1) to close treatment plants. Bangor NSB also repaired wells at OUs 1 and 2. The installation started an assessment of damaged engineering controls at OUs 1, 2, and 8. The installation began an assessment and repair of institutional controls at all OUs, which are tools that minimize the potential for human exposure. The installation continued long-term operation (LTO) and long-term management (LTM) at OUs 1, 2, and 8. Under the MMRP, the installation began a remedial investigation (RI) at Site EO 300.

In FY08, Bangor NSB continued LTO and LTM at OUs 1, 2, and 8, and completed repairs on control systems. The installation began planning and operations for a removal action at a landfill at Site 10. Bangor NSB continued the RI at MMRP Site EO 300. The installation updated the community relations plan.

**FY09 IRP Progress**

Bangor NSB completed a removal action at Site 10 and began to reduce sampling frequency at OU 8. The installation updated a site model, began installing new wells, and started a study to close the treatment plant at OU 1. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Bangor NSB completed the removal action and RI at Site EO 300 and continued monitoring munitions constituent investigations.

**Plan of Action**

Plan of action items for Bangor Naval Submarine Base are grouped below according to program category.

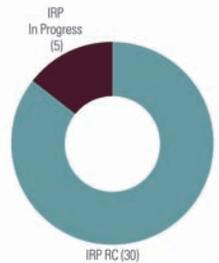
**IRP**

- Conduct a third five-year review report in FY10-FY11.
- Continue study to evaluate stability of contaminated area at OU 1 in FY10-FY11.
- Conduct a pilot study to address potential for contaminated area at OU 8 to migrate off-base in FY10-FY11.
- Install additional wells for compliance monitoring at OU 2 in FY10-FY11.

**MMRP**

- Complete removal action of lead-contaminated soil in FY10-FY11.
- Complete risk assessment of trap range area in FY10-FY11.
- Complete RI at Site EO 300 in FY10-FY11.

<b>FFID:</b>	HI917002432600	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Barbers Point, Hawaii (3,816 acres)	<b>Funding to Date:</b>	\$ 62.7 million
<b>Mission:</b>	Maintain and operate facilities and provide services and material support to aviation activities and units of the operating forces	<b>Est. CTC (Comp Year):</b>	\$ 6.2 million (FY 2016)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	35 (FY2014)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Heavy metals, petroleum hydrocarbons, pesticides, solvents, asbestos, PCBs, VOCs, SVOCs	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-21



**Progress To Date**

In July 1993, the BRAC Commission recommended closure of Barbers Point Naval Air Station (NAS). The installation closed on July 2, 1999. In FY94, the installation completed an Environmental Baseline Survey to determine the presence of potential environmental hazards, and formed a Restoration Advisory Board to discuss cleanup progress with the community. Also in FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. In FY97, the BRAC cleanup team completed the latest version of the BRAC cleanup plan with community input to prioritize sites requiring environmental restoration, along with a land reuse plan. To ensure continuous monitoring and improvement, the installation completed the first five-year review report in FY06.

To date, the installation has signed Records of Decision, which selected cleanup actions for Sites 1, 8, 13, 15, 19, and 20. The installation closed Sites 5, 8 through 13, and 19 in FY99, and Sites 2 and 18 in FY07. The installation transferred BRAC parcels to the Department of Hawaiian Home Lands in FY02 and FY08. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress for Barbers Point NAS for FY05 through FY08 is summarized below.

In FY05, Barbers Point NAS completed an assessment of potential risks to the environment for non-BRAC Sites 6, 7, 17, and 26 through 31. The installation also completed the removal action for non-BRAC Sites 6, 7, and 29. Additionally, the installation completed decision documents, which selected cleanup actions for non-BRAC Sites 6, 7, and 27. The installation completed additional sampling and an assessment of potential risks to the environment at Ordy Pond. Barbers Point NAS completed the cap for the consolidation unit.

In FY06, Barbers Point NAS completed the first five-year review report for various sites.

In FY07, Barbers Point NAS achieved site closeout for Ordy Pond (Site 2), and the Northern and Southern Trap and Skeet Range (Site 18). The BRAC cleanup team attended public meetings on proposed plans for closed sites.

In FY08, Barbers Point NAS and the BRAC cleanup team found various parcels suitable to transfer. The installation completed the monitoring well abandonment work plan. The installation also transferred BRAC parcels to the Department of Hawaiian Home Lands.

**FY09 IRP Progress**

Barbers Point NAS completed closeout of one underground storage tank and well abandonment. The installation also determined that additional parcels were suitable for transfer. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Barbers Point NAS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Barbers Point Naval Air Station are grouped below according to program category.

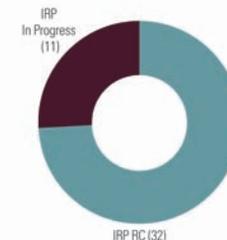
**IRP**

- Determine if two remaining parcels are suitable to transfer in FY10-FY11.
- Complete the remaining well abandonment in FY10-FY11.
- Complete the environmental hazard management plan in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA917302426100	<b>Funding to Date:</b>	\$ 111.0 million
<b>Location (Size):</b>	Barstow, California (5,688 acres)	<b>Est. CTC (Comp Year):</b>	\$ 42.9 million (FY 2039)
<b>Mission:</b>	Maintain, repair, rebuild, store, and distribute supplies and equipment; formerly conducted industrial operations	<b>IRP Sites (Final RIP/RC):</b>	43 (FY2017)
<b>HRS Score:</b>	37.93; placed on NPL in November 1989	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in October 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Heavy metals, PCBs, petroleum hydrocarbons, pesticides, herbicides, MTBE, VOCs, SVOCs, radioactive materials, TCE	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-21
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Barstow Marine Corps Logistics Base (MCLB) consists of Yermo Annex, Nebo Main Base, and the Rifle Range. Vehicle maintenance, repair and maintenance of weapons and missile systems, and storage of petroleum and chemical products contributed to contamination. Site types include sludge disposal areas, plating waste disposal areas, low-level radioactive waste storage areas, spill sites, underground storage tank (UST) sites, and evaporation ponds. The potential risk to human health and the environment from high concentrations of trichloroethylene (TCE) detected in groundwater monitoring wells was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in October 1990 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Barstow MCLB for realignment. The installation established an information repository and administrative record in FY91. The installation formed a technical review committee responsible for communicating cleanup progress with the community, and prepared a community relations plan; the community relations plan was revised in FY02. Public meetings are held annually; however, no community interest exists in forming a Restoration Advisory Board. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY03 and FY08.

To date, the installation has completed Records of Decision (RODs) for Operable Units (OUs) 1 through 6, which selected cleanup actions for these sites. The installation closed OUs 3 and 4 in FY00, and OUs 5 and 6 in FY02. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Barstow MCLB for FY05 through FY08 is summarized below.

In FY05, the installation completed repairs at CERCLA Area of Concern (AOC) 7. Cleanup operations at CERCLA AOCs 37 and 38, and long-term management (LTM) of the landfill cap continued. The installation also completed optimization studies for OUs 1 and 2. Barstow MCLB continued working with the Navy's Office of the General Council to recapture funds related to the methyl tertiary-butyl ether (MTBE)-contaminated area.

The base received regulatory approval to close 44 USTs. In FY06, Barstow MCLB, EPA, and the State of California approved the OU 2 Nebo South ROD. The installation implemented cleanup operations and activities for groundwater at CERCLA AOCs 37 and 38, and LTM of landfills. Barstow MCLB continued to coordinate with the Office of the General Council to recapture funds related to the MTBE-contaminated area. The installation also began an assessment of potential risks to the environment and a remedial investigation (RI) at OU 7.

In FY07, the installation repaired CERCLA AOC 37 and 38 cleanup systems. Barstow MCLB continued partnerships with regulators through systematic planning, meetings, and site tours.

In FY08, Barstow MCLB continued system optimization at CERCLA AOCs 37 and 38. The installation also continued to inject air into the groundwater and remove vapor contaminants from the soil at CERCLA AOC 6 and the OU 2 Nebo North contaminated area. The installation updated the site master plan and FFA schedule, and completed a second five-year review report. The installation also continued partnerships with the regulators through systematic planning, meetings, and site tours.

**FY09 IRP Progress**

Barstow MCLB completed and issued the land use control design for cleanup, which restricts use of and access to sites, and conducted an optimization study for cleanup.

Administrative and regulatory issues delayed the RI and assessment of potential risks to the environment at OU 7. Administrative issues also delayed the MTBE settlement agreement.

**FY09 MMRP Progress**

Barstow MCLB has identified no MMRP sites.

**Plan of Action**

Plan of action items for Barstow Marine Corps Logistics Base are grouped below according to program category.

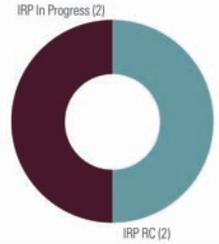
**IRP**

- Update base master plan in FY10.
- Complete feasibility study to evaluate cleanup alternatives for OU 7 in FY10-FY11.
- Complete MTBE settlement agreement in FY10.
- Complete supplemental RI and assessment of potential risks to the environment for OU 7 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	MA117002357000	<b>Funding to Date:</b>	\$ 23.9 million
<b>Location (Size):</b>	Bedford, Massachusetts (46 acres)	<b>Est. CTC (Comp Year):</b>	\$ 37.7 million (FY 2036)
<b>Mission:</b>	Designed, fabricated, and tested prototype weapons and equipment	<b>IRP Sites (Final RIP/RC):</b>	4 (FY2015)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in September 1999	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	Acids, BTEX, incinerator ash, industrial wastes, POLs, photographic wastes, solvents, paints, VOCs, SVOCs, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-99
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The Bedford Naval Weapons Industrial Reserve Plant (NWIRP), a formerly government-owned and contractor-operated plant, designed, produced, and tested prototype equipment for missile guidance and control systems. Contaminants found at the installation include acids; benzene, toluene, ethylbenzene, and xylene (BTEX); incinerator ash; industrial wastes; paints; petroleum/oil/lubricants (POLs); photographic wastes; solvents; and volatile organic compounds (VOCs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1994. DoD and EPA signed a federal facility agreement (FFA) in September 1999 to outline how they were going to proceed with cleanup. The Navy formed a technical review committee in FY89, responsible for communicating cleanup progress with the community, and converted it to a Restoration Advisory Board in FY95. The Navy also developed a community relations plan in FY89 and updated in FY92. The Navy also maintains an information repository. DoD declared the facility as excess and closed it as a non-BRAC closure on December 31, 2000.

Sites identified at the installation include Site 1: an incinerator ash disposal area (potential soil contamination with ash and heavy metals); Site 2: a components-laboratory fuel tank (potential soil contamination with low levels of POLs); Site 3: a northwest groundwater contaminated area (groundwater contaminated with VOCs); and Site 4: a former fuel pump/tank area (soil and groundwater contaminated with BTEX). In FY00, the Navy completed a No Further Action Record of Decision (ROD) for Sites 1 and 2, which determined that no further cleanup activities were necessary for these sites. In FY02, the Navy conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Bedford NWIRP for FY05 through FY08 is summarized below.

In FY05, the Navy continued cool-down of the thermal treatment pilot study at Site 3 and studying the natural attenuation at Site 4. The Navy also began follow-up well sampling of the source area and bedrock at Site 3.

Bedford NWIRP continued regular monitoring of the Site 3 groundwater treatment facility.

In FY06, the Navy continued cool-down of the Site 3 thermal treatment pilot study. The Navy also continued regular monitoring at the Site 3 groundwater treatment facility. Bedford NWIRP continued studying the natural attenuation at Site 4.

In FY07, the Navy completed groundwater modeling, drafted the revised feasibility study (FS) to evaluate cleanup alternatives, and continued regular monitoring of the groundwater treatment facility at Site 3. The Navy also continued studying the natural attenuation at Site 4.

In FY08, the Navy completed the study of natural attenuation at Site 4. Bedford NWIRP updated the FS, and drafted the revised proposed plan (PP) and ROD for Site 4. The Navy also continued regular monitoring of the Site 3 groundwater treatment facility and revised a draft FS to evaluate cleanup alternatives at the site.

**FY09 IRP Progress**

Bedford NWIRP completed a revised PP and signed a ROD for Site 4. The cost of completing environmental restoration has changed significantly due to technical issues.

Technical issues delayed completion of the revised FS, PP, and ROD for Site 3.

**FY09 MMRP Progress**

Bedford NWIRP has identified no MMRP sites.

**Plan of Action**

Plan of action items for Bedford Naval Weapons Industrial Reserve Plant are grouped below according to program category.

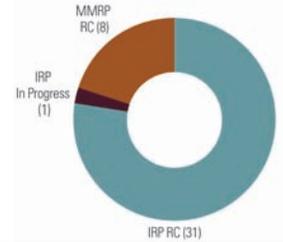
**IRP**

- Continue preparation for investigations at Site 3 in FY10.
- Complete pre-design investigation and design for cleanup at Site 4 in FY10.
- Complete revised FS, PP, and ROD for Site 3 in FY10-FY11.
- Complete cleanup at Site 4 in FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	TX657002418800	<b>Funding to Date:</b>	\$ 48.8 million
<b>Location (Size):</b>	Austin, Texas (3,197 acres)	<b>Est. CTC (Comp Year):</b>	\$ 2.0 million (FY 2016)
<b>Mission:</b>	Supported reconnaissance and fighter aircraft operations	<b>IRP Sites (Final RIP/RC):</b>	32 (FY1999)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	8 (FY2002)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, pesticides, petroleum hydrocarbons, metals, TCE, low-level radioactive waste, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-51
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Bergstrom Air Force Base (AFB) began operations in 1942 and supported flying operations for various aircraft throughout its history. Site types identified at the installation include underground storage tanks (USTs), landfills (LFs), fuel spill areas, a pesticide evaporation pit, firing ranges, a sludge weathering pit, aboveground storage tanks (ASTs), oil-water separators, a fire training area, and a radioactive waste disposal area. In July 1991, the BRAC Commission recommended closure of the installation. The installation closed September 1993, and the City of Austin began to convert the installation into the Austin-Bergstrom International Airport. In FY94, Bergstrom AFB formed a BRAC cleanup team to develop a process for cleanup of sites, and formed a Restoration Advisory Board (RAB) to discuss the installation's cleanup progress with the community. The RAB adjourned in FY97 due to successful cleanup at the installation. Bergstrom AFB updated the community relations plan in FY05 to indicate the status of cleanup and identify ongoing opportunities for community involvement. In order to ensure continuous monitoring and improvement, the installation completed a five-year review report in FY06.

Environmental studies have identified CERCLA sites and RCRA areas of concern (AOCs). Cleanup has included removal of 106 USTs, removal of contaminated soil and low-level radioactive wastes, and closure of 45 ASTs. To date, no further cleanup action is required at 478 sites and AOCs. All property at the installation has been transferred to the City of Austin. In FY04, Bergstrom AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); eight MMRP sites were identified. The installation closed seven MMRP sites in FY04. Cleanup progress at Bergstrom AFB for FY05 through FY08 is summarized below.

In FY05, EPA determined that the Solid Waste Management Unit (SWMU) 76 Area 1 trichloroethylene (TCE)-contaminated area and the combined Southeast LFs 3 through 7 were operating properly and successfully, and found them suitable for transfer. The installation transferred the remaining parcels (361 acres) and deactivated the SWMU 76 Area 1 soil vapor extraction system. Bergstrom AFB performed operation and maintenance (O&M), and long-term management (LTM) for the

combined Southeast LFs 3 through 7. The installation also performed O&M for the Area 1 TCE-contaminated area under a fixed-price cleanup contract. Bergstrom AFB updated the community relations plan. Bergstrom AFB closed the remaining MMRP site.

In FY06, Bergstrom AFB completed its first five-year review report. The installation awarded the annual, regional fixed-price contract to continue O&M and LTM for the combined Southeast LFs 3 through 7, and continued O&M of the SWMU 76 Area 1 TCE-contaminated area. The installation shut down the SWMU 76 air sparge system that had been reducing concentrations of TCE, and collected groundwater samples to demonstrate TCE did not rebound. The installation completed an evaluation of MMRP sites.

In FY07, Bergstrom AFB awarded the annual, regional fixed-price contract to continue LTM and O&M of the combined Southeast LFs 3 through 7, and O&M of the SWMU 76 Area 1 TCE-contaminated area. The installation prepared a statement of work for a regional performance-based contract (PBC) to continue LTM, O&M, well decommissioning, and other activities at Bergstrom AFB.

In FY08, Bergstrom AFB continued LTM and O&M of the combined Southeast LFs 3 through 7, and O&M of the SWMU 76 Area 1 TCE-contaminated area. The installation decided not to pursue a regional multi-year PBC, and reevaluated contract mechanisms to continue LTM, O&M, well decommissioning, and other activities.

**FY09 IRP Progress**

Bergstrom AFB continued LTM and O&M of the combined Southeast LFs 3 through 7, and O&M of the SWMU 76 Area 1 TCE-contaminated area. The installation continued to reevaluate contract mechanisms to continue to operate cleanup systems, as well as to continue LTM, O&M, well decommissioning, and other activities. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Bergstrom AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Bergstrom Air Force Base are grouped below according to program category.

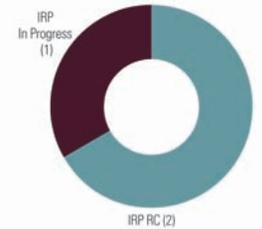
**IRP**

- Complete five-year review report in FY10.
- Continue reevaluating contract mechanisms to continue LTM, O&M, well decommissioning, and other activities in FY10-FY11.
- Continue LTM and O&M at LFs 3 through 7, and SWMU 76 Area 1 TCE-contaminated area in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	MD357182400000	<b>Est. CTC (Comp Year):</b>	\$ 11.8 million (FY 2016)
<b>Location (Size):</b>	Brandywine, Maryland (8 acres)	<b>IRP Sites (Final RIP/RC):</b>	3 (FY2008)
<b>Mission:</b>	None (inactive)	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	50.15; placed on NPL in June 1999	<b>Five-Year Review Status:</b>	Planned
<b>IAG Status:</b>	FFA under negotiation	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-97
<b>Contaminants:</b>	PCBs, solvents (including TCE), VOCs, SVOCs, metals		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 15.1 million		



**Progress To Date**

The Brandywine facility is an inactive eight-acre former Defense Reutilization and Marketing Office (DRMO) site located approximately eight miles south of Andrews Air Force Base (AFB). Andrews AFB acquired the property from the Navy in 1961 and used it to store bulky aircraft parts, aircraft engine fuels and lubricants, paints, chemicals, and other supplies subject to deterioration. As a Defense Property Disposal Office in the 1970s, the facility temporarily accumulated wastes from other area DoD facilities, though no hazardous materials have been stored onsite since 1980. The primary contaminants of concern are polychlorinated biphenyls (PCBs) and solvents, including trichloroethylene (TCE). The potential risk to human health and the environment was significant enough for EPA to place Brandywine DRMO on the NPL in June 1999. A federal facility agreement (FFA) between DoD and EPA to outline how they are going to proceed with cleanup is currently under negotiation.

Brandywine DRMO is identified as Spill Site (SS) 01 in the Andrews AFB Installation Restoration Program (IRP) site inventory. To date, the installation has signed one interim Record of Decision (ROD), which selected groundwater cleanup actions. The installation has also removed a total of 17,000 cubic yards of contaminated soil. In FY05, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Brandywine DRMO for FY05 through FY08 is summarized below.

In FY05, Brandywine DRMO finalized a remedial investigation and began the engineering evaluation and cost analysis (EE/CA) for off-site PCBs. The installation sent a newsletter on cleanup progress to the local community and gave a presentation of on-site activities to the Brandywine North Keys Civic Association.

In FY06, Brandywine DRMO continued operation of the interim pump-and-treat system to cleanup contaminated groundwater. The installation also completed a focused feasibility study, treatability study to evaluate cleanup alternatives, and completed an interim ROD, which selected the groundwater cleanup actions. Additionally, the installation completed the

EE/CA and issued a contract for the cleanup of PCB-contaminated soils. Brandywine DRMO engaged the community through the use of fact sheets, public meetings, and discussions with the Brandywine North Keys Civic Association.

In FY07, Brandywine DRMO continued operation of the pump-and-treat system for TCE-contaminated groundwater. Sampling during the design of the groundwater cleanup system determined that the chlorinated volatile organic compound (VOC)-contaminated area had spread further off-property than originally characterized. Brandywine DRMO removed 6,350 tons of impacted material as required by the EE/CA. The installation acquired 3.57 acres of private property to target potential groundwater contamination sources. The installation also began design and initial construction of the groundwater cleanup system. The installation coordinated with the Air Force Real Property Agency to declare the DRMO as excess property.

In FY08, Brandywine DRMO continued the construction of the groundwater cleanup system and investigated potential groundwater contamination source areas. The installation treated a groundwater contaminated area to condition the aquifer for natural cleanup processes in the future.

**FY09 IRP Progress**

Brandywine DRMO finalized construction of the groundwater extraction trench, treatment system, and natural cleanup for over 20 acres of contaminated areas. The installation also continued quarterly groundwater monitoring to track the effectiveness of the interim cleanup systems, which treated over 2.5 million gallons of water and removed 22 pounds of VOCs. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Brandywine DRMO has identified no MMRP sites.

**Plan of Action**

Plan of action items for Brandywine Defense Reutilization and Marketing Office are grouped below according to program category.

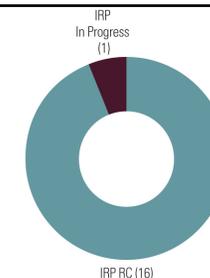
**IRP**

- Continue to operate the groundwater treatment system in FY10.
- Continue to monitor the results of the bioremediation in FY10.
- Continue to investigate potential groundwater contamination sources in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	TX657172430300	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	San Antonio, Texas (1,309 acres)	<b>Funding to Date:</b>	\$ 8.7 million
<b>Mission:</b>	Serve as host to the 311 Human System Wing, the USAF's agent for human-centered research, development, acquisition, and operational support	<b>Est. CTC (Comp Year):</b>	\$ 3.3 million (FY 2012)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	17 (FY2002)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Thinners, pesticides, hydraulics fluids, VOCs, SVOCs, PAHs, PCBs, metals, fuels, POLs, cleaning solvents, paints	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-51



**Progress To Date**

Brooks Air Force Base (AFB) was established as Brooks Field in 1918 to train pilots. In 1948, Brooks Field was renamed Brooks AFB. In 1991, Brooks AFB was designated as the central location for the Air Force Center for Engineering and the Environment, one of several tenant organizations on base. In 1998, Air Force Materiel Command converted Brooks AFB from a center to the Air Force's only composite medical wing, the 311th Human Systems Wing. In 2002, the Air Force transferred Brooks AFB to the City of San Antonio, and the installation became Brooks City Base, as part of a demonstration project in which the city undertook infrastructure responsibilities in exchange for business opportunities and community development. The 2005 BRAC Commission recommended closure of Brooks City Base. In order to ensure continuous monitoring and improvement, the installation completed a five-year review report in FY05.

One area of concern and ten (Installation Restoration Program (IRP) sites have been closed because no further cleanup action was required. Six areas of concern have also been recommended for no further cleanup action. The remaining IRP site continues to undergo cleanup. In FY05, Brooks City Base conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Brooks City Base for FY05 through FY08 is summarized below.

In FY05, Brooks City Base completed its first five-year review report for the last IRP site, Fire Protection Training Area (FPTA) 2. The installation also updated its inventory of MMRP sites.

In FY06, Brooks City Base addressed regulatory concerns for FPTA 2; the base suggested that no further cleanup of the subsurface soil contamination would be necessary, and that the site be closed.

In FY07, Brooks City Base completed an investigation of data gaps to improve cleanup at FPTA 2. The installation submitted to regulators an evaluation of design improvements for groundwater biostimulation, the method by which nutrients are added to groundwater in order to stimulate naturally occurring bacteria. The installation also submitted a report proposing the closure of FPTA 2 to regulators for review and comment.

In FY08, Brooks City Base addressed regulatory concerns regarding the evaluation of groundwater biostimulation and the report proposing no further cleanup actions. The installation obtained regulatory approval of the biostimulation design, and began injecting carbon into five contaminated groundwater areas on the base.

**FY09 IRP Progress**

Brooks City Base plugged and abandoned 11 soil vapor extraction wells and their associated conveyance piping. The installation monitored progress of the groundwater biostimulation.

**FY09 MMRP Progress**

Brooks City Base has identified no MMRP sites at this installation.

**Plan of Action**

Plan of action items for Brooks City Base are grouped below according to program category.

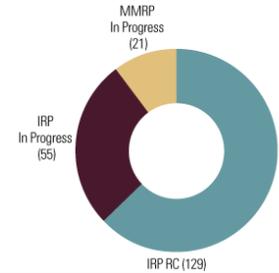
**IRP**

- Document closure of Operable Unit (OU) 1 in FY10.
- Prepare five-year review report in FY10.
- Petition for closure of FPTA 2 in FY10-FY11.
- Continue monitoring natural contaminant reduction at selected wells twice a month to supplement biostimulation data in FY10-FY11.
- Test recovery system shut down at base boundary to address minor containment concerns in FY10-FY11.
- Redevelop or repair screening interval at Monitoring Well 28 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	NC417302258000	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Jacksonville, North Carolina (151,000 acres)	<b>Funding to Date:</b>	\$ 170.6 million
<b>Mission:</b>	Provide housing, training facilities, logistical support, and administrative supplies for Fleet Marine Force units	<b>Est. CTC (Comp Year):</b>	\$ 151.4 million (FY 2058)
<b>HRS Score:</b>	36.84; placed on NPL in October 1989	<b>IRP Sites (Final RIP/RC):</b>	184 (FY2019)
<b>IAG Status:</b>	FFA signed in February 1991	<b>MMRP Sites (Final RIP/RC):</b>	21 (FY2020)
<b>Contaminants:</b>	Battery acid, fuels, used oils, paints, thinners, PCBs, pesticides, metals, solvents, VOCs, SVOCs, radioactive materials	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-129



**Progress To Date**

Camp Lejeune Marine Corps Base (MCB) provides housing, training facilities, logistical support, and administrative supplies for Fleet Marine Force units and other assigned units. The installation also provides specialized schools and other training. Contaminants released from past storage and disposal operations have migrated to a shallow aquifer, several surface water bodies, and a deep aquifer used for drinking water. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1989. In February 1991, DoD and EPA signed a federal facility agreement (FFA) to outline how they were going to proceed with cleanup. The installation formed a technical review committee in FY88, responsible for communicating cleanup progress with the community, and converted it to a Restoration Advisory Board in FY95. The installation completed a community relations plan in FY90. The installation placed its administrative record on the internet in FY00. Additionally, the installation finalized a community involvement plan in FY05. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY99 and FY05.

To date, the installation has completed 38 Records of Decision (RODs), which selected cleanup actions for those sites. In addition, Camp Lejeune MCB completed an interim final ROD for Site 69. Investigations at Camp Lejeune MCB have identified 86 leaking underground storage tank sites. Since signing the FFA, operable units (OUs) have been identified as part of the Installation Restoration Program (IRP) requiring additional investigation or cleanup. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Camp Lejeune MCB for FY05 through FY08 is summarized below.

In FY05, Camp Lejeune MCB completed pilot scale treatability studies (TSs) at Sites 35, 73, 78, and 86. The installation completed and approved the OU 4 final closeout report. The installation also signed the OU 6 ROD; completed a removal action at the source area of Site 88, the former base dry cleaners; and completed a remedial investigation (RI) and feasibility study (FS) to evaluate cleanup alternatives for Site 94. The base also finalized the five-year review report. Under

the MMRP, Camp Lejeune MCB loaded Sites 01 through 14 as unexploded ordnance (UXO) in an internal environmental database.

In FY06, Camp Lejeune MCB completed cleanup at Site 84. The installation also completed RODs for Sites 93 and 94. Under the MMRP, Camp Lejeune MCB continued site inspections (SIs) and storing all sites in the internal environmental database.

In FY07, Camp Lejeune MCB signed interim cleanup completion reports for Sites 36, 43, 44, and 54. The installation also signed a final cleanup completion report for Site 41 and implemented cleanup plans at Site 93. Camp Lejeune continued SIs previously awarded and began SIs for UXO Sites 3, 5, 6, 8, and 9. The installation identified an additional MMRP site, the previous location of a small caliber indoor pistol range and gas chamber (UXO Site 14).

In FY08, Camp Lejeune MCB continued the RI/FS at Sites 35, 69, 73, 86, 88, and 89. The installation also completed the ROD for Site 84 and completed cleanup for Site 93, which is now in long-term management (LTM). The base completed two removal actions at Sites 35 and 89. The installation also signed a final cleanup completion report for Site 2. Under the MMRP, the installation continued ongoing SIs and began new SIs for UXO Sites 2, 7, 10, 11, 12, and 14.

**FY09 IRP Progress**

Camp Lejeune MCB completed the RI/FSs for Sites 35 and 73. The installation also began a TS and FS at Site 88, and a preliminary assessment and SI for New River and Montford Point. Additionally, Camp Lejeune MCB signed a ROD for OU 5 Site 2. The installation also completed proposed cleanup plans and signed RODs for Sites 35 and 72. The cost of completing environmental restoration has changed significantly due to technical issues.

The installation began an optimization study for Sites 78 and 82, but technical issues delayed completion. Technical issues also delayed completion of the RI/FS for Site 89. Regulatory issues delayed completion of the proposed cleanup plans and RODs for Sites 86 and 89.

**FY09 MMRP Progress**

Camp Lejeune MCB received regulatory concurrence that no further cleanup actions were necessary at UXO Sites 04, 05, 09, and 16.

Technical issues delayed completion of SIs for the remaining sites.

**Plan of Action**

Plan of action items for Camp Lejeune Marine Corps Base are grouped below according to program category.

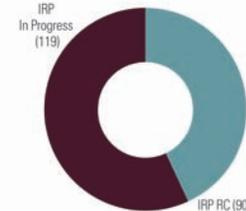
**IRP**

- Complete a five-year review report and update the community involvement plan in FY10-FY11.
- Complete preliminary assessments (PAs) and SIs for 21 sites in FY10-FY11.
- Complete removal actions for Sites 89 and 95, and complete FS for Site 88 in FY10-FY11.
- Sign ROD, complete design for cleanup, and begin cleanup actions at Sites 35 and 73 in FY10-FY11.
- Continue LTM for Sites 03, 06, 36, 78, 82, and 93 in FY10-FY11.

**MMRP**

- Complete PA/SIs for UXO Sites 01, 07, 08, 10, 11, 12, 14, and 17 through 20 in FY10-FY11.

<b>FFID:</b>	CA917302353300	<b>Funding to Date:</b>	\$ 216.1 million
<b>Location (Size):</b>	Oceanside, California (250,000 acres)	<b>Est. CTC (Comp Year):</b>	\$ 92.5 million (FY 2020)
<b>Mission:</b>	Provide housing, training facilities, logistics support, and administrative support to Fleet Marine Force Units	<b>IRP Sites (Final RIP/RC):</b>	209 (FY2018)
<b>HRS Score:</b>	33.79; placed on NPL in November 1989	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in October 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Pesticides, herbicides, heavy metals, PCBs, VOCs, SVOCs, TCE	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-21
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Camp Pendleton Marine Corps Base (MCB) provides housing, training facilities, logistics support, and administrative support to Fleet Marine Force Units. Environmental contamination at the installation resulted from maintenance of vehicles and equipment and support facilities, such as gas stations, hospitals, laundries, pest control services, and hobby shops. Sites at the installation include landfills, surface impoundments, pesticide storage areas, fire training areas, vehicle maintenance areas, and underground storage tanks (USTs). The potential risk to human health and the environment from detection of the herbicide 2,4,5-TP (Silvex) in two groundwater wells used for drinking water was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in October 1990 to outline how they would proceed with cleanup. In 2005, the BRAC Commission recommended Camp Pendleton MCB for realignment. In FY91, Camp Pendleton MCB formed a technical review committee responsible for communicating cleanup progress with the community. The installation prepared a community relations plan in FY92, which was updated in FY01. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY02, FY04, FY07, and FY09.

To date, the installation has completed five Records of Decision (RODs), which selected cleanup actions for environmental restoration sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Camp Pendleton MCB for FY05 through FY08 is summarized below.

In FY05, Camp Pendleton MCB completed and obtained agency concurrence on the Operable Unit (OU) 4 proposed plan (PP) for Sites 1D, 1E1, and 30, which documented the cleanup alternatives selected in the feasibility study (FS) to evaluate cleanup alternatives. The installation also completed and obtained agency concurrence on the OU 5 FS for Sites 1A, 6A, 1111, and Area 12 (Site 13). The installation completed the annual groundwater monitoring report and a conceptual site model, which is a schematic diagram of the contaminated area, for Site 7. Additionally, the installation continued operation and

maintenance (O&M) for cleanup systems at UST sites, and received closure for 18 UST sites. The installation held a technical review committee meeting to update the expanded regulatory community on the Site 9 explanation of significant differences with the ROD, OU 4 PP, and general program status.

In FY06, Camp Pendleton MCB negotiated reduced sampling frequencies and a reduced number of analyses for Site 7 based on the large amount of data collected. Camp Pendleton MCB also installed one monitoring well to monitor landfill gas migration in groundwater. An innovative approach to assessing trichloroethylene (TCE) in porewater, sediment, and fractured bedrock at Site 21 was developed. The installation received closure for 14 USTs. The installation continued O&M at UST sites in Areas 11, 13, 21, 24, 26, 31, 43, and 62.

In FY07, Camp Pendleton MCB completed the design for cleanup for Sites 1D and 30. All parties of the FFA team signed the OU 4 ROD. The installation completed an interim removal action at Site 1111. The installation also prepared an explanation of significant differences with the ROD for Site 1A to facilitate cleanup and signed the final five-year review report for OU 1 (Site 9). The base completed fieldwork at Site 9 and Area 13. In addition, the installation received closure for 22 USTs and continued O&M at UST sites in Areas 11, 13, 21, 24, 26, 31, and 43.

In FY08, Camp Pendleton MCB completed an FS for Site 33, and began landfill gas cleanup for Site 7. The FFA team signed the OU 5 ROD. The installation completed two site assessments for Area 16 USTs and closed 8 additional UST sites. The installation also completed the design for cleanup for Sites 1A1 and 1H, and cleanup actions at Sites 1A1 and 30.

**FY09 IRP Progress**

Camp Pendleton MCB completed a five-year review report. The installation continued cleanup actions at USTs in Areas 11 through 17, 21, 22, 24, 26, 43, 53, and 62, and closed 7 UST sites. The base completed remedial investigation (RI) and FS fieldwork for Areas 22 and 23 groundwater and Site 1115. The installation completed a cleanup completion report for Sites 30, 1A1, and 1111, and completed cleanup at Sites 1A, 1H, and soil cleanup at 1D. Additionally, Camp Pendleton MCB

completed a site inspection (SI) at Site 62. The cost of completing environmental restoration has changed significantly due to technical issues.

Contractual issues delayed the action memorandum and removal action work plan at Site 33.

**FY09 MMRP Progress**

Camp Pendleton MCB has identified no MMRP sites.

**Plan of Action**

Plan of action items for Camp Pendleton Marine Corps Base are grouped below according to program category.

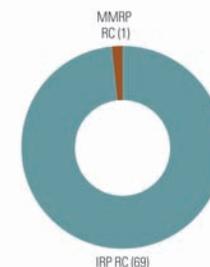
**IRP**

- Continue cleanup actions at USTs in Area 11 through 17, 21, 22, 24, 26, 43, 53, and 62 in FY10-FY11.
- Begin groundwater treatment at Site 1D and pilot studies at Sites 21 and 1115 in FY10-FY11.
- Prepare engineering evaluation and cost analysis, action memorandum, and cleanup work plan for Site 33 and submit cleanup completion reports for Sites 1A and 1H in FY10-FY11.
- Complete work plans and fieldwork for SIs at Sites 1116, 1117, 1118, and an RI at Site 1114 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	TX657002404200	<b>Funding to Date:</b>	\$ 51.4 million
<b>Location (Size):</b>	Fort Worth, Texas (2,569 acres)	<b>Est. CTC (Comp Year):</b>	\$ 0.1 million (FY 2009)
<b>Mission:</b>	Supported bomber, tanker, and other aircraft operations	<b>IRP Sites (Final RIP/RC):</b>	69 (FY2005)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2001)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	POLs, JP-4 jet fuel, solvents, waste oils, TCE cleaners, low-level radioactive material, VOCs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-8-56
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Carswell Air Force Base (AFB) was established in 1942 and supported flying operations for various aircraft throughout its history. Site types at the installation include underground storage tanks, landfills, fire training areas, waste burial areas, contaminated groundwater areas, contaminated ditches, and oil-water separators. The primary contaminants are petroleum hydrocarbons in groundwater, surface water, sediment, and soil; and trichloroethylene (TCE) in groundwater and soil. In July 1991, the BRAC Commission recommended closure of Carswell AFB. The installation closed in September 1993, but approximately 1,830 acres were reactivated in FY94 after the 1993 BRAC Commission recommended its realignment as a Joint Reserve Base. The installation's airfield is also used by the adjacent Air Force Plant 4, an aircraft manufacturing plant that opened in the 1940s. The Air Force Real Property Agency is responsible for restoration activities on the BRAC property, and the Air Force Center for Engineering and the Environment is responsible for restoration activities on the Joint Reserve Base. In FY94, the installation formed a BRAC cleanup team to develop a process for cleaning up sites at Carswell AFB, and a Restoration Advisory Board (RAB) to discuss the installation's cleanup progress with the community. To ensure continuous monitoring and improvement, Carswell AFB completed a five-year review report in FY06.

To date, Carswell AFB has completed all cleanup at sites on the golf course and the recreational vehicle family camping site. The installation has transferred cleanup of sites located within the Joint Reserve Base to the Environmental Restoration program. Of the total 492 acres not retained by DoD, 388 acres have been transferred to the local redevelopment authority and 104 acres to other federal agencies, primarily the Federal Bureau of Prisons. DoD has kept approximately 1,830 acres for the Joint Reserve Base (Navy and Air Force) and 247 acres at an Army off-base weapons storage area. In FY04, Carswell AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Carswell AFB for FY05 through FY08 is summarized below.

In FY05, The Air Force Real Property Agency investigated the radioactive contamination in the bunker at the off-base

weapons storage area and transferred approximately 37 acres to the local redevelopment authority. Carswell AFB coordinated the completion of the focused feasibility study (FS) to evaluate cleanup alternatives for the Air Force Plant 4 TCE-contaminated area with state and federal regulators. Regulators agreed to consider Carswell AFB's explanation of significant differences between cleanup actions selected by Air Force Plant 4 in 1996, and those proposed by the 2005 focused FS. The installation's explanation would support an operating properly and successfully determination and the transfer of 187 acres to the local redevelopment authority (Carswell Golf Course Parcel). Carswell AFB completed the sanitary sewer system cleanup. The installation awarded a contract for clearance of potential munitions and explosives of concern (MEC) at the off-base weapons storage area explosive ordnance disposal range. AFRPA began evaluating requirements at the identified MMRP site. The RAB and BRAC cleanup team each met three times.

In FY06, federal regulators and the Air Force and Safety Center accepted the preliminary assessment/site inspection report for radiation at the off-base weapons storage area; no further cleanup action is required at the site. Regulators approved the focused FS for the Air Force Plant 4 TCE-contaminated area. Carswell AFB completed its first five-year review report and submitted it to regulators. Regulators approved closure of the sanitary sewer system. The installation completed MEC clearance activities at the explosive ordnance disposal range, and prepared and submitted a report to the Air Force and Safety Center, DoD Explosives Safety Board, and regulators for review. The RAB and BRAC cleanup team each met three times.

In FY07, regulators approved the explanation of significant differences with the ROD for the Air Force Plant 4 TCE-contaminated area. Regulators also found 187 acres suitable to transfer to the local redevelopment authority. Carswell AFB transferred the 247-acre off-base weapons storage area property to Army, then transferred the remaining Joint Reserve Base acreage to Navy. The Air Force and Safety Center and the DoD Explosives Safety Board approved the MEC clearance report for the off-base weapons storage area explosive ordnance disposal range. The RAB and BRAC cleanup team each met three times.

In FY08, Carswell ARB obtained regulatory approval for the Corrective Action Plan for Area of Concern (AOC) 1, located on the Joint Reserve Base.

**FY09 IRP Progress**

Carswell AFB established that it was unnecessary for the installation to implement Phases I and II of the Corrective Action Plan for AOC 1, and the Texas Commission on Environmental Quality concurred with Carswell AFB that no further cleanup actions were necessary. All monitoring wells at AOC 1 are now being plugged and abandoned, and the cleanup system taken out of service. This is the last narrative for this installation, as cleanup is complete at all sites. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Carswell AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Carswell Air Force Base are grouped below according to program category.

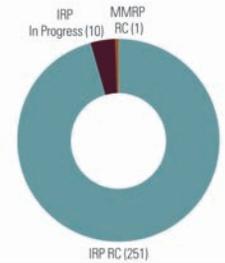
**IRP**

- Complete five-year review report on the BRAC property deeded to the local redevelopment authority in FY10.
- Investigate fuel-stained soils at Solid Waste Management Unit 48 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA957002455100	<b>Funding to Date:</b>	\$ 172.5 million
<b>Location (Size):</b>	Atwater, California (2,777 acres)	<b>Est. CTC (Comp Year):</b>	\$ 10.3 million (FY 2044)
<b>Mission:</b>	Trained tanker crews and serviced KC-135 stratotanker	<b>IRP Sites (Final RIP/RC):</b>	261 (FY2006)
<b>HRS Score:</b>	27.93; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2008)
<b>IAG Status:</b>	IAGs signed in 1989 and 2004	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Spent solvents, PCBs, POLs, pesticides, cyanide, cadmium, VOCs, SVOCs, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-29
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Castle Air Force Base (AFB) formerly trained tanker crews and serviced KC-135 stratotanker. Castle AFB has identified landfills (LFs), underground storage tanks, discharge areas, chemical disposal pits, fire training areas, fuel spill areas, and polychlorinated biphenyl (PCB) spill areas at the installation. The potential risk to human health and the environment was significant enough for EPA to place Castle Air Force Base (AFB) on the NPL in July 1987. DoD and EPA signed interagency agreements (IAGs) in 1989 and 2004 to outline how they were going to proceed with cleanup. In July 1991, the BRAC Commission recommended closure of the installation and Castle AFB closed in September 1995. The installation formed a BRAC cleanup team in FY92 to develop a process for cleanup of sites at Castle AFB, and a Restoration Advisory Board (RAB) in FY95 to discuss the installation's cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY99, FY04, and FY09.

Castle AFB grouped restoration sites at the installation into three operable units (OUs): OUs 1 and 2 (groundwater), and the source control OU. Castle AFB has signed Records of Decision (RODs) for sites across the base, groundwater, OUs 1 and 2, Castle Vista, and all source control OU sites, which selected cleanup activities for these sites. The installation closed seven sites suspected to contain contamination for the Installation Restoration Program (IRP) and transferred all remaining property in FY07. In FY04, Castle AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Castle AFB for FY05 through FY08 is summarized below.

In FY05, Castle AFB completed the source control OU ROD and began cleanup of the selected sites. Groundwater extraction and treatment systems operated effectively. The installation investigated the weapons storage area. In addition, Castle AFB began evaluating requirements at MMRP sites. The RAB conducted community activities.

In FY06, Castle AFB completed the comprehensive ROD for the base. The installation submitted seven closure reports on soil vapor extraction (SVE) to regulators, and finalized two

documents that declared all of Castle AFB property ready for transfer. Castle AFB evaluated, cleared, and closed one MMRP site.

In FY07, Castle AFB transferred all remaining property (666 acres in 16 parcels). The installation received regulatory approval to close seven IRP sites and performed operations at the remaining SVE sites. Castle AFB completed all physical investigations of MMRP sites.

In FY08, Castle AFB proposed partially closing six SVE sites. The Air Force Real Property Agency approved a performance-based contract (PBC) strategy developed by the installation. Castle AFB completed a review of historical MMRP actions.

**FY09 IRP Progress**

Castle AFB submitted a draft site closure report for six SVE sites to regulators and completed additional sampling in accordance with regulators' comments. The installation has changed from a PBC to a performance-based remediation; Castle AFB awarded a performance-based remediation contract for the base. In addition, the installation completed its third five-year review report.

Regulatory issues delayed closure of the six SVE sites.

**FY09 MMRP Progress**

Castle AFB closed the only remaining MMRP site.

**Plan of Action**

Plan of action items for Castle Air Force Base are grouped below according to program category.

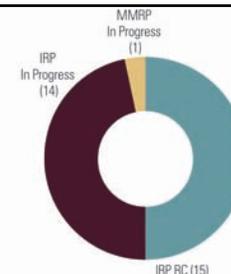
**IRP**

- Obtain regulatory closure for six SVE sites in FY10.
- Implement enhanced groundwater, SVE, and LF cleanup and monitoring in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	FL417002247400	<b>Funding to Date:</b>	\$ 66.6 million
<b>Location (Size):</b>	Jacksonville, Florida (30,895 acres)	<b>Est. CTC (Comp Year):</b>	\$ 9.5 million (FY 2029)
<b>Mission:</b>	Provide facilities, services, and material support for maintenance of Naval weapons and aircraft	<b>IRP Sites (Final RIP/RC):</b>	29 (FY2008)
<b>HRS Score:</b>	31.99; placed on NPL in November 1989	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2015)
<b>IAG Status:</b>	FFA signed in October 1990	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Waste fuel oil, solvents, heavy metals, halogenated aliphatics, phthalate esters, SVOCs, lead, VOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-17
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The Cecil Field Naval Air Station (NAS) supports the maintenance of Naval weapons and aircraft. Operations that caused contamination include equipment maintenance, storage and disposal of fuel and oil, fire training, and training on target ranges. Investigations identified CERCLA sites, 10 major underground storage tank sites, 235 other underground storage tanks, 250 BRAC grey sites, and 1 RCRA site. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in November 1990 to outline how they were going to proceed with cleanup. In July 1993, the BRAC Commission recommended closure of this installation and relocation of its aircraft, personnel, and equipment to other stations. BRAC 1995 redirected associated bombing ranges to Jacksonville NAS, reducing the BRAC footprint to 17,225 acres. Formed in FY94, the installation converted its technical review committee responsible for communicating cleanup progress with the community to a Restoration Advisory Board in FY95. The installation also formed a BRAC cleanup team in FY94 to develop a process for cleanup of sites. To ensure continuous monitoring and improvement, Cecil Field NAS completed five-year review reports in FY00 and FY05.

To date, the installation has signed 26 Records of Decision (RODs), which selected cleanup actions at environmental restoration sites. The installation also has found approximately 17,043 acres suitable to transfer. The installation delisted approximately 16,584 acres from the NPL. Cecil Field NAS conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Cecil Field NAS for FY05 through FY08 is summarized below.

In FY05, Cecil Field NAS completed the second five-year review report; completed RODs for Sites 21, 57, and 58; and found 120.4 acres suitable for transfer. The installation also submitted draft operating properly and successfully (OP&S) documentation and draft land use control (LUC) designs for cleanup, which restrict use of and access to Sites 5, 21, 25, 32, 57, and 58. The facility completed remedial investigation (RI) fieldwork at Site 59 and completed the proposed plan and feasibility study to evaluate cleanup alternatives for Site 15.

Cecil Field NAS installed the North Fuel Farm air sparging system, and continued long-term operations (LTO) and long-term management (LTM) at 36 groundwater sites. The facility completed a munitions and explosives of concern (MEC) investigation, and detonated MEC at 20 acres of the North Apron Expansion site.

In FY06, Cecil Field NAS completed LTO/LTM at 36 sites. The installation also completed cleanup at Site 49. Cecil Field NAS signed RODs at Sites 15 and 49 and approved OP&S documents and LUC designs for cleanup at eight sites. The installation also implemented the biostimulation and augmentation pilot study at Site 59 by adding nutrients to groundwater to stimulate naturally occurring bacteria. The installation also completed the MEC investigation and removal for 20 acres at Hangar 860 and two additional acres at the North Apron Expansion site.

In FY07, Cecil Field NAS found 216 acres suitable for transfer. The installation monitored cleanup using natural processes at Sites 1, 2, 3, 5, 8, 16, 17, 21, 45, 36/37, 57, and 58. Cecil Field NAS submitted after-action reports for the MEC investigation and removal at Hangar 860 and North Apron Expansion.

In FY08, Cecil Field NAS completed two RODs for Sites 15 and 59, and continued LTO/LTM at 36 groundwater sites. The installation prepared a Decision Document determining no further action for Site 25, which determined that no further cleanup activities were necessary. The installation excavated Site 15 and cleared Building 365 and Hangar 860 following interim site approval.

**FY09 IRP Progress**

Cecil Field NAS completed excavation and issued a completion report at Site 15. Cecil Field NAS continued air sparging systems at Sites 36, 37, 59, and the North Fuel Farm. The installation also continued LTM at 36 sites, and signed a no further action ROD for Site 25. Cecil Field NAS received regulatory concurrence that construction was complete for cleanup actions on the installation. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Cecil Field NAS began a site inspection (SI) at Unexploded Ordnance (UXO) 1 to determine the extent of munitions contamination.

**Plan of Action**

Plan of action items for Cecil Field Naval Air Station are grouped below according to program category.

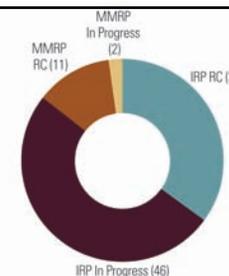
**IRP**

- Continue LTM at 35 sites in FY10.
- Continue air sparging systems at Sites 36, 37, 59, and North Fuel Farm in FY10.

**MMRP**

- Continue SI at UXO 1 in FY10-FY11.

<b>FFID:</b>	IL57002475700	<b>Est. CTC (Comp Year):</b>	\$ 13.2 million (FY 2016)
<b>Location (Size):</b>	Rantoul, Illinois (2,174 acres)	<b>IRP Sites (Final RIP/RC):</b>	78 (FY2016)
<b>Mission:</b>	Served as technical training center and airport	<b>MMRP Sites (Final RIP/RC):</b>	13 (FY2010)
<b>HRS Score:</b>	Pending	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	N/A	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-82
<b>Contaminants:</b>	POLs, chlorinated solvents, metals, UXO, VOCs, SVOCs		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 148.1 million		



**Progress To Date**

Chanute Air Force Base (AFB) was one of five Air Training Command Technical Training Centers providing specialized training for officers, airmen, and civilian employees of the Air Force and other DoD agencies. Sites identified at the facility include landfills, fire training areas, oil-water separators, a petroleum sludge disposal pit, jet engine test cells, and underground storage tanks. The potential risk to human health and the environment was significant enough for EPA to propose the Operable Unit (OU) 2 portion of the installation be placed on the NPL in FY01. DoD and EPA signed an interagency agreement (IAG) in 1990 to outline how they were going to proceed with cleanup. In 1988, the BRAC Commission recommended Chanute AFB for closure. The installation signed a memorandum of understanding with the State of Illinois, and closure occurred in 1993. The majority of the installation has been leased to the Village of Rantoul for use as an airport. In FY94, Chanute AFB formed a BRAC cleanup team to develop a process for cleanup of contaminated sites, and formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. Chanute AFB updated the community relations plan in FY07.

There are currently 78 sites suspected to contain contamination for the Installation Restoration Program (IRP) at Chanute AFB, which are divided into 59 sites regulated under CERCLA and 19 non-CERCLA sites. Chanute AFB has completed the remedial investigation (RI) phase for 77 of the 78 IRP sites. In concurrence with Illinois EPA, the installation closed 14 non-CERCLA sites, 111 former fuel storage tank sites, and 11 areas of concern (AOCs) prior to FY06. Between FY05 and FY08, the installation transferred 876 acres, primarily to the Village of Rantoul. Between FY07 and FY09, the installation completed five Records of Decision (RODs) determining that no further cleanup was required at 18 CERCLA sites. In FY04, Chanute AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); 13 MMRP sites were identified. The cleanup progress at Chanute AFB for FY05 through FY08 is summarized below.

In FY05, the installation completed decision documents (DDs) with Illinois EPA approval, which closed six non-CERCLA sites. No cleanup action was required at any of the AOCs, and

Chanute AFB transferred five acres by public sale. The installation completed a polychlorinated biphenyl (PCB) investigation and continued closure actions at multiple non-CERCLA former fuel storage tank sites. Chanute AFB identified widespread soil contamination and localized groundwater impacts. The installation completed an RI report to address one site. Chanute AFB began evaluating requirements at MMRP sites. The installation expanded community outreach efforts and completed an initiative to increase the visibility of the RAB, which included a campaign to solicit new members and elect a community co-chair.

In FY06, Chanute AFB completed 7 RI reports addressing 10 sites, and continued to develop others. The installation began a feasibility study (FS) to evaluate cleanup alternatives at three sites and developed proposed plans and RODs determining no further cleanup action was necessary for additional sites. The installation continued closure actions at multiple non-CERCLA sites. The Air Force Safety Center concurred that one area suspected to be an MMRP site did not contain munitions contamination.

In FY07, Chanute AFB transferred 781 acres to the Village of Rantoul. The installation completed two RODs that closed nine CERCLA sites, and began developing a performance-based contract (PBC) to complete cleanup at all remaining restoration sites. Illinois EPA approved the closure of one former fuel storage tank location and concurred with cleanup plans at four others, including one non-CERCLA site. The installation completed 6 RI reports addressing 19 sites and continued developing several additional RI/FS documents. Chanute AFB conducted a treatability study for groundwater contaminated with volatile organic compounds (VOCs). The installation began the site closure process for all MMRP sites.

In FY08, Chanute AFB completed cleanup at three former fuel storage tank locations and signed two RODs, which closed four IRP sites. The installation transferred 90 acres to the Village of Rantoul. Chanute AFB completed a Site Inspection Completion Report for 2 non-CERCLA petroleum/oil/lubricant (POL) sites, and 8 RI reports addressing 26 CERCLA sites. Chanute AFB closed 11 MMRP sites.

**FY09 IRP Progress**

Chanute AFB obtained regulatory concurrence on two RI reports addressing two CERCLA sites. The installation completed a ROD that closed five IRP sites, and submitted a separate ROD that closed six IRP sites. The installation awarded the PBC to conduct a final RI at 1 site and to complete cleanup at all 46 remaining sites. Chanute AFB submitted two FS reports to regulators addressing seven CERCLA sites in OU1. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Administrative issues delayed closure of the final two MMRP sites.

**Plan of Action**

Plan of action items for Chanute Air Force Base are grouped below according to program category.

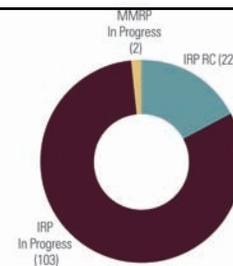
**IRP**

- Perform cleanup at eight IRP sites in FY10.
- Complete 3 RODs addressing 22 sites in FY10.
- Complete four DDs to select cleanup actions at four non-CERCLA sites in FY10.
- Complete a five-year review report in FY10.
- Complete 4 RODs addressing 15 sites and 1 non-CERCLA DD addressing 1 additional site in FY11.
- Perform cleanup at 26 IRP sites in FY11.

**MMRP**

- Close the final two MMRP sites in FY10.

<b>FFID:</b>	SC417002434300, SC417002757100, SC417002267000, SC417002425800, SC417002256000	<b>Media Affected:</b>	Groundwater, Sediment, Soil
<b>Location (Size):</b>	Charleston, South Carolina (2,922 acres)	<b>Funding to Date:</b>	\$ 56.6 million
<b>Mission:</b>	Repaired, maintained, and overhauled Navy ships	<b>Est. CTC (Comp Year):</b>	\$ 3.5 million (FY 2031)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	125 (FY2013)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2007)
<b>Contaminants:</b>	POLs, solvents, petroleum hydrocarbons, SVOCs, VOCs, asbestos, cyanide, decontaminating agents, heavy metals, paints, PCBs, pesticides	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-49



**Progress To Date**

The Charleston Naval Complex (CNC) housed five major naval commands (Naval Shipyard, Naval Station, Naval Fleet and Industrial Supply Center, Fleet and Mine Warfare Training Center, and Naval Reserve Center) and several small organizations. In July 1993, the BRAC Commission recommended closure of CNC; operational closure occurred on April 1, 1996. Formed in FY95, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board in 1996. In 1994, CNC formed a BRAC cleanup team to develop a process for cleanup of sites at the installation. Concurrently, the State of South Carolina formed a local redevelopment agency. The installation updated its community relations plan in FY01.

To date, the installation has identified solid waste management units (SWMUs) and areas of concern (AOCs) that require cleanup. The BRAC cleanup team has determined no further cleanup action is necessary at 96 sites, and 23 sites have received approval from the South Carolina Department of Health and Environmental Control for no further investigation with land use controls (LUCs), which restrict use or access to the sites. The remaining sites require long-term monitoring. The BRAC cleanup team also has identified 84 underground and aboveground storage tanks (UST/ASTs), of which 77 have received concurrence for no further cleanup action. The Navy divided transfer of CNC's 2,922 acres into four phases; all transfers are complete. The installation completed the final economic development conveyance consisting of 436 acres via early transfer in 2005. Other significant transfers include the sale of 24 acres of the Chicora Tank Farm in 2004 and transfer of 1,677 acres to other federal entities. The installation has investigated an additional 16 new RCRA sites, 12 of which have received no further action concurrence from the state, 2 have no further cleanup action recommendations (AOCs 725 and 726), 1 is recommended for monitored cleanup using natural processes (AOC 722), and 1 has cleanup underway (AOC 723). In FY02, CNC conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); two MMRP sites were identified. Cleanup progress at CNC for FY05 through FY08 is summarized below.

In FY05, CNC received state approval to develop LUCs at SWMU 9. CNC transferred the final 436 acres to the local redevelopment agency. The installation also installed a biosparge/soil vapor extraction (SVE) system at SWMU 196, and implemented a lactate injection system for source area treatment at SWMU 39.

In FY06, CNC monitored cleanup using natural processes and long-term monitoring at 37 sites. The installation also continued cleanup at SWMUs 25, 39, 166 and 196, and AOCs 607 and 723.

In FY07, CNC conducted the fill placement for the landfill cover (SWMU 9), and began installation of the air sparging/SVE system at SWMU 17. The installation also received state concurrence for monitored cleanup using natural processes at AOC 722, and for no further cleanup action at two additional UST/AST sites. Under the MMRP, CNC partnered with state regulators to conduct an Explosives Hazard Assessment and Mitigation Measures Study, which found that MMRP sites AOCs 501 and 503 required no further cleanup actions.

In FY08, CNC confirmed no further construction of cleanup systems is required at SWMUs 163/166. The installation also closed several petroleum sites. The installation completed Zone J RCRA Facility Investigation (RFI) studies and reports, and continued fieldwork to support AOCs 517, 523, 693, 694, and 695, and SWMU 179. CNC performed an excavation at one UST/AST site, continued operation of a solar-powered oil collection unit at another site, and received no further cleanup action determinations at two other sites. Under the MMRP, the installation began a second Explosives Hazard Assessment and Mitigation Measures Study for AOCs 500 and 502.

**FY09 IRP Progress**

CNC continued corrective measures at SWMUs 17, 25/70, 39, 196, and AOCs 607 and 723. The installation also continued monitored cleanup using natural processes and long-term monitoring at 14 sites. In addition the installation continued RFI studies for the remaining sites, and submitted a RCRA permit renewal application. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

CNC submitted a draft Explosives Hazard Assessment and Mitigation Measures Study for AOCs 500 and 502, but technical issues delayed completion of the study.

**Plan of Action**

Plan of action items for Charleston Naval Complex are grouped below according to program category.

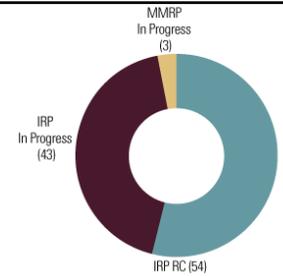
**IRP**

- Complete RCRA permit renewal and incorporate comments in FY10.
- Complete RFI studies for remaining sites in FY10.
- Continue corrective measures at 7 sites, and monitor cleanup using natural processes and long-term monitoring at 14 sites in FY10-FY11.

**MMRP**

- Submit response to agency comments and the final Explosives Hazard Assessment and Mitigation Measures study for AOCs 500 and 502 in FY10.

<b>FFID:</b>	NC417302726100	<b>Funding to Date:</b>	\$ 91.9 million
<b>Location (Size):</b>	Cherry Point, North Carolina (29,139 acres)	<b>Est. CTC (Comp Year):</b>	\$ 93.4 million (FY 2040)
<b>Mission:</b>	Maintain and operate support facilities; provide services and materials for marine aircraft	<b>IRP Sites (Final RIP/RC):</b>	97 (FY2016)
<b>HRS Score:</b>	70.71; placed on NPL in December 1994	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2019)
<b>IAG Status:</b>	FFA signed in January 2005 and January 2008	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	SVOCs, explosives, propellants, VOCs, PCBs, petroleum hydrocarbons, solvents, heavy metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-129
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Cherry Point Marine Corps Air Station (MCAS) provides services and materials for marine aircraft. Military activities have resulted in environmental contamination at the installation. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in December 1994. DoD and EPA signed federal facility agreements (FFAs) in FY05 and FY08 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Cherry Point MCAS for realignment. Formed in FY91, the installation converted its technical review committee responsible for communicating cleanup progress with the community to a Restoration Advisory Board in FY95. In FY93, the installation formed two information repositories, and completed a community relations plan in FY95. Cherry Point MCAS finalized its community involvement plan in FY05. In FY03, the installation finalized the first five-year review report. To ensure continuous monitoring and improvement, the installation completed five-year review reports for eight sites in FY03 and FY08.

To date, the installation has completed nine Records of Decision (RODs), which selected cleanup actions for 15 environmental restoration sites. A RCRA facility assessment performed in FY88 identified solid waste management units. The installation also had identified underground storage tank sites. The installation and EPA agreed to perform additional investigations at 15 sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Cherry Point MCAS for FY05 through FY08 is summarized below.

In FY05, Cherry Point MCAS finalized the FFA. The installation finalized the RODs for Operable Units (OUs) 4 and 13, an assessment of potential risks to the environment at OU 1, and the remedial investigations (RIs) for OUs 5 and 6. The installation completed the OU 14 Phase III RI fieldwork. Cherry Point MCAS conducted an enhanced natural cleanup treatability study within OU 1 to test treatment technologies for chlorinated volatile organic compounds (VOCs) in groundwater. The installation finalized the community involvement plan.

In FY06, Cherry Point MCAS finalized the feasibility study (FS) to evaluate cleanup alternatives, proposed cleanup action plan and RODs for OUs 5 and 6, and began implementation. The installation began an update of the OU 1 RI to incorporate the latest human health screening criteria and the latest sampling results of the assessment of potential risks to the environment.

In FY07, Cherry Point MCAS completed a removal action at OU 6 (Site 12 Crash Crew Training Area) in accordance with the ROD, removed contaminated soils, and began long-term monitoring. Cherry Point MCAS also started site inspections (SIs) at three MMRP sites.

In FY08, Cherry Point MCAS finalized the RI and began the FS for OU 14. The installation also completed an RI addendum for OU 1 and began the FS for the central groundwater contaminated area. The installation completed a completion report for OU 6 and removal actions at OU 1 (Tributary 2). Cherry Point MCAS also completed five-year review reports for the OU 1 central groundwater contaminated area, Site 16, OUs 2 through 6, and 13. Under the MMRP, the installation developed a communication plan to inform stakeholders of anticipated actions.

**FY09 IRP Progress**

Cherry Point MCAS finalized the FS, proposed cleanup plan, and ROD for OU 14. The installation also finalized all cleanup actions at OU 6, and finalized the RI for OU 1 central groundwater contaminated area. Cherry Point MCAS completed a supplemental investigation for OU 1 Site 17 resulting in agreement that no further cleanup actions were necessary. The cost of completing environmental restoration has changed significantly due to technical issues.

Technical issues delayed completion of the FSs and RODs for OU 1 Sites 14 through 18, and 40. Technical issues also delayed completion of the FS at OU 1 and the interim cleanup action completion report for OU 5.

**FY09 MMRP Progress**

Cherry Point MCAS informed stakeholders of anticipated MMRP actions.

Technical issues delayed the aerial mapping required for an SI at Sites 1, 2, and 3.

**Plan of Action**

Plan of action items for Cherry Point Marine Corps Air Station are grouped below according to program category.

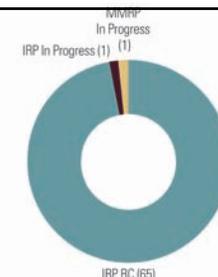
**IRP**

- Begin design and start cleanup at OU 14 in FY10.
- Complete proposed cleanup plan and ROD for OU 1 Sites 14, 15, 17, 18, and 40 in FY10.
- Complete optimization study for groundwater at OU 2 in FY10.
- Complete FS, proposed cleanup plan, and ROD for the OU 1 central groundwater contaminated area in FY10-FY11.
- Complete FS, proposed cleanup plan, ROD, and cleanup design for OU 1 Site 16 and 83 in FY10-FY11.
- Complete proposed cleanup plan and revised ROD for OU 2 Site 10 and design for cleanup in FY10-FY11.

**MMRP**

- Complete SIs for Sites 1, 2, and 3 in FY10.
- Begin RI for Site 2 to include contaminated watershed study in FY10-FY11.
- Complete final focused RI including surface removal for Site 1 in FY11.

<b>FFID:</b>	NE721382023400	<b>Est. CTC (Comp Year):</b>	\$ 17.7 million (FY 2021)
<b>Location (Size):</b>	Hall County, Nebraska (4,020 acres)	<b>IRP Sites (Final RIP/RC):</b>	66 (FY2004)
<b>Mission:</b>	Manufactured ammunition	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2013)
<b>HRS Score:</b>	51.3; placed on NPL in July 1987	<b>Five-Year Review Status:</b>	Completed and underway
<b>IAG Status:</b>	FFA signed in December 1994	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-110
<b>Contaminants:</b>	Explosives and heavy metals		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 74.5 million		



**Progress To Date**

Cornhusker Army Ammunition Plant (AAP) is a former ammunition manufacturing facility. In FY83, the installation identified an explosives-contaminated groundwater area migrating off-site. The off-site contamination affected more than 250 private residences in Grand Island. In FY86 and FY95, the installation extended the Grand Island municipal water distribution system to all affected residences. In FY86, Cornhusker AAP removed and incinerated 40,000 tons of explosives-contaminated soil from sumps and leaching pits. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in July 1990, to outline how they were going to proceed with cleanup. In FY01, the installation completed the transfer of disposal responsibility for Cornhusker AAP from the Army Materiel Command to the U.S. Army Corps of Engineers. The community formed a local redevelopment authority in FY89. To ensure continuous monitoring and improvement, Cornhusker AAP completed a five-year review report in FY04.

An initial assessment study completed in FY80 identified 65 contaminant sources at the installation. To date, the installation has completed five Records of Decision, which selected cleanup actions at environmental restoration sites. In FY99, the results of long-term groundwater monitoring of the off-post contamination provided data to support monitored cleanup of the explosive contaminants using natural processes. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Cornhusker AAP for FY05 through FY08 is summarized below.

In FY05, the installation operated cleanup systems at Operable Unit (OU) 1.

In FY06, the installation continued to operate cleanup systems at OU 1 and long-term management at OUs 3 and 5. Cornhusker AAP also performed chemical characterization and the removal of contaminated soils at Load Lines 1 and 2. The installation also completed the explosives safety removal and certification of Load Line 4 and started an explosives safety submission for six additional areas. Under the MMRP,

Cornhusker AAP completed the site inspection (SI). The installation also started an engineering evaluation and cost analysis (EE/CA) for future accelerated interim cleanup at the OU 5 open burning and open detonation (OB/OD) ground.

In FY07, Cornhusker AAP accelerated the operation of cleanup systems at OU 1. The installation also started the performance-based contract for full cleanup of discarded military munitions and environmental contaminants of concern.

In FY08, Cornhusker AAP continued to accelerate the operation of cleanup systems at OU 1, and removed explosives-contaminated soils at Load Line 4. Cornhusker AAP also submitted an explosives safety submission for No DoD Action Indicated for the sale of additional land.

**FY09 IRP Progress**

Cornhusker AAP continued to operate the cleanup systems at OU 1 groundwater contaminated area. Cornhusker AAP completed Phase I of an injection program at the site. The installation also received regulatory approval and transferred Load Line 4 property and additional areas.

Regulatory issues delayed the approval for No DoD Action Indicated and public transfer at four sites. Regulatory issues also delayed the approval of the Freon SI for No DoD Action Indicated and public transfer.

**FY09 MMRP Progress**

Cornhusker AAP awarded and started a performance-based acquisition contract for the removal of explosives at the OB/OD ground.

Administrative issued delayed the removal of explosives from the OB/OD ground. Regulatory issues delayed the approval for the interim cleanup and EE/CA.

**Plan of Action**

Plan of action items for Cornhusker Army Ammunition Plant are grouped below according to program category.

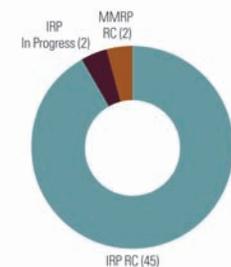
**IRP**

- Gain approval of the Freon SI for No DoD Action Indicated and public transfer in FY10.
- Gain regulatory approval for No DoD Action Indicated and public transfer at four sites in FY10.
- Complete sampling at OU 3 in FY10-FY11.
- Continue injection program to accelerate cleanup at the groundwater explosives contaminated area in FY10-FY11.
- Continue to accelerate the operation of the cleanup system at OU 1 in FY10-FY11.

**MMRP**

- Complete explosives removal and sampling at OB/OD ground in FY10.
- Obtain regulatory approval of EE/CA for OB/OD ground in FY10.
- Begin work on the removal and destruction of explosives and soil sampling at the OB/OD ground in FY10-FY11.
- Submit and receive approval of the explosive safety submission for OB/OD ground in FY10-FY11.

<b>FFID:</b>	TX617002278600	<b>Est. CTC (Comp Year):</b>	\$ 6.7 million (FY 2018)
<b>Location (Size):</b>	Dallas, Texas (832 acres)	<b>IRP Sites (Final RIP/RC):</b>	47 (FY2007)
<b>Mission:</b>	Served as a pilot training center	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2005)
<b>HRS Score:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	N/A	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-51
<b>Contaminants:</b>	VOCs, SVOCs, POLs, solvents, asbestos, heavy metals		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 83.5 million		



**Progress To Date**

In July 1993, the BRAC Commission recommended closure of the Dallas Naval Air Station (NAS), which served as a pilot training center. The installation closed in September 1998. After the base was closed, operations transferred to Fort Worth NAS. A number of the industrial operations that supported the installation’s military mission contributed to contamination. For investigations of environmental conditions, the installation was divided into six areas, categories A through F, based on operations and property ownership. In FY94, Dallas NAS formed a BRAC cleanup team to develop a process for cleanup of sites, and developed a BRAC cleanup plan with community input to prioritize sites requiring environmental restoration. The installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community, and established an information repository. The RAB adjourned in FY05. The installation established a local redevelopment authority and adopted a land reuse plan. During FY96, the installation completed a community relations plan.

The installation has completed a RCRA facility assessment, which identified solid waste management units (SWMUs) and areas of concern. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); two MMRP sites were identified. Cleanup progress at Dallas NAS for FY05 through FY08 is summarized below.

In FY05, Dallas NAS submitted response action completion reports for 84 soil sites for review. Dallas NAS also continued long-term operation (LTO) and long-term management (LTM) for the remaining sites. The RAB adjourned due to the specified environmental cleanup standards and funding provided in the settlement agreement between the City of Dallas and the Navy.

In FY06, Dallas NAS completed site restoration and groundwater excavation at SWMUs 18 and 85 by engineering maintenance and control. The installation continued LTO/LTM for the remaining sites. The installation also completed monitored cleanup using natural processes at SWMU 35 and began the report.

In FY07, Dallas NAS submitted a groundwater cleanup report, conducted groundwater sampling for the base, and completed

cleanup using natural processes at 13 sites within groundwater contamination areas. The installation also submitted a response action completion report for SWMU 35 groundwater and an annual response action effectiveness report for 13 groundwater contaminated areas.

In FY08, Dallas NAS conducted semiannual groundwater sampling for the base and completed an annual response action effectiveness report for 13 groundwater contaminated areas. The installation completed the closure activities report for the oil-water separator at Building 1424. The installation received concurrence for no further action for soil removal activity and the SWMU 35 groundwater contaminated areas on the base.

**FY09 IRP Progress**

Dallas NAS submitted a response action effectiveness report and continued monitoring at 12 groundwater contaminated areas. The installation submitted revised corrective action plans to the State of Texas, which realigned actions from cleanup using natural processes to institutional controls that minimized potential for human exposure at SWMUs 21, 136 Central, and 136 South. The installation also determined that no further cleanup action was necessary at SWMU 139.

**FY09 MMRP Progress**

The installation conducted no MMRP actions.

**Plan of Action**

Plan of action items for Dallas Naval Air Station are grouped below according to program category.

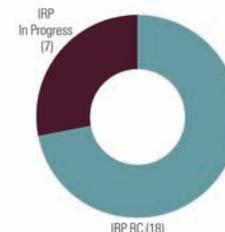
**IRP**

- Continue monitoring at 12 groundwater contaminated areas in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	RI117002203600	<b>Funding to Date:</b>	\$ 63.0 million
<b>Location (Size):</b>	Davisville, Rhode Island (1,285 acres)	<b>Est. CTC (Comp Year):</b>	\$ 15.9 million (FY 2040)
<b>Mission:</b>	Provided mobilization support to Naval Construction Forces	<b>IRP Sites (Final RIP/RC):</b>	25 (FY2013)
<b>HRS Score:</b>	34.52; placed on NPL in November 1989	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in March 1992	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Heavy metals, PCBs, pesticides, petroleum hydrocarbons, POLs, VOCs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-148
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



**Progress To Date**

The Davisville Naval Construction Battalion Center (NCBC) provided mobilization support to Naval Construction Forces. Site types at the installation include landfills, solvent storage and disposal areas, transformer storage areas, spill areas, underground storage tanks, and fire training areas. Contaminants include solvents, polychlorinated biphenyls (PCBs), petroleum/oil/lubricants (POLs), and pesticides. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in March 1992 to outline how they were going to proceed with cleanup. In July 1991, the BRAC Commission recommended closure of the installation. Construction battalion training and mobilization activities transferred to the Naval Construction Battalion Center, Gulfport, Mississippi, and to the Naval Construction Battalion Center, Port Hueneme, California. The installation closed in April 1994. The installation established an administrative record and information repository in FY89. Formed in FY88, the installation converted its technical review committee, responsible for communicating cleanup progress with the community, to a Restoration Advisory Board (RAB) in FY94. Also in FY94, the installation formed a BRAC cleanup team to develop a process for cleanup at Davisville NCBC. In FY95, a BRAC cleanup plan was completed to prioritize sites requiring environmental restoration, and in FY96 and FY97, the BRAC cleanup team prepared BRAC business plans and a community relations plan, respectively. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY03 and FY08.

The installation has completed three Records of Decision (RODs), which selected cleanup actions at environmental restoration sites. In addition, the installation has completed five No Further Action RODs, which determined no further cleanup activities were necessary. Davisville NCBC conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Davisville NCBC for FY05 through FY08 is summarized below.

In FY05, Davisville NCBC continued long-term management (LTM) at Sites 3, 7, and 9. The installation also continued the

environmental baseline survey to determine the presence of potential environmental hazards at Site 21.

In FY06, Davisville NCBC continued LTM at Sites 7 and 9, and the environmental baseline survey at Site 21. The installation reached a settlement with the State of Rhode Island concerning a natural resource damage claim. The installation also submitted delinquent LTM and annual inspection reports to regulators.

In FY07, Davisville NCBC continued interim groundwater sampling at Site 3, and coordinated a sampling event between the Navy's Site 3 and a U.S. Army Corps of Engineers site. The installation also conducted two sampling rounds at Site 7, and completed three rounds of monitoring at Site 9. The installation conducted four RAB meetings and seven BRAC cleanup team meetings.

In FY08, Davisville NCBC completed remedial investigation (RI) fieldwork and submitted a draft report at Site 16. The installation also continued LTM of Sites 3, 7, and 9, and the environmental baseline survey for Site 21. Additionally, Davisville NCBC completed a second five-year review report. The installation also conducted three RAB meetings and five BRAC cleanup team meetings.

**FY09 IRP Progress**

Davisville NCBC continued LTM of Sites 7 and 9, and the environmental baseline survey for Site 21. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Davisville NCBC has identified no MMRP sites.

**Plan of Action**

Plan of action items for Davisville Naval Construction Battalion Center are grouped below according to program category.

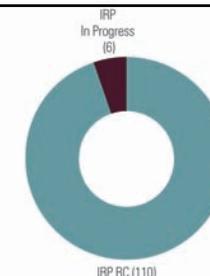
**IRP**

- Conduct investigation of source areas at Site 7 in FY10.
- Complete fieldwork, revised draft feasibility study, proposed cleanup plan, and ROD for Site 16 in FY10-FY11.
- Complete revision to LTM sampling programs for Sites 7 and 9 in FY10-FY11.
- Complete FS, proposed cleanup plan and ROD for soils at Site 3 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	TN497152057000	<b>Funding to Date:</b>	\$ 58.0 million
<b>Location (Size):</b>	Memphis, Tennessee (642 acres)	<b>Est. CTC (Comp Year):</b>	\$ 8.9 million (FY 2016)
<b>Mission:</b>	Stored and distributed clothing, food, medical supplies, electronic equipment, petroleum products, and industrial chemicals	<b>IRP Sites (Final RIP/RC):</b>	116 (FY2010)
<b>HRS Score:</b>	58.06; placed on NPL in October 1992	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in March 1995	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	POLs, VOCs, pesticides, heavy metals, chlorinated solvents	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-50
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Defense Distribution Depot (DDD) Memphis stored and distributed clothing, food, medical supplies, electronic equipment, petroleum products, and industrial chemicals until FY97. Contamination resulted from leakage, spillage, disposal, and the normal application of pesticides. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in 1992. DoD, EPA, and the Tennessee Department of Environment and Conservation signed a federal facility agreement (FFA) in 1995 to outline how the were going to proceed with cleanup. In 1995, the BRAC Commission recommended closure of DDD Memphis. The BRAC cleanup team developed a BRAC cleanup plan with community input in FY96 to prioritize sites requiring environmental restoration. In FY93, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. In FY98, DDD Memphis developed a community relations plan. In FY01 and FY02, the RAB received funding for technical assistance for public participation. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY03 and FY08.

DDD Memphis is divided into two areas: the Main Installation and Dunn Field. The installation divided all CERCLA sites and former underground storage tanks into four Operable Units. DDD Memphis has signed three RODs for the Main Installation and Dunn Field, and the installation amended the Dunn Field ROD in FY09. DDD Memphis has transferred 381 acres of the Main Installation and 41 acres of Dunn Field. Cleanup progress at DDD Memphis for FY05 through FY08 is summarized below.

In FY05, DDD Memphis found the eastern half of Dunn Field suitable for transfer. EPA and the Tennessee Department of Environment and Conservation approved the Main Installation cleanup action work plan. DDD Memphis completed the early implementation of the selected remedy fieldwork, and EPA and Tennessee Department of Environment and Conservation approved the associated cleanup completion report. DDD Memphis completed an annual inspection of the land use control implementation plan, which restricts the use of or access to Main Installation sites.

In FY06, DDD Memphis transferred a portion of the Main Installation, and offered the remaining property found suitable

to transfer for public sale. DDD Memphis completed cleanup of disposal sites at Dunn Field, and received EPA and Tennessee Department of Environment and Conservation approval of the associated report. The installation also completed construction and began enhanced bioremediation at the Main Installation. The installation also completed its annual inspection of the implementation plan for land use controls at the Main Installation.

In FY07, DDD Memphis completed a cleanup design for contamination source areas, the two associated cleanup action work plans, and constructed a fluvial soil vapor extraction (SVE) system at Dunn Field. The installation transferred the golf course on the Main Installation to the City of Memphis. The installation held a public sale for the remainder of the 41 transferable acres of Dunn Field. DDD Memphis completed the annual inspection of land use controls at the Main Installation.

In FY08, DDD Memphis continued fluvial SVE at Dunn Field. The Depot completed the annual inspection of land use controls at the Main Installation. Additionally, the installation achieved groundwater cleanup goals, and turned off 5 of 11 extraction wells used for groundwater interim cleanup at Dunn Field.

**FY09 IRP Progress**

DDD Memphis completed the ROD amendment for Dunn Field. EPA and the Tennessee Department of Environment and Conservation approved the off-depot groundwater cleanup design for Dunn Field, and DDD Memphis began constructing the air sparging SVE system to reduce contaminant concentrations. DDD Memphis completed the enhanced bioremediation treatment at the Main Installation, resulting in an over 80 percent reduction of contaminants. The installation also completed a source areas thermal-enhanced SVE, and the annual inspection of land use controls at the Main Installation. DDD Memphis submitted a document finding the remainder of Dunn Field suitable for transfer, and shut down the groundwater pump and discharge system at Dunn Field. The cost of completing environmental restoration has changed significantly due to regulatory and technical issues and changes in estimating criteria.

DDD Memphis conducted one RAB meeting, one administrative RAB meeting, one public comment meeting on the Dunn Field

revised proposed plan, and one public briefing on the cleanup design.

**FY09 MMRP Progress**

DDD Memphis has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Defense Distribution Depot Memphis are grouped below according to program category.

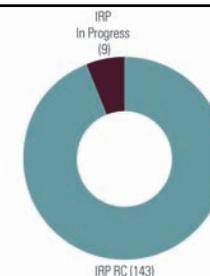
**IRP**

- Complete documents finding the remainder of Dunn Field and the Main Installation suitable for transfer, and conduct public comment periods and meetings in FY10.
- Obtain an operating properly and successfully determination from EPA for cleanup action at the Main Installation in FY10.
- Complete construction and begin operation of the off-depot groundwater cleanup action at Dunn Field in FY10.
- Complete annual inspections of land use controls at the Main Installation and Dunn Field in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA997152083200	<b>Funding to Date:</b>	\$ 78.5 million
<b>Location (Size):</b>	Lathrop, California (724 acres)	<b>Est. CTC (Comp Year):</b>	\$ 87.9 million (FY 2047)
<b>Mission:</b>	Receive, store, and distribute supplies, materials, and equipment	<b>IRP Sites (Final RIP/RC):</b>	152 (FY2012)
<b>HRS Score:</b>	42.24; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	IAG signed in March 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, heavy metals, POLs, TCE, pesticides	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-31
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Defense Distribution Depot (DDD) San Joaquin, Sharpe Facility began operation in 1941 as a supply and maintenance center. Activities at the property have included overhauls, repairs, painting, paint stripping, metal finishing, and degreasing of aircraft and heavy construction equipment. Investigations have identified contaminated groundwater, soil, and building sites. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed an interagency agreement (IAG) in March 1989 to outline how they were going to proceed with cleanup. DDD San Joaquin, Sharpe Facility developed a community relations plan, which the installation updated in FY07. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY04 and FY09.

To date, DDD San Joaquin, Sharpe Facility has completed two Records of Decision (RODs), selecting cleanup actions for Operable Unit (OU) 1 groundwater cleanup in FY93 and the OU 2 soil cleanup in FY96. Cleanup progress at DDD San Joaquin, Sharpe Facility for FY05 through FY08 is summarized below.

In FY05, DDD San Joaquin, Sharpe Facility obtained EPA and state approval on a plan to complete environmental cleanup. The installation also performed operations and maintenance (O&M), and improved groundwater treatment systems and groundwater monitoring.

In FY06, DDD San Joaquin, Sharpe Facility continued O&M, monitoring, and optimization of the groundwater treatment systems and the groundwater monitoring well network. The installation also started a plan to complete cleanup by investigating alternative treatment technology and cleanup using natural processes.

In FY07, DDD San Joaquin, Sharpe Facility finished updating the community relations plan. The installation continued O&M, improvements to the groundwater treatment systems, and groundwater monitoring. The installation also implemented the response completion plan that reviews the selected cleanup actions, and develops approaches to complete cleanup and close the site. The plan included the submission of alternative

treatment technology and additional contaminated area delineation work plans to regulators.

In FY08, DDD San Joaquin, Sharpe Facility continued O&M of groundwater treatment systems, groundwater monitoring, and implementation of the cleanup completion plan. The installation finished cleanup at OU 2 Site S 26, and completed the cleanup report and additional evaluations of the plan to delineate contamination.

**FY09 IRP Progress**

DDD San Joaquin, Sharpe Facility continued O&M of groundwater treatment systems, associated compliance actions, and groundwater monitoring. The installation also finalized the groundwater contaminated area delineations and evaluations, and submitted findings to regulators. Additionally, DDD San Joaquin, Sharpe Facility installed an alternative discharge line for treated groundwater. The installation submitted a draft ROD amendment and proposed plan for OU 2 to regulators. DDD San Joaquin, Sharpe Facility completed three alternative technology field pilot studies in accordance with the cleanup completion plan, and completed two associated performance evaluations. DDD San Joaquin, Sharpe Facility completed its second five-year review report.

Technical issues delayed completion of the ROD amendment for OU 2.

**FY09 MMRP Progress**

DDD San Joaquin, Sharpe Facility has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Defense Distribution Depot San Joaquin, Sharpe Facility are grouped below according to program category.

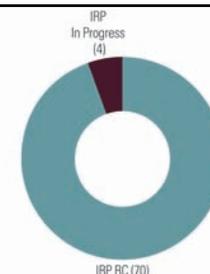
**IRP**

- Complete the ROD amendment for OU 2 in FY10.
- Begin an engineering evaluation and cost analysis, a PP, and a ROD amendment for OU 1 in FY10.
- Continue O&M of groundwater treatment systems, associated compliance actions, and groundwater monitoring in FY10.
- Complete the third alternative pilot study technology evaluation in FY10.
- Begin work plan and install the soil vapor extraction system at Site P-5A in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA997150682700	<b>Funding to Date:</b>	\$ 104.5 million
<b>Location (Size):</b>	Tracy, California (908 acres)	<b>Est. CTC (Comp Year):</b>	\$ 16.2 million (FY 2024)
<b>Mission:</b>	Store and distribute medical, textile, food, electronic, industrial, construction, chemicals, and other supplies and equipment	<b>IRP Sites (Final RIP/RC):</b>	74 (FY2010)
<b>HRS Score:</b>	37.16; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Chlorinated solvents, heavy metals, pesticides, POLs, VOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-32
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Defense Distribution Depot (DDD) San Joaquin, Tracy Facility stores and distributes supplies and equipment for DoD. Sites include burn and disposal pits, underground storage tanks, hazardous waste storage sites, and other contaminated areas. The installation identified contaminated on-site soil and groundwater, and off-site groundwater. The potential risk to human health and the environment was significant enough for EPA to place DDD San Joaquin, Tracy Facility on the NPL in 1990. DoD and EPA signed a federal facility agreement (FFA) in 1991 to outline how they were going to proceed with cleanup. The installation established a community relations plan in 1994, and updated it in FY04 and FY06. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY05.

To date, DDD San Joaquin, Tracy Facility has signed two Records of Decision (RODs): one selected cleanup actions for groundwater contamination, and the other selected cleanup actions for all sites at the installation. Cleanup progress at DDD San Joaquin, Tracy Facility for FY05 through FY08 is summarized below.

In FY05, the installation completed a five-year review report, which included an outline of the draft response completion plan. The installation performed operations and maintenance (O&M), optimized groundwater treatment systems, and monitored soil and groundwater. Additionally, the installation continued soil vapor extraction (SVE) to remove trichloroethylene (TCE) and tetrachloroethylene (PCE) from the soil.

In FY06, DDD San Joaquin, Tracy Facility shut down one of the two groundwater treatment systems. The installation continued O&M, optimization of groundwater treatment systems, and soil and groundwater monitoring. DDD San Joaquin, Tracy Facility also continued SVE for TCE and PCE in the soil. The installation updated the community relations plan.

In FY07, DDD San Joaquin, Tracy Facility continued O&M, optimization of groundwater treatment systems, and soil and groundwater monitoring. The installation also conducted a groundwater cleanup investigation to evaluate the effectiveness of groundwater cleanup using natural processes. DDD San

Joaquin, Tracy Facility continued SVE to remove TCE and PCE in the soil.

In FY08, DDD San Joaquin, Tracy Facility continued O&M, optimization of groundwater treatment systems, and soil groundwater monitoring. The installation completed and submitted the response completion plan to regulators. In addition, the installation conducted an investigation at Site WH 10 (Solid Waste Management Unit [SWMU] 20) to delineate extent of soil and groundwater contamination. DDD San Joaquin, Tracy Facility began preparing a cleanup improvement work plan for Operable Unit (OU) 1.

**FY09 IRP Progress**

DDD San Joaquin, Tracy Facility continued O&M, optimization of groundwater treatment systems, and soil groundwater monitoring. The installation completed the groundwater investigation at SWMU 20, installed two extraction wells, and conducted pump tests in the northwest corner of the North Depot Dieldrin site. The installation also completed a rebound test, which evaluated groundwater volatile organic compound (VOC) concentrations at OU 1, and the cleanup action improvement work plan. DDD San Joaquin, Tracy Facility completed the installation and operation of the SVE system at Area 1, and conducted on- and off-depot groundwater investigations. The installation determined that no further cleanup actions were necessary at Areas 2 and 3.

Technical issues delayed completion of a preliminary close-out report for all sites at the installation, as well as the completion of SVE operations, the cleanup action report, and the ROD amendment for OU 2. Technical issues also delayed the preparation and submittal of the proposed plan (PP) and ROD amendment for the northwest corner of the North Depot Dieldrin site.

**FY09 MMRP Progress**

DDD San Joaquin, Tracy Facility has identified no sites suspected to contain contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Defense Distribution Depot San Joaquin, Tracy Facility are grouped below according to program category.

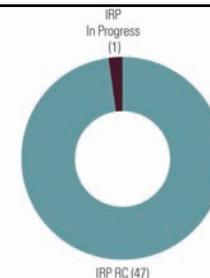
**IRP**

- Complete the feasibility study, PP, and OU 1 ROD Amendment for the northwest corner of the North Depot Dieldrin site in FY10.
- Install and operate the SVE system at SWMU 20 in FY10.
- Prepare the second five-year review report in FY10.
- Conduct sampling at Area 1 to determine if no further cleanup is necessary in FY10.
- Complete preliminary close out report for all sites in FY10.
- Complete SVE operations, cleanup action report, and ROD amendment at OU 2 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	PA397154266500	<b>Media Affected:</b>	Groundwater and Soil
<b>Location (Size):</b>	Philadelphia, Pennsylvania (87 acres)	<b>Funding to Date:</b>	\$ 32.4 million
<b>Mission:</b>	Procured and distributed food, clothing and textiles, medical supplies and equipment, and general and industrial items in support of the DoD military services, federal and civil agencies, and foreign countries; and to ensure military readiness	<b>Est. CTC (Comp Year):</b>	\$ 9.4 million (FY 2012)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	48 (FY2003)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	POLs, PCBs, pesticides, asbestos	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-46



### Progress To Date

The mission of Defense Supply Center (DSC) Philadelphia (formerly Defense Personnel Support Center Site) was procurement and distribution of food, clothing and textiles, medical supplies and equipment, and general and industrial items. Sites include underground storage tanks, aboveground storage tanks, pesticide management areas, hazardous waste management areas, polychlorinated biphenyl (PCB)-containing transformers, asbestos-contaminated areas, and former railroad track areas. Studies have indicated that the contamination originated off-site and migrated onto DSC Philadelphia. In July 1993, the BRAC Commission recommended closure of the installation, and relocated its mission to the Naval Support Activity Philadelphia. DSC Philadelphia formed a BRAC cleanup team in FY94 to develop a process for cleanup of sites. In FY95, the installation established a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. In FY05, the installation began to establish an administrative record.

The only Installation Restoration Program (IRP) site currently open and undergoing cleanup is the subsurface groundwater petroleum hydrocarbon-contaminated site, which lies under large portions of the installation and is managed by the Defense Energy Support Center (DESC). The installation closed five IRP sites in FY01, one IRP site in FY03, and three IRP sites in FY04. Remaining IRP sites, aside from the hydrocarbon-contaminated area, were closed prior to FY01. Cleanup progress at DSC Philadelphia for FY05 through FY08 is summarized below.

In FY05, DSC Philadelphia began incorporating data into a draft administrative record. DESC completed the construction of a vacuum-enhanced cleanup system. DSC Philadelphia, DLA, and DESC continued discussions with the Army on environmental responsibilities, actions, and timelines.

In FY06, DESC completed testing and began to operate a vacuum-enhanced cleanup system to extract petroleum vapors. DESC completed the installation of six deep and four intermediate monitoring wells.

In FY07, installed seven additional deep and seven intermediate wells. The installation also completed groundwater sampling and analysis at the deep and intermediate wells.

In FY08, DESC installed vapor liners in the Philadelphia Housing Authority building and eight newly constructed townhouses. These liners will protect buildings from the potential intrusion of vapors from contaminated groundwater.

### FY09 IRP Progress

DESC continued to operate the vacuum-enhanced cleanup system. The cost of completing environmental restoration has changed significantly due to technical and regulatory issues and changes in estimating criteria.

Administrative issues delayed access agreements for the sampling of existing monitoring wells and the installation of new monitoring wells at the former Passyunk Homes site. Administrative issues also delayed the submittal of Pennsylvania Act 2 documentation and the installation of three deep wells. Technical issues delayed finishing repair work on damaged vacuum lines on the vapor extraction portion of the system, and restarting operation of the cleanup system on the Philadelphia Housing Authority site.

The installation held a meeting with members of the RAB, Pennsylvania Department of Environmental Protection, and DLA.

### FY09 MMRP Progress

DSC Philadelphia has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

### Plan of Action

Plan of action items for Defense Supply Center Philadelphia are grouped below according to program category.

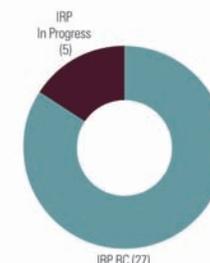
#### IRP

- Conduct groundwater sampling in the shallow, intermediate, and deep wells, and install three deep wells to further characterize the deep aquifer in FY10.
- Submit Pennsylvania Act 2 documentation (public involvement plan, remedial investigation report, and final cleanup plan) in FY10.
- Finish repairs on the vacuum air lines for the vapor extraction system in FY10.
- Restart operation of the cleanup system on the Philadelphia Housing Authority site in FY10.
- Obtain access agreements for the construction of new monitoring wells at the former Passyunk Homes site in FY10.

#### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	VA397152075100	<b>Funding to Date:</b>	\$ 65.0 million
<b>Location (Size):</b>	Richmond, Virginia (565 acres)	<b>Est. CTC (Comp Year):</b>	\$ 13.7 million (FY 2035)
<b>Mission:</b>	Provide logistics support (aviation weapon system and environmental) for DoD	<b>IRP Sites (Final RIP/RC):</b>	32 (FY2012)
<b>HRS Score:</b>	33.85; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	IAG signed in 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	POLs, VOCs, PAHs, solvents, pesticides, metals, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-175
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Defense Supply Center (DSC) Richmond provides aviation weapon systems and environmental logistics support for DoD. Petroleum/oil/lubricants (POLs), polyaromatic hydrocarbons (PAHs), chlorinated volatile organic compounds (VOCs), solvents, metals, and pesticides in the groundwater and soil are the primary contaminants at the installation. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed an interagency agreement (IAG) in 1991 to outline how they were going to proceed with cleanup. In FY02, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community, and implemented a community relations plan. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY97, FY99, FY02, FY05, and FY08.

Sites have been grouped into 13 Operable Units (OUs). To date, DSC Richmond has signed nine Records of Decision (RODs), selecting cleanup actions for nine OUs. Cleanup progress at DSC Richmond for FY05 through FY08 is summarized below.

In FY05, DSC Richmond removed over 1,200 tons of hazardous waste that threatened to be a principal source of contamination at OU 4, and completed the associated closeout report. The installation completed the DSC Richmond conceptual site model, which is a schematic diagram of the contaminated area, and the management action plan to identify and manage the restoration program requirements. DSC Richmond completed the proposed plan (PP) for OU 12. Additionally, the installation developed an implementation plan for land use controls (LUCs), which restrict the use of or access to sites, as well as risk assessments for OUs 10 and 11. RAB meetings continued.

In FY06, DSC Richmond signed the installation's first ROD for groundwater (OU 8). DSC Richmond also completed risk assessments and feasibility studies (FSs) to evaluate cleanup alternatives at OUs 10 and 11. DSC Richmond completed a ROD for OU 12, and began installing a cleanup system. Additionally, the installation completed the PP and FS for OU 8. RAB meetings continued.

In FY07, DSC Richmond completed RODs for OUs 10 and 11. The installation constructed a large-scale groundwater treatability study for OUs 6 and 7. DSC Richmond finalized an explanation of significant differences for OU 1, which determined that cleanup was complete, and the cleanup completion report for OU 12. The RAB held monthly meetings.

In FY08, DSC Richmond completed a PP and ROD for OU 2; a design for cleanup and installation of cleanup systems for OUs 8, 10, and 11; and a five-year review report, which included OUs 1, 3, 6, and 8 through 12. DSC Richmond also completed a ROD amendment for OU 9, a screening-level assessment of potential risks to the environment for OU 13, and a report on the cleanup systems for OUs 10 and 11. Additionally, DSC Richmond removed the soil vapor extraction system at OU 8.

**FY09 IRP Progress**

DSC Richmond completed a cleanup design for OU 2 and an FS for OU 13. The installation also completed a final LUC implementation plan and the corresponding inspection report for OUs 10 and 11. DSC Richmond decommissioned both the OU 9 pump-and-treat groundwater system and the post exchange gas station bailing system at OU 9. The installation completed a management action plan. The cost of completing environmental restoration has changed significantly due to technical and regulatory issues and changes in estimating criteria.

Regulatory issues delayed completion of a ROD for OU 13. Technical issues delayed completion of an FS for OUs 6 and 7.

**FY09 MMRP Progress**

DSC Richmond has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Defense Supply Center Richmond are grouped below according to program category.

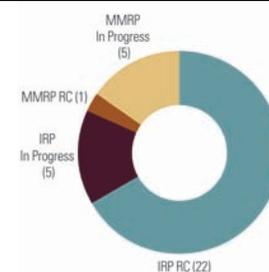
**IRP**

- Complete FS for OUs 6 and 7 in FY10.
- Complete a PP and a ROD for OU 13 in FY10.
- Complete cleanup construction at OU 2 in FY10.
- Complete additional groundwater investigation at OU 8 in FY10.
- Complete the land use control implementation plan and inspections for all sites in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	UT821382026500	<b>Funding to Date:</b>	\$ 23.3 million
<b>Location (Size):</b>	Tooele, Utah (19,364 acres)	<b>Est. CTC (Comp Year):</b>	\$ 196.7 million (FY 2016)
<b>Mission:</b>	Plan and execute the storage and disposal of chemical weapons	<b>IRP Sites (Final RIP/RC):</b>	27 (FY2014)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	6 (FY2016)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Solvents, heavy metals, explosives, VOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-167
<b>Media Affected:</b>	Groundwater and Soil		



## Progress To Date

Deseret Chemical Depot (CD) opened in 1943 as a storage facility for chemical agents. The primary mission of Deseret CD is the storage, surveillance, and demilitarization of chemical ammunition, and to provide installation support for chemical weapons disposal at its two permitted treatment facilities: Tooele Chemical Agent Disposal Facility and Chemical Agent Munitions Disposal Systems. Tooele Chemical Agent Disposal Facility is a full-scale treatment facility with four incinerators used for various decontamination activities associated with chemical agents and munitions. Chemical Agent Munitions Disposal Systems is a research and development facility used to demonstrate technology for chemical munitions handling, disassembly, incineration, pollution control, and treatment of waste. The installation has tested and evaluated various alternatives to incineration for destruction of chemical and conventional munitions at the facility. Past operations and disposals at Deseret CD have resulted in various types of contaminants across the installation. Solvents, heavy metals, and explosives are the primary contaminants, with chemical agent breakdown products being detected at several sites. In 2005, the BRAC Commission recommended Deseret CD for closure after completion of its chemical demilitarization mission.

To date, there are two known releases from solid waste management units (SWMUs) and 27 suspected releases. Cleanup progress at Deseret CD for FY05 through FY08 is summarized below.

In FY05, the installation completed a final Phase II RCRA facility investigation report and a corrective measure study for SWMU 22.

In FY06, Deseret CD started an environmental condition of property report, which summarizes the environmental conditions of all transferable property. This was in response to the BRAC Commission's recommendation to close Deseret CD.

In FY07, Deseret CD began a baseline risk assessment.

In FY08, Deseret CD completed soil sampling activities at SWMU 3. The installation also started the first phase of a soil gas study at SWMUs 1 and 25. Additionally, Deseret CD

continued groundwater monitoring at the installation, and installed additional monitoring wells in SWMUs 25 and 26.

## FY09 IRP Progress

Deseret CD completed the soil gas investigation at SWMU 1 and submitted the draft final document to the Utah Department of Environmental Quality for review. The installation also continued cleanup at SWMU 3. Regarding SWMU 19, Deseret CD prepared the work plan, accident prevention plan, and site safety and health plan for the soil gas study. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues delayed groundwater monitoring at the installation. Administrative issues also delayed the completion of the environment condition of property, and completion of cleanup activities at SWMU 3.

## FY09 MMRP Progress

Deseret CD prepared and submitted an interim action plan for two sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP): DCD 002-R-01 and DCD 006-R-01.

## Plan of Action

Plan of action items for Deseret Chemical Depot are grouped below according to program category.

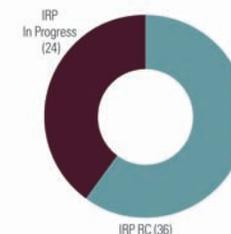
### IRP

- Continue groundwater monitoring at the installation in FY10.
- Complete the environment condition of property in FY10.
- Complete cleanup at SWMU 3 and update the Phase II RCRA facility investigation in FY10.
- Complete an investigation at SWMU 29 in FY10.
- Complete soil gas study and a soil vapor intrusion sampling at SWMU 19 in FY10.

### MMRP

- Complete soil gas investigation at DCD 006-R-01 in FY10-FY11.
- Conduct interim removal activities and complete Phase II RCRA facility investigation at DCD 002-R-01 and DCD 006-R-01 in FY10-FY11.

<b>FFID:</b>	DE357182401000	<b>Est. CTC (Comp Year):</b>	\$ 30.8 million (FY 2032)
<b>Location (Size):</b>	Dover, Delaware (3,730 acres)	<b>IRP Sites (Final RIP/RC):</b>	60 (FY2007)
<b>Mission:</b>	Provide airlift support for troops, cargo, and equipment	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	35.89; placed on NPL in March 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in August 1989	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-51
<b>Contaminants:</b>	Solvents, VOCs, petroleum products, SVOCs, metals		
<b>Media Affected:</b>	Surface Water, Sediment, Groundwater, Soil		
<b>Funding to Date:</b>	\$ 89.0 million		



**Progress To Date**

Dover Air Force Base (AFB) has provided airlift support for troops, cargo, and equipment since 1942. Contaminated site types include solvent spills, fire training areas, landfills, fuel spills, and leaks. Former waste management practices contaminated the shallow groundwater aquifer with petroleum products and volatile organic compounds (VOCs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in March 1989. DoD and EPA signed a federal facility agreement (FFA) in August 1989 to outline how they were going to proceed with cleanup. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY03 and FY08.

To date, all of the sites have installed operational cleanup systems or require no further cleanup actions. The installation has signed 6 Records of Decision (RODs), selecting cleanup actions for 39 sites. In FY05, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Dover AFB for FY05 through FY08 is summarized below.

In FY05, Dover AFB drafted four RODs, which selected groundwater actions at 11 sites and land use controls (LUCs) to restrict access to 22 sites. Dover AFB finalized feasibility studies to evaluate cleanup alternatives for all remaining sites, monitored groundwater contaminated areas, and developed an acceleration initiative to ensure that no further construction of cleanup systems was required by the end of FY06. The installation accepted public comments and held a public meeting on four proposed cleanup plans.

In FY06, Dover AFB signed 6 final RODs for all remaining cleanup actions at 39 sites. The installation also completed four cleanup action plans for five groundwater contaminated areas. Additionally, the installation constructed or implemented final groundwater cleanup systems at 17 sites, and implemented LUCs at all required sites. As a result of the Dover AFB acceleration initiative 34 sites completed the selected cleanup actions.

In FY07, Dover AFB continued operations, maintenance, monitoring, and reporting of groundwater cleanup systems at 24 sites. Additionally, the installation completed groundwater cleanup activities at the remaining petroleum site ahead of schedule, and received state concurrence. The installation also conducted optimization studies, which recommended reducing the installation's monitoring well network by 31 wells and closing one site. Dover AFB completed its first annual monitoring and reporting event for for the installation's LUC activities.

In FY08, Dover AFB completed its second five-year review report, which recommended closing eight sites. Cleanup systems at all remaining sites were found to be protective of human health and the environment, and making progress toward achieving cleanup objectives. The installation continued operations, maintenance, monitoring, and reporting of groundwater cleanup systems at 24 sites; 1 site completed the selected cleanup actions and met cleanup objectives. The Air Force Center for Engineering and the Environment conducted an optimization review at Dover AFB, which concluded that the installation's groundwater cleanup approach was effective.

**FY09 IRP Progress**

Dover AFB continued operations, maintenance, monitoring, and reporting of groundwater cleanup remedies at 23 sites. This installation continued monitoring at 6 of the 23 sites using natural cleanup processes; and continued injection and monitoring activities at the remaining 14 sites. Dover AFB reduced contaminant concentrations at 2 of the 14 injection sites to levels below cleanup objectives and fuel recovery continued at 3 sites. The installation also submitted final closure documentation to the EPA for the eight sites recommended for closure in the FY08 five-year review report. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Dover AFB has identified no MMRP sites.

**Plan of Action**

Plan of action items for Dover Air Force Base are grouped below according to program category.

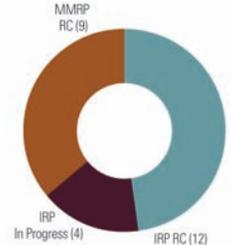
**IRP**

- Continue operations, maintenance, monitoring, and reporting of groundwater cleanup systems at 23 sites in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	AR657002447300	<b>Est. CTC (Comp Year):</b>	\$ 1.0 million (FY 2026)
<b>Location (Size):</b>	Blytheville, Arkansas (3,401 acres)	<b>IRP Sites (Final RIP/RC):</b>	16 (FY1999)
<b>Mission:</b>	Supported bomber and tanker aircraft operations	<b>MMRP Sites (Final RIP/RC):</b>	9 (FY2002)
<b>HRS Score:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	N/A	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-7
<b>Contaminants:</b>	POLs, VOCs, UXO, metals, SVOCs, petroleum hydrocarbons		
<b>Media Affected:</b>	Groundwater, Sediment, Soil		
<b>Funding to Date:</b>	\$ 30.9 million		



**Progress To Date**

Eaker Air Force Base (AFB) formerly supported bomber and tanker aircraft operations. Typical environmental site types include underground storage tanks, aboveground storage tanks, oil-water separators, petroleum/oil/lubricant (POL) spill sites, and landfills. Other sites include a fire training area, waste and material storage areas, an explosive ordnance disposal range, a small arms firing range, a trap and skeet range, a JP-4 jet fuel hydrant system, and a bulk fuel storage tank farm. In July 1991, the BRAC Commission recommended closure of Eaker AFB. The installation closed in December 1992. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. In FY97 and FY05, the BRAC cleanup team updated the BRAC cleanup plan, which prioritizes sites requiring environmental restoration. In FY94, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. The RAB adjourned in FY00 due to successful cleanup efforts and declining community interest. Eaker AFB completed a community relations plan in FY95. To ensure continuous monitoring and improvement, Eaker AFB completed a five-year review report in FY06.

Environmental studies have identified sites at Eaker AFB suspected to contain contamination for the Installation Restoration Program (IRP). EPA and Eaker AFB signed an administrative consent order indicating that 30 sites were subject to RCRA corrective action and would be addressed under a RCRA facility investigation. In FY99, the installation confirmed no further construction of cleanup systems was required at any IRP sites. The installation completed the deed for the 110-acre golf course and transferred a 155-acre parcel in FY00. In FY04, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. In FY07, Eaker AFB finalized the closure of all MMRP sites. Cleanup progress at Eaker AFB for FY05 through FY08 is summarized below.

In FY05, Eaker AFB conducted fieldwork associated with the five-year review report and submitted the draft five-year review report to regulators. The installation began evaluating requirements at MMRP sites.

In FY06, the installation completed the five-year review report, which concluded that all remedies remaining at the base continue to be protective of human health and the environment. The installation completed an evaluation of MMRP sites.

In FY07, Eaker AFB completed the five-year performance-based contract (PBC) to operate cleanup activities, as well as for long-term management (LTM) and groundwater monitoring. The installation prepared and submitted the annual LTM status report to regulators, and received regulatory approval for the closure of four IRP sites. Eaker AFB removed all monitoring wells associated with the four sites from service. The installation prepared a statement of work for a regional multi-year PBC to continue cleanup systems operation, LTM, operations and maintenance (O&M), well decommissioning, and other activities. The installation also prepared and submitted documentation to obtain closure for nine MMRP sites.

In FY08, Eaker AFB prepared and submitted an annual LTM status report to regulators. The installation operated cleanup systems, in addition to conducting LTM and groundwater monitoring at four IRP sites. Eaker AFB decided not to pursue a regional multi-year PBC due to technical contracting requirements. Instead, the installation awarded an annual fixed-price contract to continue to operate cleanup systems and to continue LTM and groundwater monitoring.

**FY09 IRP Progress**

Eaker AFB continued to operate cleanup systems, LTM and groundwater monitoring at four IRP sites. The installation continued to evaluate contracting mechanisms to continue cleanup systems operation, LTM, O&M, well decommissioning, and other activities.

**FY09 MMRP Progress**

Eaker AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Eaker Air Force Base are grouped below according to program category.

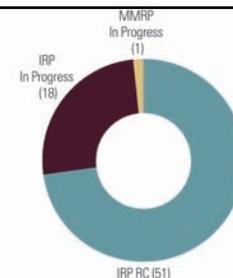
**IRP**

- Complete five-year review report in FY10.
- Complete annual LTM status report in FY10.
- Reevaluate contracting mechanisms to continue cleanup systems operation, LTM, O&M, well decommissioning, and other activities in FY10-FY11.
- Continue cleanup systems operation, LTM, and groundwater monitoring for four IRP sites in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	NJ217002217200	<b>Funding to Date:</b>	\$ 32.2 million
<b>Location (Size):</b>	Colts Neck, New Jersey (11,134 acres)	<b>Est. CTC (Comp Year):</b>	\$ 7.1 million (FY 2037)
<b>Mission:</b>	Handle, store, renovate, and ship munitions	<b>IRP Sites (Final RIP/RC):</b>	69 (FY2011)
<b>HRS Score:</b>	37.21; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2005)
<b>IAG Status:</b>	FFA signed in December 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, SVOCs, heavy metals, hydrocarbons, petroleum products, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-36
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Earle Naval Weapons Station (NWS) handles, stores, renovates, and ships munitions. The sites include landfills, production areas, storage areas, maintenance areas, and disposal areas. Releases of volatile organic compounds (VOCs) and heavy metals from landfills and production areas have contaminated groundwater and soil at the installation. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in December 1990 to outline how they were going to proceed with cleanup. Formed in FY90, the installation converted its technical review committee responsible for communicating cleanup progress with the community to a Restoration Advisory Board in FY95. The installation completed a community relations plan in FY90, which was updated in FY98. The installation also established an information repository containing a copy of the administrative record. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY03 and FY08.

To date, the installation has completed Records of Decision (RODs), which selected cleanup actions at 21 environmental restoration sites and has determined no further cleanup actions were necessary at 13 sites. The installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one site was identified. Cleanup progress at Earle NWS for FY05 through FY08 is summarized below.

In FY05, Earle NWS completed the design and construction for the landfill cap at Site 13. The installation also signed RODs for Sites 1 and 11.

In FY06, Earle NWS signed RODs for Sites 3 and 10.

In FY07, Earle NWS signed RODs for Sites 6, 12, 15, 17, and 26.

In FY08, Earle NWS completed the feasibility study (FS) to evaluate cleanup alternatives and developed the proposed plan for Site 7. The installation also completed five-year review reports for Sites 1 through 6, 10, 13, 15, 17, 19, 20, 23, 26, and 27. The installation continued cleanup, including Classification

Exception Area establishment, for Sites 1, 6, 13, 15, 17, and 26. Under the MMRP, Earle NWS received regulatory concurrence from EPA on no further cleanup action for the Conservation Club Range.

**FY09 IRP Progress**

Earle NWS completed a proposed cleanup plan, and prepared the work plan, landfill cap, and ROD for Site 7. The installation also prepared documents to require no further cleanup action at Sites 9, 41, and 46. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

No MMRP actions were conducted at this installation.

**Plan of Action**

Plan of action items for Earle Naval Weapons Station are grouped below according to program category.

**IRP**

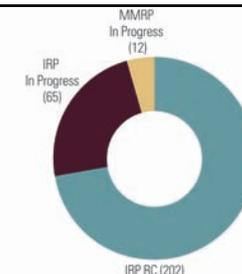
- Establish Classification Exception Areas at Sites 3 through 6, 10, 13, 17, 19, and 26 in FY10-FY11.
- Complete ROD, work plan, and construct landfill cap at Site 7 in FY10-FY11.
- Prepare RODs requiring no further cleanup action at Sites 9, 41, and 46 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA957172450400
<b>Location (Size):</b>	Kern County, California (301,000 acres)
<b>Mission:</b>	Conduct aerospace research, development, testing, and evaluation, and provide support to United States and allies
<b>HRS Score:</b>	33.62; placed on NPL in August 1990
<b>IAG Status:</b>	FFA signed in 1990
<b>Contaminants:</b>	Waste oils, solvents, petroleum hydrocarbons, POLs, rocket fuel, potential CWM, metals, VOCs, SVOCs, PCBs
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil

<b>Funding to Date:</b>	\$ 377.3 million
<b>Est. CTC (Comp Year):</b>	\$ 893.9 million (FY 2043)
<b>IRP Sites (Final RIP/RC):</b>	267 (FY2012)
<b>MMRP Sites (Final RIP/RC):</b>	12 (FY2016)
<b>Five-Year Review Status:</b>	Planned
<b>IRP/MMRP Status Table:</b>	Refer to page C-6-29



**Progress To Date**

Edwards Air Force Base (AFB) conducts aerospace research, development, testing, and evaluation. Contaminants include waste oils, solvents, petroleum hydrocarbons, petroleum/oil/lubricants (POLs), rocket fuel, potential chemical warfare materiel (CWM), metals, volatile organic compounds (VOCs), semi-volatile organic compound (SVOCs), and polychlorinated biphenyls (PCBs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in 1990 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Edwards AFB for realignment. In 1995, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community.

To date, studies have identified sites and areas of concern (AOCs) that are divided into 10 operable units (OUs). The installation has signed a Record of Decision (ROD) for OU 6, which selected cleanup actions for this site. In FY07, Edwards AFB completed an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Edwards AFB for FY05 through FY08 is summarized below.

In FY05, Edwards AFB began cleanup actions including in-place natural, biological, or chemical treatability studies (TSs) at OUs 1, 2, 4, 5, and 9. The installation operated the ion exchange system at Site 285 in OU 5. Edwards AFB finalized the proposed plan (PP) for groundwater contaminated areas in OU 4. The installation also completed removal actions at Sites 275 and 278 at OU 10. The RAB met quarterly.

In FY06, Edwards AFB continued the ion exchange off-site TS at OU 5 and continued the in-place natural, biological, or chemical TSs at OUs 1, 2, 4, 5, 7, and 9. The installation finalized the OU 2 South Base PP and submitted the draft OU 7 CWM feasibility study (FS) report for agency review in order to evaluate cleanup alternatives. The installation and EPA completed and signed the OU 6 ROD. The public reviewed a PP for four of the OU 4 sites and nine additional sites that included a management plan; land use controls (which restrict

use of and access to the sites); monitoring; and the shutdown of a groundwater treatment system. The RAB met quarterly.

In FY07, Edwards AFB completed the Sites 5/14 in-place chemical oxidation TS work plan and installed the system. The installation completed the OU 7 CWM FS report and prepared a draft cleanup action work plan for OU 6. Edwards AFB operated the Site 25 groundwater treatment system and the Site 301 bioaugmentation TS; and successfully demonstrated three-phase heating groundwater treatment. The installation installed a groundwater treatment system at Sites 225 and 298.

In FY08, Edwards AFB completed the OU 4/9 soils and debris PP and ROD. The installation also completed the OU 7 CWM PP and the draft ROD. Edwards AFB completed remedial investigations (RIs) at OUs 5/10, 7, and 8 addendum. Edwards AFB completed an FS for OU 1 and an in-place chemical oxidation TS at OU 2 (Sites 5/14). The installation optimized cleanup at OU 1 (Site 16) and Site 18. Edwards AFB conducted the cleanup action work plan for OU 2 Site 29 Landfill Debris and OU 6. Edwards AFB completed the MMRP site inspection (SI) fieldwork and drafted the report.

**FY09 IRP Progress**

Edwards AFB completed FSs for OUs 4/9 and 8 (Site 25). The installation finalized cleanup action work plans for OU 4/9 South Air Force Research Laboratory. Edwards AFB also finalized the OU4/9 Air Force Research Laboratory Arroyos PP. Edwards AFB signed RODs for OUs 2 and 7 CWM. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed the FS for OU 5/10 and PPs for OUs 1 and 7 (Site 3).

**FY09 MMRP Progress**

Edwards AFB was awarded a contract to perform surface clearance for three areas.

Regulatory issues delayed completion of the SI report, and administrative issues delayed the RI.

**Plan of Action**

Plan of action items for Edwards Air Force Base are grouped below according to program category.

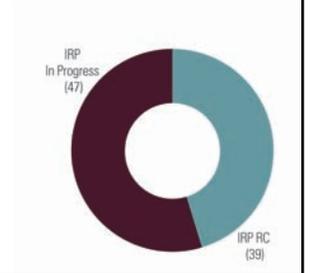
**IRP**

- Complete FSs for OUs 5/10, 7, and 9 Northeast Air Force Research Laboratory in FY10.
- Complete PP for OUs 1, 7 (Site 3), and 8 (Site 25) in FY10.
- Complete cleanup action work plan for OU 2 (Sites 5/14, 76, and 86) in FY10.
- Complete ROD for OUs 4/9 Air Force Research Laboratory Arroyos in FY10.
- Conduct cleanup vapor monitoring for indoor air at South Air Force Research Laboratory in FY10.

**MMRP**

- Complete the SI report for three areas in FY10.
- Begin expanded SI for one area in FY10.
- Complete RI in FY10.
- Finalize expanded SI for one area in FY11.
- Complete surface clearance of areas in FY11.

<b>FFID:</b>	AK057302864600	<b>Est. CTC (Comp Year):</b>	\$ 6.0 million (FY 2032)
<b>Location (Size):</b>	Fairbanks, North Star Borough, Alaska (19,790 acres)	<b>IRP Sites (Final RIP/RC):</b>	86 (FY2006)
<b>Mission:</b>	Provide tactical air support to Pacific Air Forces	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	48.14; placed on NPL in November 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	IAG signed in May 1991	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-3
<b>Contaminants:</b>	POLs, benzene, VOCs, PCBs, solvents, heavy metals		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 63.3 million		



**Progress To Date**

The mission of Eielson Air Force Base (AFB) is to provide tactical air support to Pacific Air Forces. Sites include fire training areas, landfills, spill sites (SSs), aboveground storage tanks, underground storage tanks, and disposal pits (DPs). Primary contaminants affecting groundwater and soil are petroleum/oil/lubricants (POLs), benzene, and chlorinated solvents. Additional contaminants include heavy metals, volatile organic compounds (VOCs), and polychlorinated biphenyls (PCBs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed an interagency agreement (IAG) in May 1991 to outline how they were going to proceed with cleanup. The 2005 BRAC Commission recommended Eielson AFB for realignment. In FY95, the installation converted its technical review committee, responsible for communicating cleanup progress with the community, into a Restoration Advisory Board (RAB). To ensure continuous monitoring and improvement, Eielson AFB completed five-year review reports in FY98, FY03, and FY08.

Eielson AFB cleanup sites are grouped into 6 operable units (OUs); 24 sites require no further cleanup actions. To date, the installation has signed six Records of Decision (RODs) for OUs 1 through 8, which selected cleanup actions at these sites. There are amendments to the RODs for OUs 2 through 5. In FY05, Eielson AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Eielson AFB for FY05 through FY08 is summarized below.

In FY05, Eielson AFB completed the cleanup system repair and upgrade for Storage Tank (ST) 13 and DP 26. The installation also completed sampling and analysis of all monitoring wells. The current measures at Garrison Slough remained protective, including fish removal. The RAB co-chairs suspended regularly scheduled meetings and met as needed. An annual fact sheet conveyed environmental cleanup information to the surrounding communities.

In FY06, the installation removed SS 68 from the environmental cleanup program. Future activities will be addressed through the compliance program using the State of Alaska cleanup

standards. Eielson AFB awarded a munitions sweep contract for Garrison Slough. The Eielson AFB RAB merged with the U.S. Army Corps of Engineers (USACE) FUDS program for the Eielson Farm Road Anti-Aircraft Artillery site. The combined RAB met to discuss USACE’s proposed plan for cleanup efforts at the site.

In FY07, Eielson AFB collected groundwater data for selected environmental cleanup program sites. The base also completed the fish removal initiative at Garrison Slough. In addition, Eielson AFB completed the munitions sweep of Garrison Slough and began an MMRP preliminary assessment (PA).

In FY08, Eielson AFB completed the operation of cleanup systems at four sites in OU 2 and two sites in OU 3. The installation assembled a cleanup process optimization team comprised of federal and state regulators, and successfully moved several POL sites to the land use control (LUC) phase, which will restrict access to the sites. Eielson AFB completed the third five-year review report, which included a finalized LUC management plan. Eielson AFB evaluated data collected at Waste Pit (WP) 45 and SS 57 to determine the applicability of a future project for enhanced trichloroethylene (TCE) cleanup. Under the MMRP, Eielson AFB completed PA fieldwork.

**FY09 IRP Progress**

Eielson AFB completed the installation of cleanup systems at SS 57 and WP 45. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical issues delayed the replacement of the water supply at Well C. Regulatory issues delayed an evaluation of Garrison Slough for PCB source removal.

**FY09 MMRP Progress**

Eielson AFB completed a PA and identified one site for further inspection: a former recreational trap range. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

**Plan of Action**

Plan of action items for Eielson Air Force Base are grouped below according to program category.

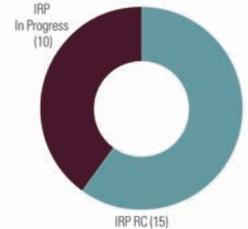
**IRP**

- Conduct groundwater treatment study at SS 57 and WP 45 in FY10.
- Complete the risk evaluation for Garrison Slough in FY10.
- Complete source evaluation process site evaluation and work plan in FY10.
- Conduct source evaluation process Phase I investigation near Engineer Hill in FY10.
- Replace water supply at Well C in FY10.

**MMRP**

- Conduct site inspection of trap range in FY10.

<b>FFID:</b>	CA917302320800	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Irvine, California (4,738 acres)	<b>Funding to Date:</b>	\$ 153.4 million
<b>Mission:</b>	Served as the primary Marine Corps jet fighter facility on the West Coast; provide materials and support for Marine Corps aviation activities; provide housing for Marine Corps personnel	<b>Est. CTC (Comp Year):</b>	\$ 60.7 million (FY 2042)
<b>HRS Score:</b>	40.83; placed on NPL in February 1990	<b>IRP Sites (Final RIP/RC):</b>	25 (FY2014)
<b>IAG Status:</b>	FFA signed in October 1990	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Herbicides, SVOCs, heavy metals, TCE and other VOCs, petroleum hydrocarbons, PCBs, pesticides	<b>Five-Year Review Status:</b>	Completed
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-23



**Progress To Date**

El Toro Marine Corps Air Station (MCAS) served as the primary Marine Corps jet fighter facility on the West Coast, providing materials and support for Marine Corps aviation activities. Sites at the installation are grouped into three operable units (OUs): volatile organic compound (VOC)-contaminated regional groundwater (OU 1), sites potentially contributing to groundwater contamination (OU 2), and all remaining CERCLA sites (OU 3). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1990. DoD and EPA signed a federal facility agreement (FFA) in October 1990 to outline how they were going to proceed with cleanup. In July 1993, the BRAC Commission recommended closure of this installation and transfer of its aircraft, personnel, equipment, and support to Miramar Naval Air Station and Camp Pendleton Marine Corps Base. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites, and developed a BRAC cleanup plan to prioritize sites requiring environmental restoration. The technical review committee, which was responsible for communicating cleanup progress with the community, converted to a Restoration Advisory Board (RAB) in FY94. In FY05, the installation updated its community relations plan. To ensure continuous monitoring and improvement, El Toro MCAS completed a five-year review report in FY09.

To date, approximately 3,736 acres have been transferred or found suitable for transfer. The installation also has completed 11 Records of Decision (RODs), which selected cleanup actions for 21 sites at environmental restoration activities began. The installation signed RODs, which determined no further cleanup activities were necessary, and obtained regulatory concurrence for 399 underground storage tank sites, 12 aerial-photography anomaly sites, and 12 aboveground storage tanks. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at El Toro MCAS for FY05 through FY08 is summarized below.

In FY05, El Toro MCAS completed fieldwork for cleanup at Site 11 (Transformer Storage Area). In addition, the installation completed design for cleanup and began cleanup field activities at Site 24 groundwater. The installation also completed the

community relations plan update and held BRAC cleanup team and RAB meetings.

In FY06, El Toro MCAS completed the ROD for Site 24, exploratory digging at 43 locations, and soil sampling at various JP5 pipeline features. The installation determined no further action necessary for 11 aircraft direct refueling stations; approximately 3,100 linear feet of primary pipelines; and 1,600 linear feet of secondary pipelines.

In FY07, El Toro MCAS completed the ROD for Sites 8 and 12. The installation also completed a remedial investigation report and draft feasibility study (FS) to evaluate cleanup alternatives for Site 1. The installation completed a supplemental groundwater evaluation for Anomaly Area 3. Additionally, El Toro MCAS completed the final operating properly and successfully (OP&S) report for Site 16, a final operations and maintenance (O&M) manual for Sites 18 and 24, and a final interim cleanup completion report for Site 24. The installation completed treatment and confirmation sampling.

In FY08, El Toro MCAS completed RODs, began a design for cleanup, and started cleanup actions at Sites 3 and 50. El Toro MCAS completed the draft final O&M manual and the final cleanup cap construction for Sites 2 and 17; revegetation continued. The installation issued the final radiological release report for Building 297. In addition, the installation found approximately 3.9 acres of public sale property suitable to transfer. El Toro MCAS and regulators distributed a fact sheet with groundwater cleanup updates and cleanup objectives for Sites 18 and 24.

**FY09 IRP Progress**

El Toro MCAS continued O&M and long-term management (LTM) activities and began a pilot test for groundwater at Sites 1 and 2. The installation also completed the design for cleanup and started cleanup actions for field activities at Sited 8 and 12. El Toro MCAS also completed a draft OP&S report for Site 24. The installation completed the cleanup design, started cleanup actions, completed a fact sheet, and completed the draft O&M and LTM plan for Site 3 and 5. El Toro MCAS completed landfill caps, drafted the cleanup completion report, and completed the long-term O&M plan for Sites 2 and 17. The installation published a fact sheet for groundwater cleanup and obtained

unrestricted radiological release for Building 297 from the California Department of Toxic Substances Control. El Toro MCAS completed a five-year review report for Sites 2, 16, 17, 18, and 24.

**FY09 MMRP Progress**

El Toro MCAS has identified no MMRP sites.

**Plan of Action**

Plan of action items for El Toro Marine Corps Air Station are grouped below according to program category.

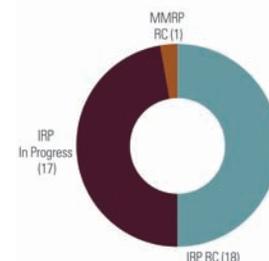
**IRP**

- Obtain OP&S designation for Site 24 in FY10-FY11.
- Complete cleanup at Sites 8 and 12 and obtain unrestricted use at Site 8 in FY10-FY11.
- Complete cleanup at Sites 3 and 5 in FY10-FY11.
- Complete ROD, design for cleanup, and begin cleanup at Anomaly Area 3 in FY10-FY11.
- Complete pilot studies for groundwater, FSs, and draft proposed plans for Sites 1 and 2 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	SD857212464400	<b>Funding to Date:</b>	\$ 86.2 million
<b>Location (Size):</b>	Rapid City, South Dakota (4,858 acres)	<b>Est. CTC (Comp Year):</b>	\$ 1.7 million (FY 2015)
<b>Mission:</b>	Maintain a combat-ready force capable of executing long-range bombardment operations	<b>IRP Sites (Final RIP/RC):</b>	35 (FY2002)
<b>HRS Score:</b>	33.62; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2003)
<b>IAG Status:</b>	FFA signed in January 1992	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Solvents (including TCE), POLs, lead, low-level radioactive waste	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-50
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Ellsworth Air Force Base (AFB) maintains a combat-ready force capable of executing long-range bombardment operations. Site types include landfills, underground storage tanks, maintenance areas, a fire training (FT) area, and a low-level radioactive waste burial site. Groundwater and soil contamination resulted from releases of trichloroethylene (TCE) and petroleum/oil/lubricants (POLs) at these sites. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in January 1992 to outline how they were going to proceed with cleanup. In FY95, the base formed a Restoration Advisory Board to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports for 13 sites in FY00 and FY05.

To date, Ellsworth AFB has grouped sites into 12 operable units (OUs). The installation signed Records of Decision (RODs) for OUs 01 through 10 and OU 12, which selected cleanup actions at these sites. Two sites are not located on Ellsworth AFB: Other (OT) site 18 (Badlands Bombing Range) and Radioactive Waste (RW) site 27 (Sundance Portable Medium Power Plant [PM] 1 Reactor Site). In FY05, the installation updated its inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Ellsworth AFB for FY05 through FY08 is summarized below.

In FY05, Ellsworth AFB added information and reformatted data into an expanded preliminary assessment and site inspection for RW 27 (Sundance PM 1 Reactor Site), and continued to operate cleanup systems and long-term management (LTM) at selected sites. Ellsworth AFB awarded a performance-based contract covering the closure of 13 environmental program cleanup sites. The installation also conducted outreach in support of the cleanup at OT 18 (Badlands Bombing Range). Ellsworth AFB completed its second five-year review report.

In FY06, Ellsworth AFB continued operating cleanup systems and LTM at selected sites. The installation began treatability studies at OU 04 and OT 20. The installation continued

outreach in support of the cleanup at OT 18 (Badlands Bombing Range).

In FY07, EPA Region 8 delisted 10 of the 12 OUs at Ellsworth AFB from the NPL; the 2 remaining NPL sites are OT 20 and FT 01. The installation continued operating cleanup systems and LTM at selected sites. The installation implemented full-scale natural cleanup of groundwater at OT 20, which injects natural soy oil or molasses and microbers. The installation also shutdown selected extraction wells and accelerated soil cleanup at FT 01. Ellsworth AFB received EPA approval for the remedial investigation at RW 27 (Sundance PM 1 Reactor Site), and continued and optimized LTM at the site. The base renewed consultation with the Oglala Sioux Tribe on cleanup at OT 18 (Badlands Bombing Range).

In FY08, Ellsworth AFB continued operating cleanup systems and LTM optimization at selected sites. The installation conducted the OT 18 (Badlands Bombing Range) tribal consultation and completed the community relations plan.

**FY09 IRP Progress**

Ellsworth AFB completed an evaluation of RW 27 (Sundance PM 1 Reactor Site) and continued annual LTM using the optimized sampling plan. The South Dakota Department of Environment and Natural Resources agreed that Storage Tank (ST) site 14 required no further cleanup action. The installation performed a round of groundwater cleanup at a small area on North Docks 60 Row. Ellsworth AFB continued monitoring the natural groundwater cleanup, and identified additional treatment zones. The installation conducted significant sampling to define and monitor cleanup of the off-base groundwater contamination using natural processes. Ellsworth AFB completed fieldwork for the engineering evaluation and cost analysis (EE/CA) at OT 18 (Badlands Bombing Range). The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues delayed the completion of the EE/CA for OT 18 (Badlands Bombing Range).

Ellsworth AFB continued tribal consultation activities.

**FY09 MMRP Progress**

Ellsworth AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Ellsworth Air Force Base are grouped below according to program category.

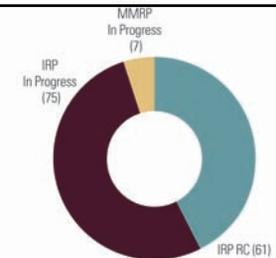
**IRP**

- Complete a ROD and continue LTM for RW 27 (Sundance PM 1 Reactor Site) in FY10.
- Complete EE/CA and begin cleanup at OT 18 (Badlands Bombing Range) in FY10.
- Complete a third five-year review report in FY10.
- Continue LTM and cleanup system optimization for groundwater at OT 20 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	AK057302864900	<b>Est. CTC (Comp Year):</b>	\$ 77.5 million (FY 2038)
<b>Location (Size):</b>	Anchorage, Alaska (13,452 acres)	<b>IRP Sites (Final RIP/RC):</b>	136 (FY2012)
<b>Mission:</b>	Serve as headquarters to the Alaskan Command	<b>MMRP Sites (Final RIP/RC):</b>	7 (FY2019)
<b>HRS Score:</b>	45.91; placed on NPL in August 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in November 1991	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-4
<b>Contaminants:</b>	VOCs, heavy metals, POLs, solvents, BTEX		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 95.9 million		



**Progress To Date**

Elmendorf Air Force Base (AFB) serves as headquarters to the Alaskan Command. Sites include old construction landfills (LFs), petroleum spill sites, and underground storage tanks. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in November 1991 to outline how they were going to proceed with cleanup. The 2005 BRAC Commission recommended Elmendorf AFB for realignment. In FY92, the installation formed a Restoration Advisory Board (RAB) to discuss the installation’s cleanup progress with the community. In FY97, the RAB revised its charter to focus on all environmental activities, beginning the transition to a Community Advisory Board. In FY97, the installation also developed a community relations plan, which was revised in FY00. To ensure continuous monitoring and improvement, Elmendorf AFB completed five-year review reports in FY98, FY04, and FY09.

The FFA covers 38 sites, grouped into 6 operable units (OUs). An additional 42 sites are designated as petroleum/oil/lubricant (POL)-contaminated sources; Elmendorf AFB is performing cleanup activities under the State of Alaska cleanup regulations. To date, Elmendorf AFB has completed Records of Decision for OUs 1 through 6 and Disposal Pit (DP) 98, which selected cleanup actions for these sites. The installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Elmendorf AFB for FY05 through FY08 is summarized below.

In FY05, Elmendorf AFB began the OU 6 explanation of significant differences with the ROD to change groundwater action at Storm Drain (SD) site 15 to monitored cleanup using natural processes; establish new groundwater cleanup levels for contaminants at LF 02 and SD 15; and clarify the management of land use controls. The installation also completed and signed closure documents for Storage Tank (ST) sites 71 and 74, and Storage Area 99. The installation continued operation of the OU 5 engineered wetland system and conducted annual debris removal at LF 04. Elmendorf AFB conducted a cleanup process optimization project, which resulted in two separate groundwater contaminated area

treatability studies to enhance the cleanup process at two locations within the base’s boundaries. Under the MMRP, the installation began preliminary assessments (PAs) for all sites suspected to contain munitions contamination.

In FY06, Elmendorf AFB began treatability studies for enhanced cleanup at the Kenney Plume (ST 37) and the Slammer Plume (ST 37). The installation completed a site closure report for Spill Site (SS) 10. In addition, the installation continued annual debris removal at LF 04 and operation of cleanup systems at Fire Training (FT) area 23 and ST 32 and the engineered wetland system at OU 5.

In FY07, Elmendorf AFB began the remedial investigation (RI) and feasibility study to evaluate cleanup alternatives for SS 22. Elmendorf AFB also conducted annual debris removal at LF 04 and continued operation of the cleanup system at FT 23 and the engineered wetland system at OU 5.

In FY08, Elmendorf AFB removed the treatment system at SD 15 and two cleanup systems at ST 32. The installation also conducted annual debris removal at LF 04 and continued operation of the cleanup system at FT 23 and the engineered wetland system at OU 5. Elmendorf AFB conducted a combined PA and site inspection (SI) for identified MMRP sites.

**FY09 IRP Progress**

Elmendorf AFB completed its third five-year review report and began a cleanup report for DP 98. Elmendorf AFB completed Phase II RI fieldwork for SS 22. The installation also decommissioned the fuel pipeline at OT 92 and cleanup systems at SS 43 and ST 68. Elmendorf AFB conducted annual debris removal at LF 04 and continued operation of the cleanup system at FT 23 and the engineered wetland system at OU 5. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Elmendorf AFB completed SIs at all MMRP sites.

**Plan of Action**

Plan of action items for Elmendorf Air Force Base are grouped below according to program category.

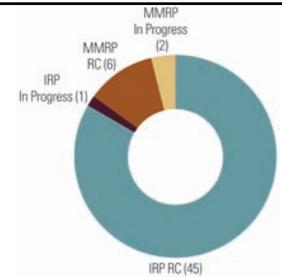
**IRP**

- Complete report on cleanup requirements for DP 98 in FY10.
- Prepare decision documents selecting cleanup actions for ST 36/66 and 61 in FY10.
- Begin Phase III RI fieldwork for SS 22 in FY10.
- Continue operation of cleanup system at FT 23 and engineered wetland system at OU 5, and conduct annual debris removal at LF 04 in FY10.
- Prepare closure report for LF 02 in FY11.
- Assume environmental restoration responsibilities from Fort Richardson in FY11.

**MMRP**

- Conduct RIs for all MMRP sites in FY10.

<b>FFID:</b>	LA657002445200	<b>Funding to Date:</b>	\$ 36.3 million
<b>Location (Size):</b>	Alexandria, Louisiana (2,284 acres)	<b>Est. CTC (Comp Year):</b>	\$ 3.9 million (FY 2055)
<b>Mission:</b>	Supported flying operations for fighter and attack aircraft	<b>IRP Sites (Final RIP/RC):</b>	46 (FY2001)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	8 (FY2010)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Industrial waste, spent solvents, fuels, waste oil, paints, pesticides, low-level radioactive waste, chlorine gas, PCBs, TCE, POLs, alkali, medical waste, VOCs, SVOCs, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-27
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



**Progress To Date**

England Air Force Base (AFB) was established in 1943 and supported flying operations for various aircraft throughout its history. Sites identified at the installation include landfills (LFs), underground storage tanks, aboveground storage tanks, fire training areas, oil-water separators, a sewage treatment pond, a low-level radiation site, and gas training kit burial sites. In July 1991, the BRAC Commission recommended closure of England AFB and the installation closed in December 1992. The installation formed a BRAC cleanup team in FY93 to develop a process for cleanup of sites. The BRAC cleanup plan, developed with community input to prioritize sites requiring environmental restoration, was updated in FY95 and FY04. In FY94, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. The RAB adjourned in FY00 due to lack of interest. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY08.

Environmental studies have identified sites suspected to contain contamination for the Installation Restoration Program (IRP). A RCRA facility assessment conducted in FY92 identified areas of concern and solid waste management units. To date, more than 1,700 acres have been transferred, primarily to the local redevelopment authority. In FY04, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Two additional MMRP sites were identified in FY08. Cleanup progress at England AFB for FY05 through FY08 is summarized below.

In FY05, England AFB conducted long-term management (LTM) at LF 015 and Spill Site (SS) 021, and cleanup operations at SS 045 (a trichloroethylene [TCE]-contaminated area). The installation developed an alternative strategy for site closure and submitted it to regulators for review. England AFB also began evaluating requirements at MMRP sites. The BRAC cleanup team held two meetings.

In FY06, England AFB continued LTM at LF 015 and SS 021, and cleanup operations at SS 045. The installation prepared a report determining that SS 045 was operating properly and successfully. England AFB transferred approximately 384 acres to the local redevelopment authority and submitted a five-year

review report to regulators. England AFB began clearing munitions and explosives of concern (MEC) from three MMRP sites. The installation evaluated the requirements necessary to close remaining MMRP sites. The BRAC cleanup team held two meetings.

In FY07, the installation continued LTM at LF 015 and SS 021, and cleanup operations at SS 045. The installation revised the RCRA cleanup permit renewal and obtained the approval of state regulators. England AFB cleared MEC from three MMRP sites and prepared closure documentation for the remaining MMRP sites. The BRAC cleanup team held two meetings.

In FY08, England AFB completed a five-year review report. The installation continued LTM at LF 015 and SS 021, and cleanup operations at SS 045. The installation prepared documentation showing LF 015 and SS 045 were operating properly and successfully. England AFB awarded a new 10-year performance-based contract (PBC). The installation submitted new work plans for improving cleanup at three sites. The installation received a notice of deficiency for the RCRA permit renewal application and responded to all items. EPA completed a pilot study for soil vapor intrusion, the entry of volatile organic compounds (VOCs) to indoor air from underlying soil; the results suggested that no further cleanup action was necessary. England AFB submitted after-action reports for three MMRP sites to the Air Force Safety Center. England AFB awarded a contract for a new historical records review. The installation identified two new potential MMRP sites. The BRAC cleanup team held monthly meetings to track open action items required for RCRA permit renewal and property transfer.

**FY09 IRP Progress**

England AFB optimized cleanup at three sites (LF 015 and SSS 021 and 045) under the new PBC. Regulators approved the installation's operating properly and successfully report on LF 015. In addition, regulators reviewed the draft operating properly and successfully report on SS 045. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues delayed finalizing the RCRA corrective action permit and the finding that the remaining 576 acres would be suitable for transfer.

The BRAC cleanup team held monthly meetings to track open action items required for RCRA permit renewal and property transfer.

**FY09 MMRP Progress**

England AFB cleared two sites of MEC. The installation completed the review of historical records. England AFB began a preliminary assessment and investigated three sites.

Technical issues delayed the clearance of MEC from the third site, and the submission of closure documentation for all MMRP sites to the Air Force Safety Center and the Department of Defense Explosive Safety Board.

**Plan of Action**

Plan of action items for England Air Force Base are grouped below according to program category.

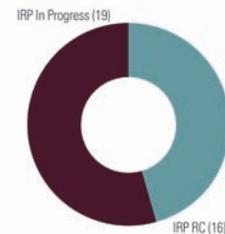
**IRP**

- Prepare document finding the remaining 576 acres suitable for transfer in FY10.
- Complete RCRA permit renewal in FY10.
- Finalize operating properly and successfully determination for SS 045 in FY10.

**MMRP**

- Clear MEC at one site in FY10.
- Submit closure documentation for all MMRP sites to the Air Force Safety Center and the Department of Defense Explosive Safety Board in FY10.

<b>FFID:</b>	WY857212417900	<b>Funding to Date:</b>	\$ 130.8 million
<b>Location (Size):</b>	Cheyenne, Wyoming (5,866 acres)	<b>Est. CTC (Comp Year):</b>	\$ 21.0 million (FY 2034)
<b>Mission:</b>	Serve as host to the 90th Space Wing, which support missile and space launch operations	<b>IRP Sites (Final RIP/RC):</b>	35 (FY2011)
<b>HRS Score:</b>	39.23; placed on NPL in February 1990	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in September 1991	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Oils, solvents, metals, acids, petroleum, explosives residues, VOCs, SVOCs, PCBs, PAHs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-184
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

F.E. Warren Air Force Base (AFB) serves as the host to the 90th Space Wing Support and missile and space launch operations. Restoration activities began at F.E. Warren AFB in FY84. Contaminants at this installation include oils, solvents, metals, acids, petroleum, explosive residues, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and polyaromatic hydrocarbons (PAHs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1990. DoD and EPA signed a federal facility agreement (FFA) in September 1991, which included 19 sites, to outline how they were going to proceed with cleanup. In FY05, three additional sites were added to the FFA. In FY95, F.E. Warren AFB formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY99, FY04, and FY09.

Remedial investigations (RIs) have identified sites within 14 operable units (OUs) and 5 investigative zones. The installation has signed Records of Decision (RODs), selecting cleanup actions for 20 of the sites; 11 sites required no further cleanup action. In FY05, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at F.E. Warren AFB for FY05 through FY08 is summarized below.

In FY05, F.E. Warren AFB determined that no further cleanup actions were necessary for Zone E. Phase I of the RI for closed firing ranges identified and investigated eleven sites with over 30,000 anomalies. The installation signed the ROD amendment for Zone C and implemented the cleanup action. The installation also completed a supplemental preliminary assessment/site investigation, which added four sites to the installation's cleanup program. The RAB continued meetings and training sessions. The Air Force, EPA, the State of Wyoming, and contractors continued to meet regularly.

In FY06, F.E. Warren AFB completed and signed the ROD for Zone D Groundwater and determined that no further cleanup actions were necessary for the Zone D source areas. The

installation completed the design for cleanup and constructed the Zone D Groundwater treatment system. F.E. Warren AFB identified munitions and explosives of concern (MEC) and MEC scrap along the base boundary, indicating a need to investigate the adjacent private property. F.E. Warren AFB began the process to obtain access to this property. The installation also continued the closed firing ranges RI. The RAB held quarterly meetings.

In FY07, F.E. Warren AFB began installation of the Zone D Groundwater cleanup systems and amended the ROD for actions at two groundwater contaminated areas. The installation continued monitoring all sites requiring cleanup operation and long-term management, including implementation of a site inspection (SI) to optimize cleanup at the Zone B Groundwater treatment system. F.E. Warren AFB also completed the ongoing SI and RI efforts at Spill Sites (SSs) 08, 09, and 10, and Storage Area 10. The installation completed fieldwork for the closed north ranges RI.

In FY08, F.E. Warren AFB completed the installation of cleanup systems at Zone D Groundwater Plumes C and E. Based on SI data, the installation also determined that no further cleanup action was required at SS 09. F.E. Warren AFB submitted the cleanup plan for SS 10 to the State of Wyoming.

**FY09 IRP Progress**

F.E. Warren AFB completed the plan requiring no further cleanup action for SS 09, the ROD for SS 10, and the ROD amendment for Zone B. The installation also completed the RI for the closed firing ranges. The installation conducted its third five-year review report; results showed all remedies are functioning, and cleanup is progressing as planned. The installation completed an interim cleanup action for SS 08 to remove arsenic-contaminated soils. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed completion of the final ROD and cleanup for SS 08. Technical issues delayed completion of the feasibility study (FS) to evaluate cleanup alternatives and the ROD for the closed firing ranges.

**FY09 MMRP Progress**

F.E. Warren AFB has identified no MMRP sites.

**Plan of Action**

Plan of action items for F.E. Warren Air Force Base are grouped below according to program category.

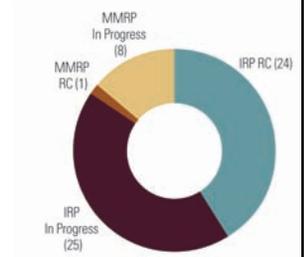
**IRP**

- Complete the FS and ROD for the closed firing ranges in FY10.
- Complete the ROD and implement cleanup action at SS 08 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	WA057212464700	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Spokane County, Washington (4,300 acres)	<b>Funding to Date:</b>	\$ 61.0 million
<b>Mission:</b>	Provide aerial refueling and airlift services	<b>Est. CTC (Comp Year):</b>	\$ 31.7 million (FY 2029)
<b>HRS Score:</b>	31.98; placed on NPL in March 1989	<b>IRP Sites (Final RIP/RC):</b>	49 (FY2011)
<b>IAG Status:</b>	FFA signed in March 1990	<b>MMRP Sites (Final RIP/RC):</b>	9 (FY2014)
<b>Contaminants:</b>	Solvents, fuels, electroplating chemicals, cleaning solutions, corrosives, photographic chemicals, paints, thinners, pesticide residues, PCBs, VOCs, SVOCs, metals, radioactive materials, PAHs	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-180



**Progress To Date**

Fairchild Air Force Base (AFB) provides aerial refueling and airlift services. Sites include contaminated fire training (FT) areas, landfills, radioactive waste (RW) sites, spill sites (SSs), waste pits (WPs), disposal pits, and ditches. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in March 1989. DoD and EPA signed a federal facility agreement (FFA) in March 1990 to outline how they were going to proceed with cleanup. The 2005 BRAC Commission recommended Fairchild AFB for realignment. In FY95, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. In FY00, a partial NPL delisting effort began with the Washington State Department of Ecology and EPA. The installation prepared 22 sites for removal from the NPL. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY08.

Fairchild AFB has signed 3 Records of Decision (RODs), which selected cleanup actions for 28 sites. The installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fairchild AFB for FY05 through FY08 is summarized below.

In FY05, the installation completed the field effort for a Triad remedial investigation (RI) at SS 39, which used pre-existing criteria to expedite site characterizations. This effort defined the nature and extent of trichloroethylene (TCE) and carbon tetrachloride contamination in the groundwater, and determined that the contamination would not adversely impact the family housing area. Fairchild AFB began the preliminary assessments (PAs) at the MMRP sites.

In FY06, Fairchild AFB completed the SS 39 RI and began a contract for the feasibility study (FS) to evaluate cleanup alternatives. The installation began developing an exit strategy for Site Other (OT) 17 and FT 32, and returned clean soil to the site.

In FY07, Fairchild AFB funded additional sampling for RW 11 and WP 36 in support of a performance-based contract (PBC) award to close these sites. The installation completed and

signed no further cleanup planned documents during the site inspection (SI) for two areas of concern. Fairchild AFB also completed PAs at all identified MMRP sites.

In FY08, Fairchild AFB completed investigative field efforts at RW 11 and WP 36. The installation awarded PBCs to install cleanup systems for RW 11, WP 36, Storm Drain (SD) 37, and SS 39. The installation also completed a focused FS and drafted the proposed plan (PP) and ROD for SS 39. Fairchild AFB completed the second five-year review report with EPA concurrence. The installation awarded PBCs to install cleanup systems at all remaining sites. Under the MMRP, Fairchild AFB partnered with the Washington Army National Guard to delineate and investigate local eastern Washington sites. The installation also awarded an SI contract and began planning the fieldwork. Fairchild AFB briefed the RAB on SS 39, progress at RW 11 and WP 36, investigative efforts, MMRP site progress, and planned future activities.

**FY09 IRP Progress**

Fairchild AFB began groundwater sampling and updated planning process activities at SD 37 and SS 39. The installation also started the PP for RW 11 and SD 37, developed site management and exit strategies for all sites with operational cleanup systems, and began contaminant source reduction cleanup process optimization recommendations at the Craig Road Landfill (LF 02). Fairchild AFB briefed the RAB on the SS 39 PP, investigative efforts at RW 11 and WP 36, cleanup system optimization, MMRP progress, and planned future activities. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed the PP and public comment period for SS 39.

**FY09 MMRP Progress**

Fairchild AFB began SIs and completed field sampling efforts at all remaining sites.

**Plan of Action**

Plan of action items for Fairchild Air Force Base are grouped below according to program category.

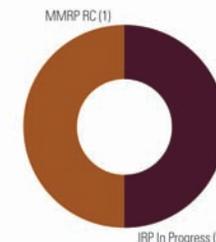
**IRP**

- Complete the SS 39 ROD, begin design for cleanup, and begin cleanup actions in FY10.
- Complete the WP 36 FS and begin the PP in FY10-FY11.

**MMRP**

- Complete SIs at all remaining sites in FY10.
- Perform engineering estimate and cost analysis for Skeet Range in FY10.
- Complete soil removal action as necessary for Skeet Range in FY11.

<b>FFID:</b>	WV39799F789200	<b>Funding to Date:</b>	\$ 0.7 million
<b>Location (Size):</b>	Nitro, West Virginia (12 acres)	<b>Est. CTC (Comp Year):</b>	\$ 0.2 million (FY 2014)
<b>Mission:</b>	Manufactured smokeless powder (private party operated a batch chemical plant)	<b>IRP Sites (Final RIP/RC):</b>	1 (FY2014)
<b>HRS Score:</b>	36.3; placed on NPL in September 1983	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2004)
<b>IAG Status:</b>	None	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	Organic and inorganic chemicals, metals, dioxin	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-58
<b>Media Affected:</b>	Soil and Groundwater		



**Progress To Date**

Fike-Artel Chemical is part of a 16,000-acre former government plant (Powder Plant "C") that manufactured smokeless powder. Environmental restoration sites are grouped into five operable units (OUs): disposal of storage tank and drum contents (OU 1); decontamination and disposal of storage tanks, surface drums, and aboveground structures (OU 2); removal of buried drums (OU 3); remedial investigation (RI) and feasibility study efforts to evaluate cleanup alternatives in groundwater and soil (OU 4); and RI of the cooperative sewage treatment plant (OU 5). The potential risk to human health and the environment was significant enough for EPA to place the property on the NPL in September 1983. Numerous potentially responsible parties, responsible for cleanup, and commonly referred to as "the Trust," finance and perform some of the cleanup actions at the property.

The Army approved the first project for sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP) in FY96; an MMRP site was identified. Cleanup progress at Fike-Artel Chemical for FY05 through FY08 is summarized below.

In FY05, the Trust proceeded with operations and maintenance (O&M) for OU 4 and the cooperative sewage treatment plant. Additionally, the Trust conducted the design for groundwater cleanup, which discovered new information with respect to groundwater flow, requiring an increase in the cleanup and removal design effort.

In FY06, the Trust continued the design for groundwater cleanup, and O&M continued for OU 4 and the cooperative sewage treatment plant. The Trust completed the 12-inch and 66-inch sewer line investigations.

In FY07, the Trust completed cleaning the 12-inch and 66-inch sewer lines. In addition, the Trust completed Phase I of the groundwater test along Pickens Road. The Trust continued O&M for the OU 4 soils and completed the cooperative sewage treatment plant project.

In FY08, the Trust completed O&M for OU 4 soils and the Phase I OU 4 groundwater design for cleanup. The Trust continued Phase I O&M for the groundwater treatment system.

**FY09 IRP Progress**

The U.S. Army Corps of Engineers (USACE) monitored cleanup progress at the property in order to process payment to the Department of Justice (DOJ) for reimbursement costs. The Trust continued O&M of the groundwater treatment system and began a vapor intrusion study.

Technical issues delayed completion of the cleanup design for the Phase II groundwater treatment system.

**FY09 MMRP Progress**

USACE closed MMRP Project 04. There are no further MMRP actions planned at this property.

**Plan of Action**

Plan of action items for Fike-Artel Chemical are grouped below according to program category.

**IRP**

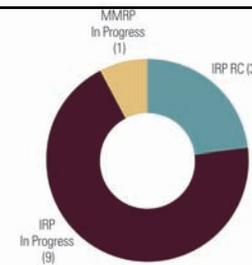
- Continue to monitor progress by the Trust, and process payment request to the the DOJ for reimbursement costs in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

**FFID:** VA39799F156700  
**Location (Size):** Suffolk, Virginia (975 acres)  
**Mission:** Served as ordnance depot  
**HRS Score:** 70.0; placed on NPL in July 1999  
**IAG Status:** IAG negotiations on hold with EPA concurrence  
**Contaminants:** TNT, solvents, fuels, pesticides, heavy metals, MEC, SVOCs, VOCs, propellants, explosives  
**Media Affected:** Groundwater, Surface Water, Sediment, Soil

**Funding to Date:** \$ 46.9 million  
**Est. CTC (Comp Year):** \$ 47.8 million (FY 2024)  
**IRP Sites (Final RIP/RC):** 12 (FY2018)  
**MMRP Sites (Final RIP/RC):** 1 (FY2023)  
**Five-Year Review Status:** This installation is not required to complete a five-year review report.  
**IRP/MMRP Status Table:** Refer to page C-6-176



**Progress To Date**

The Army acquired the Former Nansemond Ordnance Depot (Nansemond) between 1917 and 1929 and used the Depot from World War I until November 1950, leasing the property to the Navy. In 1960, the Army transferred the property to the Beazley Foundation, Inc. Nansemond covers approximately 975 acres and is located in Suffolk, Virginia at the convergence of the James and Nansemond rivers. The current list of landowners at Nansemond includes: Tidewater Community College (TCC); the General Electric Company; Ashley Capital; Dominion Lands, Inc.; Bridgeway LP; Suffolk Towers; SYSCO Food Services; Hampton Roads Sanitation District; Lockheed Martin; the City of Suffolk Industrial Development Authority; and the Virginia Department of Transportation. Contaminants identified at the property include TNT, fuels, heavy metals, volatile organic compounds (VOCs), solvents, pesticides, and munitions and explosives of concern. The potential risk to human health and the environment was significant enough for EPA to place the property on the NPL in July 1999. A federal facility agreement (FFA) is currently under negotiation between DoD and EPA to outline how they are going to proceed with cleanup. In FY97, Nansemond held its first Restoration Advisory Board (RAB) meeting to discuss cleanup progress with the community; the RAB meets quarterly. EPA delisted the impregnite kit area soils from the NPL in FY03. The Nansemond project team meets every quarterly to discuss cleanup progress with the RAB.

To date, the U.S. Army Corps of Engineers (USACE) has signed two Records of Decision (RODs) and one decision document, all of which require no further cleanup actions at 14 project sites. Cleanup progress at Nansemond for FY05 through FY08 is summarized below.

In FY05, USACE completed a groundwater investigation to study naturally occurring contaminant background levels, and a survey of anomalies on the Nansemond River Beachfront and James River Beachfront. USACE also completed near-shore site inspections (SIs) for the James River Beachfront and Horseshoe Pond, as well as assessments of potential risks to human health and the environment for the Track K Dump (NPL Source Area 6) and the Horseshoe Pond. USACE determined that an engineering evaluation and cost analysis for the Pesticide Drum Area was inappropriate, and began human

health and environmental risk assessments as part of a remedial investigation (RI). USACE satisfied the removal action requirements of an interagency agreement (IAG) to outline how EPA and DoD were going to proceed with cleanup, and began drafting the final report. TCC and USACE signed a memorandum of agreement defining a land use control (LUC) plan to restrict access to the site.

In FY06, USACE signed a final letter of agreement concerning public information access and interim LUCs with the City of Suffolk. USACE continued RI work at the James River Beachfront, Horseshoe Pond, Main Burning Ground, TNT Area, Pesticide Drum Area, and Track K Dump (NPL Source Area 6). USACE began investigations at Areas of Concern (AOCs) 12, 14, 15, 20, 22, and 23. EPA approved the final report on removal actions in accordance with the IAG. USACE discovered bulk TNT at the Nansemond River Beachfront, recharacterizing this location as an NPL Source Area. The district held a public meeting for the Track K Dump (NPL Source Area 6) Proposed Plan (PP).

In FY07, USACE and EPA determined that no further action was required at the Track K Dump (NPL Source Area 6). Additionally, USACE expanded SIs at AOCs 4, 10, and 11 to further characterize contaminants. USACE also updated the site management plan.

In FY08, USACE finalized the AOC 22 SI and found no relationship with the contamination at Horseshoe Pond. Additionally, USACE began expanded SIs at J Lake and TCC Lake to provide additional containment characterization. USACE determined that no further action was required at the Pesticide Drum Area and held a public meeting to discuss the area. USACE also completed the munitions investigation at the Main Burning Ground.

**FY09 IRP Progress**

USACE began an RI at the Nansemond River Beachfront, and submitted the revised draft RI report for the Main Burning Ground. USACE also submitted the draft RI report, and began a feasibility study (FS) to evaluate cleanup alternatives at James River Beachfront. Additionally, USACE completed a draft RI report for Horseshoe Pond. The cost of completing

environmental restoration has changed significantly due to technical issues and changes in estimating criteria.

Regulatory issues delayed the PP for the James River Beachfront and completion of the final RI. Technical issues delayed completion of the draft PP for the Horseshoe Pond.

**FY09 MMRP Progress**

USACE completed munitions investigations at the Nansemond River Beachfront, and a draft SI at J Lake and TCC Lake. USACE also began an FS at James River Beachfront, and a comprehensive SI for all remaining areas.

Technical issues delayed completion of the final SI at J Lake and TCC Lake.

**Plan of Action**

Plan of action items for Former Nansemond Ordnance Depot are grouped below according to program category.

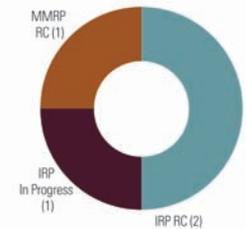
**IRP**

- Complete RI, FS, and PP at Horseshoe Pond, James River Beachfront, and Main Burning Ground in FY10.
- Complete FS at TNT Area, RI at Nansemond River Beachfront, and the background investigation report in FY10.
- Complete the SI report for TCC Lake in FY10.
- Complete ROD at James River Beachfront and Main Burning ground in FY11.

**MMRP**

- Complete comprehensive SI for all remaining areas of Nansemond in FY10.
- Complete SI for J Lake and TCC Lake in FY10.
- Complete FS for shoreline stabilization at James River Beachfront in FY10.

<b>FFID:</b>	MO79799F034700	<b>Media Affected:</b>	Groundwater
<b>Location (Size):</b>	Newton County, Missouri (42,786 acres)	<b>Funding to Date:</b>	\$ 2.3 million
<b>Mission:</b>	Served as World War II Signal Corps training facility; Korean conflict-era reception station; disciplinary barracks; Atlas missile rocket engine manufacture and testing facility; and jet engine and component manufacture and repair facility	<b>Est. CTC (Comp Year):</b>	\$ 0.8 million (FY 2014)
<b>HRS Score:</b>	50.00; placed on NPL in October 1999	<b>IRP Sites (Final RIP/RC):</b>	3 (FY2014)
<b>IAG Status:</b>	None	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2006)
<b>Contaminants:</b>	VOCs, TCE, carbon tetrachloride	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-33



**Progress To Date**

The Army used the former Fort Crowder during World War II as a Signal Corps training center and again during the Korean conflict as a reception station. The property is located near the City of Neosho, in southwestern Missouri. In 1956, the Army transferred approximately 3,650 acres to the Air Force for the establishment of Air Force Plant 65. Approximately 4,360 acres were leased to the Missouri National Guard for a training facility, known as Camp Crowder. Air Force Plant 65 operated until 1968 as an Atlas missile manufacturing and testing facility and, until 1980, as a jet engine overhaul and testing facility. The potential risk to human health and the environment was significant enough for EPA to place the property on the NPL in October 1999. In FY99, the U.S. Army Corp of Engineers (USACE) signed two administrative orders on consent for removal actions.

USACE conducted an inspection in FY05 of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP), MMRP sites were identified. Cleanup progress at Fort Crowder for FY05 through FY08 is summarized below.

In FY05, USACE assisted in the planning and oversight of a soil vapor extraction system at the Quince Road Area. USACE and the group of other potentially responsible parties (PRPs), which share responsibility for environmental cleanup at Pools Prairie, began planning a pre-remedial investigation (RI), a feasibility study (FS) to evaluate cleanup alternatives, and continued negotiations regarding the administrative order. USACE monitored removal actions executed by other PRPs and provided technical and legal support to the Department of Justice (DOJ) settlement discussions.

In FY06, USACE oversaw the execution of three removal actions. USACE also completed the planning and estimating phase of the pre-RI and FS. USACE continued providing legal and technical support to the DOJ for settlement discussions with PRPs. USACE completed the cleanup system installation phase with educational awareness training of local stakeholders. Under the MMRP, USACE also began the RI, FS, and programmatic phases for the MMRP/chemical warfare materiel (CWM) project.

In FY07, USACE and the National Guard Bureau monitored the pre-RI and FS, and USACE continued to monitor three removal actions. USACE completed the RI and FS, and began the 30-year long-term management (LTM) of the CWM project.

In FY08, USACE continued technical and legal support to the DOJ for settlement discussions with other PRPs. USACE also continued to monitor the execution of the pre-RI and FS efforts, and three removal actions by PRPs. USACE continued LTM of the CWM site.

**FY09 IRP Progress**

USACE provided technical and legal support to the DOJ for settlement actions. USACE also monitored the pre-RI and FS, and three removal actions by PRPs. The cost of completing environmental restoration has changed significantly due to technical and regulatory issues and changes in estimating criteria.

**FY09 MMRP Progress**

USACE conducted LTM of the MMRP/CWM site.

**Plan of Action**

Plan of action items for Fort Crowder are grouped below according to program category.

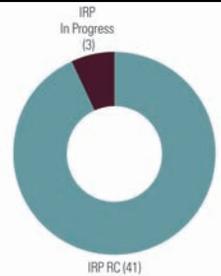
**IRP**

- Continue technical and legal support to the DOJ in FY10-FY11.
- Continue monitoring the PRPs execution of pre-RI, FS, and three removal actions in FY10-FY11.

**MMRP**

- Complete a proposed plan and decision document to select cleanup actions for the CWM site in FY10-FY11.
- Continue LTM of the MMRP/CWM site in FY10-FY11.

<b>FFID:</b>	MD321162026700	<b>Media Affected:</b>	Surface Water, Soil, Groundwater
<b>Location (Size):</b>	Frederick County, Maryland (1,212 acres)	<b>Funding to Date:</b>	\$ 44.1 million
<b>Mission:</b>	Supports a multi-governmental community that conducts biomedical research and development, medical materiel management, worldwide communications, and the study of foreign plant pathogens	<b>Est. CTC (Comp Year):</b>	\$ 10.2 million (FY 2021)
<b>HRS Score:</b>	49.52; placed on NPL in April 2009	<b>IRP Sites (Final RIP/RC):</b>	44 (FY2021)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	VOCs, metals, biological materials, radionuclides	<b>Five-Year Review Status:</b>	Underway
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-96



## Progress To Date

Fort Detrick is a premier quad-services installation committed to excellence. As an Army Medical Installation, it is home to the United States Army Medical Research and Materiel Command, the National Cancer Institute, and 37 mission partners. The primary missions include biomedical research and development, medical materiel management and global telecommunications. Fort Detrick currently houses the National Interagency Confederation for Biological Research and National Interagency Biodefense Campus. The installation supports approximately 8,800 military, civilian, and contractor employees conducting biomedical research and development, medical material management, and communications. Identified restoration sites include 12 disposal and landfill areas, 10 buildings, 4 storage areas, 4 storage tank sites, 2 contaminated groundwater sites, 2 wash racks, sewer line, sewage treatment plant, small arms range, burn area, burn/open detonation area, and 4 other areas. Contaminants identified at the site include volatile organic compounds (VOCs), biological materials, metals, and radionuclides. The environmental investigations of former operations that have caused groundwater contamination at Fort Detrick have been ongoing since 1992, when the installation first identified off-post groundwater contamination. The potential risk to human health and the environment led EPA to place the Area B groundwater site on the NPL in April 2009. Fort Detrick established a Restoration Advisory Board to discuss cleanup progress with the community in June 1993.

To date, Fort Detrick has completed cleanup or determined no further action is necessary at 35 of the 42 waste sites identified at Areas A, B, and C. The remaining seven sites are located in Area B. Landfill caps are being constructed on six of the seven sites. The only remaining open site at Fort Detrick is Area B Groundwater. Cleanup progress at Fort Detrick for FY05 through FY08 is summarized below.

In FY05, Fort Detrick performed cleanup actions at the former Skeet Range in Area B to remove debris causing elevated levels of polyaromatic hydrocarbons (PAHs) contamination in soil. The installation also completed a final remedial investigation (RI), proposed plan (PP), and feasibility study (FS) to evaluate cleanup alternatives at the wastewater treatment plant in Area C. The selected remedy required no further cleanup actions at four areas within the treatment plant, and

implementation of land use controls (LUCs), which restrict the use of and access to the former ash disposal area.

In FY06, Fort Detrick signed the DD, which selected LUCs for the Area C wastewater treatment plant. Fort Detrick also provided bottled water to four homes potentially affected by the groundwater contamination in Area B.

In FY07, Fort Detrick completed a final RI, FS and PP, which selected capping and LUCs as the remedy for contamination at the landfill site in Area B2. The installation also completed a final RI for five sites in Area B (B Ammo, B Grid, B20 North and South, and B Skeet), and completed a PP, which required no further cleanup actions at these sites. Additionally, Fort Detrick completed a final RI/FS for five landfill sites in Area B.

In FY08, Fort Detrick signed a DD requiring no further cleanup actions at the B Ammo, B Grid, B20 North and South, and B Skeet sites, and a DD for Area B2. The Maryland Department of Environment concurred on both DDs. Fort Detrick also completed the final RI and FS for Areas B3, B8, B10, and B11 and submitted the draft final PP for capping the Disposal Areas B3, B6, B8, B10, and B11 to the Maryland Department of Environment for review. The installation continued sampling and analysis of on-post and off-post groundwater, including residential wells. Fort Detrick also continued to coordinate with regulators to develop a work plan for the investigation and remedy selection for groundwater at Area B.

## FY09 IRP Progress

Fort Detrick, with Maryland Department of the Environment concurrence, signed a DD to cap the B3, B6, B8, B10, and B11 waste disposal areas. Fort Detrick also fully funded and nearly completed cap construction at six waste disposal areas at Area B, and continued the sampling and analysis of on-post and off-post groundwater, including residential wells. The installation continued to coordinate with EPA and the Maryland Department of the Environment to develop a work plan for groundwater cleanup at Area B. Fort Detrick and regulators reached an agreement for the scope of Phase I RI fieldwork. The cost of completing environmental restoration has changed significantly due to regulatory and technical issues.

## FY09 MMRP Progress

Fort Detrick has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

## Plan of Action

Plan of action items for Fort Detrick are grouped below according to program category.

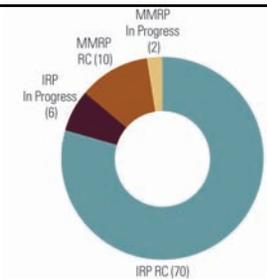
### IRP

- Finalize the RI Workplan for Area B Groundwater and initiate fieldwork for the Area B Groundwater RI in FY10.
- Conduct long-term management of the landfill caps in Area B in FY10.
- Complete five-year review report for the wastewater treatment plant in Area C, including the 568 trichloroethylene (TCE) spill sites, in FY10.
- Continue sampling residential wells and provide alternate water supplies if necessary in FY10.
- Complete the Area B Groundwater RI/FS in FY11.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	MA121042027000	<b>Funding to Date:</b>	\$ 151.5 million
<b>Location (Size):</b>	Fort Devens, Massachusetts (9,302 acres)	<b>Est. CTC (Comp Year):</b>	\$ 31.8 million (FY 2042)
<b>Mission:</b>	Supported Reserve component training	<b>IRP Sites (Final RIP/RC):</b>	76 (FY2014)
<b>HRS Score:</b>	42.24; placed on NPL in November 1989	<b>MMRP Sites (Final RIP/RC):</b>	12 (FY2011)
<b>IAG Status:</b>	IAG signed in November 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, heavy metals, petroleum products, PCBs, pesticides, herbicides, explosive compounds	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-99
<b>Media Affected:</b>	Groundwater and Sediment		



## Progress To Date

Prior to closure in July 1991, Fort Devens supported Reserve component training. Identified sites included landfills, vehicle and equipment maintenance and storage yards, the Defense Reutilization and Marketing Office scrap yard, motor pools, and underground storage tanks. Investigations revealed soil and groundwater contamination. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in 1989. DoD and EPA signed a federal facility agreement (FFA) in November 1991 to outline how they were going to proceed with cleanup. In July 1991, the BRAC Commission recommended closure of Fort Devens. In FY96, the Army closed Fort Devens and replaced it with the Devens Reserve Forces Training Area, which assumed the Army mission. The Devens Reserve Forces Training Area is also referred to as Fort Devens. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. In 2005, the BRAC Commission recommended Fort Devens for realignment. In FY94, the installation formed a Restoration Advisory Board to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Fort Devens completed five-year review reports in FY00 and FY05.

To date, DoD and EPA have signed multiple Records of Decision (RODs). The Army, EPA, and the State have determined that no further cleanup actions were necessary at multiple sites. To date, the Army has conveyed 2,902 acres to the local redevelopment authority; 22 acres to the U.S. Department of Labor; 222 acres to the U.S. Bureau of Prisons; and 836 acres to the U.S. Fish and Wildlife Service. In FY94 and FY95, the installation completed all unexploded ordnance removal actions. In FY03, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Devens for FY05 through FY08 is summarized below.

In FY05, the installation awarded a performance-based contract (PBC) for supplemental groundwater and landfill cap assessments under the long-term management (LTM) remedy phase. Fort Devens also completed the cleanup work plan and land use control (LUC) plan, which restricted access to Area of Concern (AOC) 50 (former North Post/Airfield). Additionally,

Fort Devens sampled for perchlorate in the South Post Impact Area monitoring wells. The installation also completed the second five-year review report for all BRAC sites and transferred leased Parcels A.2A, A.4, and A.8.

In FY06, the installation began a PBC for ongoing LTM and optimization at six AOCs. Fort Devens also completed the supplemental groundwater and landfill cap assessment work plans; continued the Shepley's Hill Landfill remedy operation and optimization; and the preliminary assessment and site inspection (SI) and supplemental SI for the Grant Housing Areas. The installation also completed a removal action of lead-contaminated soils. Additionally, the installation transferred leased parcel A.16 (AREE 69 AE), obtained operating properly and successfully (OP&S) approval for the AOC 69W remedy, and found AOC 69W (Parcel A.15) suitable for transfer. Under the MMRP, Fort Devens awarded a PBC and started planning an SI for sites identified in the closed, transferred, and transferring inventory report.

In FY07, Fort Devens awarded a PBC for the long-term operation and maintenance of the pump-and-treat contingency remedy at Shepley's Hill Landfill. The installation also completed fieldwork for the supplemental groundwater and landfill cap assessment. EPA provided an OP&S certification for the AOC 50 remedy. The installation also completed a revised LTM plan for the remaining six AOC sites in the LTM remedy phase. In addition, Fort Devens transferred leased Parcel A.15 and completed cleanup of pesticide-contaminated soils at the former Buena Vista Housing Area.

In FY08, Fort Devens finalized the feasibility study (FS) to evaluate cleanup alternatives, and the proposed plan for LUCs at the former Grant Housing Area. The installation also completed the remedial investigation (RI) work plan for AOC 72, and completed a sediment risk characterization report for Site SA 71. Under the MMRP, the installation completed the final SI work plan. Fort Devens also awarded a new PBC to continue cleanup at AOC 50 and to conduct the munitions and explosives of concern (MEC) SI and RI phase activities at the Markley Range and Oak/Maple Housing Area.

## FY09 IRP Progress

Fort Devens completed the FS work plan for the Shepley's Hill Landfill, and submitted the draft focused FS to regulators. The installation completed the ROD for LUCs at the former Grant Housing Area.

Regulatory issues delayed completion of the draft RI report for AOC 72. Administrative issues delayed the completion of the pesticide-contaminated soil remediation at the former housing areas.

## FY09 MMRP Progress

Fort Devens completed the final SI report for the remaining MMRP sites.

Administrative issues delayed the completion of the SI report for Markley Range.

## Plan of Action

Plan of action items for Fort Devens are grouped below according to program category.

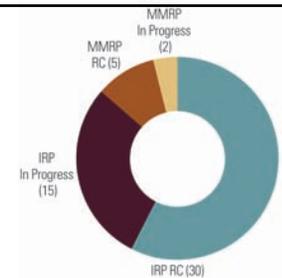
### IRP

- Complete the RI report for AOC 72 in FY10.
- Complete the final focused FS for Shepley's Hill Landfill in FY10.
- Complete pesticide-contaminated soil cleanup at the former housing areas in FY10.
- Complete the FS for AOC 72 in FY11.
- Update the ROD for Shepley's Hill Landfill in FY11.

### MMRP

- Complete draft RI report for MEC at Oak/Maple Housing Area in FY10.
- Complete the SI report for Markley Range in FY10.

<b>FFID:</b>	NJ221042027500	<b>Funding to Date:</b>	\$ 19.5 million
<b>Location (Size):</b>	Pemberton Township, New Jersey (30,638 acres)	<b>Est. CTC (Comp Year):</b>	\$ 8.5 million (FY 2018)
<b>Mission:</b>	Provide training and Reserve support	<b>IRP Sites (Final RIP/RC):</b>	45 (FY2012)
<b>HRS Score:</b>	37.40; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	7 (FY2018)
<b>IAG Status:</b>	FFA signed in July 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, POLs, chlorinated solvents, PCBs, heavy metals, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-36
<b>Media Affected:</b>	Groundwater and Soil		



## Progress To Date

Fort Dix provides training and Reserve support for the Army. In FY89, the installation identified contamination at storage areas, motor pools, abandoned underground storage tanks (USTs), landfills (LFs), lagoons, impact areas, and an incinerator. Contaminants identified include heavy metals, volatile organic compounds (VOCs), petroleum/oil/lubricants (POLs), and chlorinated solvents. The potential risk to human health and the environment was significant enough for EPA to place the Sanitary LF at Fort Dix on the NPL in 1987. DoD and EPA signed a federal facility agreement (FFA) in September 1991 to outline how they were going to proceed with cleanup. In FY00, the Army petitioned EPA to remove the Sanitary LF from the NPL. In 1995 and 2005, the BRAC Commission recommended realignment of Fort Dix, with retention of land and facilities for Reserve training. In FY96, the installation formed a Restoration Advisory Board to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports for the Sanitary LF in FY99 and FY05.

To date, the installation has completed nine Records of Decision, which selected cleanup actions for environmental restoration sites. In FY97, the installation removed 80 abandoned USTs and began evaluating the contaminated sites. In FY99, EPA added the Sanitary LF to its construction complete list. In FY03, the Army conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP) sites; MMRP sites were identified. Cleanup progress at Fort Dix for FY05 through FY08 is summarized below.

In FY05, Fort Dix completed a five-year review report for the Sanitary LF. The installation also conducted cleanup actions at 14 sites under the guaranteed fixed-price contract, and soil cleanup at the New Egypt Armory.

In FY06, the installation continued cleanup at the 14 sites under the guaranteed fixed-price contract. The installation also completed treatment of the Taxi Stand Plume, and conducted groundwater sampling for the installation. Fort Dix also began construction of a sentinel well at the Sanitary LF and pursued delisting from the NPL.

In FY07, Fort Dix continued cleanup at the 14 sites under the guaranteed fixed-price contract. Fort Dix also continued the groundwater sampling for the installation. The installation completed the remedial investigation (RI) and feasibility study (FS) reports for the Pesticide Control Shop, to evaluate cleanup alternatives, and submitted them to regulators. At the Taxi Stand Plume, Fort Dix conducted sampling and amended the RI report, which was submitted to the regulators. Under the MMRP, Fort Dix completed and regulators approved the site inspection work plan, fieldwork, and historical records review for its closed, transferred, and transferring ranges.

In FY08, Fort Dix continued cleanup at the 14 Fort Dix sites under the guaranteed fixed-price contract. Fort Dix also awarded a performance-based contract to conduct long-term management and monitoring of sites, including groundwater sampling for the installation. Additionally, the installation worked with regulators on the sampling required to complete the RI and interim removal action reports for the New Egypt Armory. Fort Dix also received regulatory approval for proposed plans (PPs) for the Pesticide Control Shop and Fire Training Tank Area. The installation conducted a public meeting to discuss the PP for the Pesticide Control Shop.

## FY09 IRP Progress

Fort Dix received regulatory approval for decision documents for the Pesticide Control Shop and the Fire Training Tank Area, which selected cleanup actions at these sites. The installation conducted soil removal at the Pesticide Control Shop. The installation also conducted sampling, and completed RIs and a focused FS for the Range LF and ANC 2 Disposal Area. Additionally, Fort Dix installed three new wells.

## FY09 MMRP Progress

The installation conducted no MMRP actions.

## Plan of Action

Plan of action items for Fort Dix are grouped below according to program category.

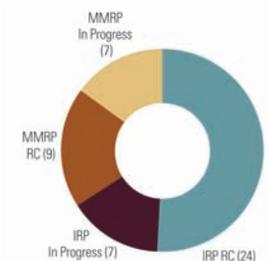
### IRP

- Complete PP and ROD for the ANC LF in FY10.
- Modify the RI/FS for the Range LF in FY10.
- Draft RI report for the New Egypt Armory in FY10.
- Complete the planning process for the Property Disposal Office LF in FY10.
- Construct groundwater monitoring wells north of Dogwood Lake in FY10.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	VA321372032100	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Newport News, Virginia (8,248 acres)	<b>Funding to Date:</b>	\$ 53.8 million
<b>Mission:</b>	Serve as host to the Army Transportation Center; provide training in all modes of transportation, including rail and marine; aviation maintenance; involved in amphibious operations	<b>Est. CTC (Comp Year):</b>	\$ 17.5 million (FY 2017)
<b>HRS Score:</b>	50.00; placed on NPL in December 1994	<b>IRP Sites (Final RIP/RC):</b>	31 (FY2012)
<b>IAG Status:</b>	FFA signed in March 2008	<b>MMRP Sites (Final RIP/RC):</b>	16 (FY2017)
<b>Contaminants:</b>	PCBs, VOCs, pesticides, heavy metals, SVOCs, petroleum products	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-171



## Progress To Date

Fort Eustis, home to the Army Transportation Center, is where soldiers receive education and training in all modes of transportation, aviation maintenance, logistics and deployment doctrine, and research. Identified sites include landfills, underground storage tanks (USTs), pesticide storage areas, range/impact areas, and surface impoundments. The migration of contaminants from some sites to creeks and estuaries, and the potential migration through surface water and the upper water table to the James River are the greatest concerns at the installation. Analysis of samples indicated the presence of polychlorinated biphenyls (PCBs), pesticides, polyaromatic hydrocarbons (PAHs), and lead in surface water and sediment. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in December 1994. DoD and EPA signed a federal facility agreement (FFA) in July 2008 to outline how they were going to proceed with cleanup. The 2005 BRAC Commission recommended the realignment of Fort Eustis garrison functions as part of the Joint Basing effort. During FY96, the installation established an administrative record and set up information repositories at three local libraries. Since FY00, Fort Eustis held two technical review committee meetings each year. Fort Eustis updated its community relations plan in FY06. To ensure continuous monitoring and improvement, Fort Eustis completed a five-year review report in FY08.

To date, Fort Eustis and EPA have signed five Records of Decision (RODs), which selected cleanup actions at four sites. In FY03, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Eustis for FY05 through FY08 is summarized below.

In FY05, the installation conducted monthly liquid vapor extraction treatments at the Army-Air Force Exchange Service Station and monthly monitoring at the Helicopter Maintenance Area. The installation also operated the soil vapor extraction system at Landfill (LF) 7; and completed a proposed plan (PP) for Brown's Lake; and prepared a supplemental site evaluation report for Milstead Island Creek, which recommended no further action. Additionally, Fort Eustis began a groundwater and soil treatability study (TS) at the fire training area (FTA)

site. The installation also started a Vegetative Management Program for LF 15 to lower maintenance costs, establish native vegetation, and improve wildlife habitat. Under the MMRP, the installation held a kick-off meeting with the Army, regulatory agencies, and the awarded contractor. The installation started the site inspection (SI) at closed, transferring, and transferred ranges.

In FY06, Fort Eustis received a contract award for long-term management (LTM) at LF 15. The installation also prepared a preliminary draft feasibility study (FS) to evaluate cleanup alternatives for the FTA site. Fort Eustis also completed the LTM plan for the Oil Sludge Holding Pond. Under the MMRP, the installation conducted SIs and completed the historical records review report.

In FY07, Fort Eustis awarded a performance-based contract for environmental cleanup services at six sites. The installation also signed the final ROD for Brown's Lake. In addition, Fort Eustis submitted and completed the final SI report for the Third Post UST and determined that a Decision Document determining nor further action was required. Under the MMRP, the installation finalized the SI report and recommended that seven sites proceed to the remedial investigation (RI) phase.

In FY08, Fort Eustis finalized and signed the FFA and completed the first CERCLA five-year review report, which concluded that cleanup actions at the Oil Sludge Holding Pond and Department of Labor (DOL) Yard are protective of human health and the environment. The installation also close the Oil Sludge Holding Pond.

## FY09 IRP Progress

Fort Eustis completed a groundwater pilot-scale TS at the FTA site and submitted the focused FS for Army review. Fort Eustis also obtained approval to end LTM and closed the DOL Yard. The installation also completed cleanup actions, the LTM plan, and the land use control design to restrict the use of and access to Brown's Lake. Additionally Fort Eustis finalized the FS, PP, and ROD for Eustis Lake. For Bailey Creek, the installation finalized the focused FS, and submitted the PP and ROD for regulatory review. Fort Eustis solicited bids on a performance-based acquisition (PBA) for environmental cleanup services at seven sites.

Regulatory issues delayed the completion of the PP and ROD for Bailey Creek.

## FY09 MMRP Progress

Fort Eustis completed the 1,000-inch Rifle Range RI/FS fieldwork and submitted the RI/FS reports for regulatory review. Fort Eustis solicited bids on a PBA for environmental remediation services at six sites.

Contractual issues delayed the completion of the RI/FS, PP, and ROD for the 1,000-inch Rifle Range.

## Plan of Action

Plan of action items for Fort Eustis are grouped below according to program category.

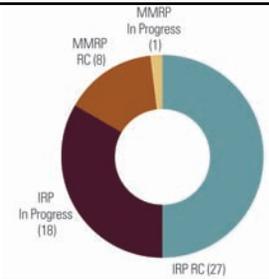
### IRP

- Complete the FS, PP, and ROD for the FTA site in FY10.
- Award PBA for seven sites in FY10.
- Complete the RI, FS, PP, and ROD for Felker Airfield in FY10.
- Complete the FS, PP, and ROD for Skeet Range Upland in FY10.
- Complete the PP and ROD for Bailey Creek in FY10.
- Complete the design for cleanup and cleanup actions at Eustis Lake in FY10-FY11.
- Complete the FS, PP, and ROD for the SR Wetland in FY10-FY11.
- Transfer environmental restoration responsibilities to Langley Air Force Base in FY11.

### MMRP

- Award PBA for six sites in FY10.
- Complete the RI/FS, PP, ROD, design for cleanup, and cleanup actions at the 1,000-inch Rifle Range in FY10-FY11.
- Complete the RI at Langley Field Gunnery Range, Bombing Target H, Camp Wallace Firing Fan, SR, and SR-TD in FY11.

<b>FFID:</b>	MD321022056700	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Fort Meade, Maryland (5,142 acres)	<b>Funding to Date:</b>	\$ 101.6 million
<b>Mission:</b>	Served as administrative post for various DoD tenants	<b>Est. CTC (Comp Year):</b>	\$ 22.8 million (FY 2042)
<b>HRS Score:</b>	52.0; placed on NPL in July 1998; Tipton Airfield delisted from NPL in November 1999	<b>IRP Sites (Final RIP/RC):</b>	45 (FY2013)
<b>IAG Status:</b>	FFA signed in June 2009	<b>MMRP Sites (Final RIP/RC):</b>	9 (FY2012)
<b>Contaminants:</b>	Chlorinated solvents, metals, munitions and explosives of concern, petroleum hydrocarbons, VOCs, SVOCs, explosives, propellants, PAHs, pesticides	<b>Five-Year Review Status:</b>	Completed and underway
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-96



**Progress To Date**

Fort George G. Meade (Fort Meade) served as an administrative post for various DoD tenants. The National Security Agency is the primary tenant. Investigations beginning in FY88 identified several areas of concern, including landfills (LFs), petroleum and hazardous waste storage areas, aboveground storage tanks, underground storage tanks, asbestos-containing material in structures, and unexploded ordnance (UXO). The potential risk to human health and the environment was significant enough for EPA to place Fort Meade on the NPL in July 1998. EPA delisted the Tipton Airfield parcel from the NPL in November 1999. DoD and EPA signed a federal facility agreement (FFA) in 2009 to outline how they were going to proceed with cleanup. In December 1988, the BRAC Commission recommended closing the Fort Meade range and training areas and realigning the installation as an administrative center. In July 1995, the BRAC Commission recommended additional realignment, reducing Kimbrough Army Community Hospital to a clinic. The installation formed a BRAC cleanup team in FY94 to develop a process for cleanup of sites, and a Restoration Advisory Board (RAB) in FY95 to communicate cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed a five-year review reports in FY05 and in FY09.

To date, the installation has completed three No Further Action Records of Decision (RODs), which determined that no further cleanup activities were necessary at Tipton Airfield and the Clean Fill Dump. In FY04, the Army conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Meade for FY05 through FY08 is summarized below.

In FY05, Fort Meade completed the five-year review report for the Tipton Airfield BRAC parcel. The installation also submitted the decision document selecting cleanup actions for the ordnance demolition area BRAC site, and the draft Closed Sanitary LF remedial investigation (RI) report for stakeholder review. Additionally, the installation awarded a performance-based contract (PBC) for 11 sites, including the Defense Reutilization and Marketing Office (DRMO) and the Trap and Skeet Range. Fort Meade also completed the removal action at the Patuxent Research Refuge. The RAB held

monthly meetings and regulatory partnership meetings as needed.

In FY06, Fort Meade completed the installation of additional monitoring wells to characterize the groundwater condition at the DRMO. The installation also completed the comprehensive evaluation of all historical data and cleanup at the former Battery Shop. Under the MMRP, Fort Meade completed the historical records review and began site inspections (SIs) at all sites.

In FY07, Fort Meade started long-term management (LTM) and land use control (LUC) inspections, which restrict use of and access to sites; methane recovery; and RI fieldwork. The installation also completed the draft final preliminary assessment and SI report for the entire installation, and the RI for the Closed Sanitary LF. The installation received final regulatory approval for the Granite Nike Site. Under the MMRP, the installation completed an SI, which identified the former Mortar Range. Fort Meade also completed the geophysical work plan and fieldwork for the RI. The RAB continued to hold meetings.

In FY08, Fort Meade continued LTM/LUC inspections, methane recovery, and RI activities. Fort Meade also completed a final MMRP work plan and a draft sampling and analysis plan for munitions constituents. The RAB continued to hold meetings.

**FY09 IRP Progress**

Fort Meade signed an FFA with EPA, who rescinded the RCRA Section 7003 Administrative Order. The Maryland Department of the Environment also withdrew its citizens suit. The installation completed all cleanup at Operable Unit (OU) 2. Fort Meade continued LTM and LUC inspections. The installation conducted a five-year review report for the Clean Fill Dump, the Tipton Airfield Parcel, and the Patuxent Research Refuge-North Tract non-time critical removal action. The cost of completing environmental restoration has changed significantly due to regulatory issues.

Regulatory issues delayed the completion of the RI and feasibility study (FS) to evaluate cleanup alternatives for the former Pesticide Shop and Manor View Dump Site.

**FY09 MMRP Progress**

The installation conducted no MMRP actions.

**Plan of Action**

Plan of action items for Fort George G. Meade are grouped below according to program category.

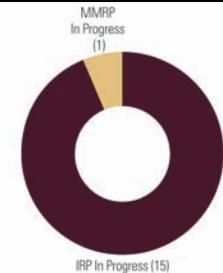
**IRP**

- Complete RI/FS for the former Pesticide Shop and Manor View Dump Site in FY10.
- Complete proposed plans and ROD for the DRMO, former Pesticide Shop, and the Architect of the Capitol sites in FY10.
- Complete PBC requirements (FS or remedial design) for OU 4, DRMO, former Trap and Skeet Range, and former Granite Nike Site in FY10.
- Continue BRAC property LTM and LUC inspections in FY10.
- Complete RI and design phase, and begin cleanup activities for Range 17 Trap and Skeet in FY10.
- Submit Ordnance Demolition Area proposed plan (PP) and ROD in FY10-FY11.
- Develop an explanation of significant differences to the ROD to ensure UXO removal in FY10-FY11.
- Complete FS for the Closed Sanitary LF in FY11.

**MMRP**

- Complete the RI/FS for the former Mortar Range in FY10.
- Complete the PP for the former Mortar Range in FY11.

<b>FFID:</b>	GA421402004600	<b>Funding to Date:</b>	\$ 33.9 million
<b>Location (Size):</b>	Forest Park, Georgia (1,426 acres)	<b>Est. CTC (Comp Year):</b>	\$ 10.1 million (FY 2029)
<b>Mission:</b>	Supported FORSCOM readiness missions	<b>IRP Sites (Final RIP/RC):</b>	15 (FY2014)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2010)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Metals, PAHs, VOCs, pesticides, POLs, chlorinated solvents, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-62
<b>Media Affected:</b>	Groundwater, Surface Water, Soil		



## Progress To Date

Fort Gillem supports Army Forces Command readiness missions and is home for many Army Forces Command and Fort McPherson activities. The Eastern Distribution Region of the Army and Air Force Exchange Service uses approximately 60 acres for storage. Fort Gillem also supports the Federal Emergency Management Agency disaster relief activities by providing warehouse and office space. The 2005 BRAC Commission recommended Fort Gillem, a sub-installation of Fort McPherson, for closure. The installation is comprised of approximately 1,426 acres and is surrounded by residential and commercial properties. In FY07, the installation solicited public interest in establishing a Restoration Advisory Board (RAB) to discuss cleanup progress with the community, but concluded that there was not enough interest in convening a RAB.

In 2001, the installation excavated 27,000 tons of lead-contaminated soil and 4,000 tons of volatile organic compound (VOC)-contaminated soil at the Northern Landfill Area. Fort Gillem conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one site was identified. Cleanup progress at Fort Gillem for FY05 through FY08 is summarized below.

In FY05, the installation awarded a performance-based contract for FTG 01, 04, 07, 09, 10, and 13. The remaining sites (FTG 02, 03, 05, 06, 08, and 14) required no further cleanup activities based on the site inspection (SI) provided to the Georgia Environmental Protection Division.

In FY06, Fort Gillem began a report to summarize the environmental conditions of all transferable property and a CERFA report, which documents all uncontaminated property undergoing closure or realignment, in response to the BRAC 2005 recommendations. Fort Gillem also completed a focused feasibility study to evaluate cleanup alternatives at FTG 01 (Operable Units A, B, H, and I). The installation also developed a remedial investigation (RI) work plan to address data gaps at FTG 01, 04, and 07/10. Additionally, Fort Gillem prepared the design for cleanup documents for interim cleanup measures to address source removals at FTG 01 and 09. The installation also evaluated the groundwater monitoring network and the

off-site well survey. Under the MMRP, the installation completed a historical records review for the ranges at Fort Gillem.

In FY07, Fort Gillem completed Phase I of the environmental conditions of transferable property report and started Phase II/SI to determine if additional investigation or cleanup is required. The installation also completed the CERFA report and started to update the background study for metals and pesticides as requested by the Georgia Environmental Protection Division. The background study will impact the RI and baseline risk assessment, an assessment of potential environmental hazards, for the following sites: FTG 01 through 10, 13, and 14. The installation also awarded a contract to achieve no further cleanup for Buildings 606 and 610 leaking underground storage tank (UST) sites. Additionally, the installation conducted a total of four fluid and vapor recovery events at the Building 610 leaking UST site. Under the MMRP, Fort Gillem scheduled sampling of the former Trap Skeet Range during the SI.

In FY08, Fort Gillem completed the background study for metals and pesticides; the Georgia Environmental Protection Division concurred with the conclusions of the study. The installation also received a no further action letter from Georgia Environmental Protection Division for the Building 606 leaking UST site. Additionally, Fort Gillem received an approved corrective action plan for further investigation and monitoring or cleanup of the release on the Building 610 leaking UST site. Fort Gillem also updated and submitted the final RI and baseline risk assessment for FTG 07/10 to the Georgia Environmental Protection Division. The installation also submitted and received concurrence on the technical memorandum to Georgia Environmental Protection Division recommending the following: closure of FTG 11, work plan to conduct interim cleanup actions and effluent discharge criteria for the two proposed pump-and-treat plants at FTG 01 and 09. Under the MMRP, Fort Gillem began SI work at the Trap Skeet Range and identified lead contamination on the surface soil. Fort Gillem met monthly with the Georgia Environmental Protection Division to discuss program status for all sites.

## FY09 IRP Progress

Fort Gillem finalized the list of USTs and aboveground storage tanks (ASTs), came to an agreement with the Georgia

Environmental Protection Division on a closure strategy for the USTs/ASTs, and awarded a contract to achieve closure. The installation also completed and submitted the draft final RI and baseline risk assessment for FTG 01, 04, 07, 09, 10, and 13. The cost of completing environmental restoration changed significantly due to regulatory issues and changes in estimating criteria.

Administrative issues delayed the closure of Building 610 leaking UST sites, as well as the RI and baseline risk assessment for FTG 02, 03, 05, 06, 08, and 14.

## FY09 MMRP Progress

Fort Gillem awarded a contract to conduct the SI, RI, and baseline risk assessment for the Trap Skeet Range.

Administrative issues delayed starting the fieldwork in support of the SI, RI, and baseline risk assessment for the Trap Skeet Range.

## Plan of Action

Plan of action items for Fort Gillem are grouped below according to program category.

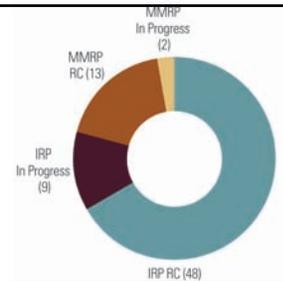
### IRP

- Ensure that all required cleanup systems are constructed at FTG 02, 07, 09, and 13 in FY10.
- Complete cleanup actions at FTG 10 and 11 in FY10.
- Close Building 610 leaking UST sites in FY10.
- Complete and submit the RI and baseline risk assessment for FTG 03, 05, 06, 08, and 14 in FY10.

### MMRP

- Finalize the work plan for the Trap and Skeet Range in FY10.
- Start fieldwork in support of the SI, RI, and baseline risk assessment for the Trap Skeet Range in FY10.

<b>FFID:</b>	WA021402050600	<b>Contaminants:</b>	PAHs, VOCs, battery electrolytes, PCBs, heavy metals, POLs
<b>Location (Size):</b>	Fort Lewis, Washington (86,176 acres)	<b>Media Affected:</b>	Soil
<b>Mission:</b>	Serve as host to I Corps Headquarters; plan and execute Pacific, NATO, or other contingency missions; provide troop training, airfield, medical center, and logistics	<b>Funding to Date:</b>	\$ 91.8 million
<b>HRS Score:</b>	42.78 (Landfill No. 5), placed on NPL in July 1987, delisted from NPL in May 1995; 35.48 (Logistics Center), placed on NPL in November 1989	<b>Est. CTC (Comp Year):</b>	\$ 24.9 million (FY 2034)
<b>IAG Status:</b>	IAG signed in January 1990	<b>IRP Sites (Final RIP/RC):</b>	57 (FY2012)
		<b>MMRP Sites (Final RIP/RC):</b>	15 (FY2011)
		<b>Five-Year Review Status:</b>	Completed
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-179



**Progress To Date**

Fort Lewis is located approximately 15 miles south of Tacoma, Washington. Its mission includes planning and executing Pacific, NATO, and other contingency missions; providing troop training; operating an airfield and medical center; and providing logistical support. Contaminated sites identified at Fort Lewis include landfills (LFs), former ranges, and spill sites. Primary contaminants include organic solvents, heavy metals, and fuels. The potential risk to human health and the environment was significant enough for EPA to place two Fort Lewis sites on the NPL in July 1987 and November 1989. DoD and EPA signed an interagency agreement (IAG) in January 1990 to outline how they were going to proceed with cleanup. EPA removed LF 5 from the NPL in May 1995. In 2005, the BRAC Commission recommended Fort Lewis for realignment. Fort Lewis developed a community relations program due to lack of public interest in developing a Restoration Advisory Board to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Fort Lewis completed three five-year review reports in FY97, FY02, and FY07.

To date, Fort Lewis has signed three Records of Decision, which selected cleanup actions at environmental restoration sites, and decision documents (DDs) for five sites. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Lewis for FY05 through FY08 is summarized below.

In FY05, the installation performed operations and maintenance (O&M) of cleanup actions at the Logistics Center (two groundwater pump-and-treat systems) and the Illicit Polychlorinated Biphenyls (PCB) Dump Site (cap-and-fence). Fort Lewis continued long-term management cleanup actions at the Logistics Center and LFs 1 and 4. The installation also completed treatment at the second of three Logistics Center source areas. Additionally, Fort Lewis closed the potential vapor intrusion pathway for the Logistics Center. The installation also expanded a completed focused feasibility study (FS), which evaluated cleanup alternatives for the Sea Level Aquifer, into a full FS. Fort Lewis also installed and sampled additional monitoring wells to further map the potential of well

water to come from the tetrachloroethene (PCE)-contaminated area in the Sea Level Aquifer.

In FY06, the installation continued O&M of cleanup actions at the Logistics Center, Illicit PCB Dump Site, and LFs 1 and 4. Fort Lewis also completed the FS for the Logistics Center Sea Level Aquifer. The installation also completed DDs, which selected cleanup actions for five non-NPL sites. The installation proposed that no further cleanup actions were necessary at LF 6. Under the MMRP, Fort Lewis completed a site inspection (SI) work plan for all sites.

In FY07, Fort Lewis completed treatment at the final Logistics Center source area. The installation also selected the cleanup action and began construction at the Logistics Center Sea Level Aquifer. Additionally, the installation continued O&M of cleanup actions at the Logistics Center, Illicit PCB Dump Site, and LFs 1 and 4. EPA concurred that no further cleanup action was necessary for the vapor intrusion pathway at Madigan Housing. The installation completed a five-year review report and the land use control (LUC) plan which restricts use of and access to the Logistics Center and seven other IAG sites. Under the MMRP, the installation completed field sampling and an SI.

In FY08, Fort Lewis continued O&M cleanup actions at the Logistics Center, Illicit PCB Dump Site, LFs 1 and 4, and four other IAG sites with LUCs. The installation also completed the engineering design for the pump-and-treat system at the Sea Level Aquifer.

**FY09 IRP Progress**

Fort Lewis completed the construction of the pump-and-treat system at the Sea Level Aquifer. The installation also continued O&M cleanup actions at the Logistics Center, Illicit PCB Dump Site, LFs 1 and 4, and four other IAG sites with LUCs. In addition, Fort Lewis completed and submitted the draft FS for the remaining nine sites and began a pilot test for soil vapor extraction at one site. The installation and EPA began negotiations for an explanation of significant differences for the 1990 Logistics Center ROD. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Fort Lewis identified an MMRP site of approximately 2,000 acres on North Fort Lewis (B Range).

Administrative issues delayed the cleanup at the former Skeet Range.

**Plan of Action**

Plan of action items for Fort Lewis are grouped below according to program category.

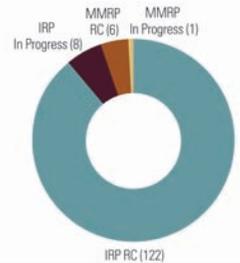
**IRP**

- Complete soil removal at former Miller Hill and Skeet Ranges in FY10.
- Complete FS and cleanup action plan at seven sites in FY10.
- Complete an explanation of significant differences for the Logistics Center ROD in FY10.
- Assume environmental restoration responsibilities from McChord Air Force Base in FY11.

**MMRP**

- Complete cleanup at former Skeet Range in FY10.
- Complete investigation and clearance at the B Range in FY10-FY11.

<b>FFID:</b>	AL421372056200	<b>Funding to Date:</b>	\$ 226.5 million
<b>Location (Size):</b>	Anniston, Alabama (41,191 acres)	<b>Est. CTC (Comp Year):</b>	\$ 236.7 million (FY 2029)
<b>Mission:</b>	Served as host to the U.S. Army Chemical School, the U.S. Army Military Police School, and the DoD Polygraph Institute	<b>IRP Sites (Final RIP/RC):</b>	130 (FY2017)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	7 (FY2029)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Underway
<b>Contaminants:</b>	VOCs, SVOCs, pesticides, explosives, metals, UXO, radioactive sources, non-stockpile chemical warfare materiel	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-1
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



## Progress To Date

The mission of Fort McClellan was to serve as host to the U.S. Army Chemical School, the U.S. Army Military Police School, and the DoD Polygraph Institute. Studies since FY90 have identified the following site types at Fort McClellan: maintenance facility areas; training and range areas; underground storage tanks; landfills; incinerators; storage handling areas for toxic and hazardous materials; and chemical agent and radioactive substance training, storage, and disposal areas. The main contaminants of concern are chlorinated volatile organic compounds (VOCs) in groundwater and lead in soils. In FY95, EPA concluded that the potential risk to human health and the environment was not significant enough to place Fort McClellan on the NPL. In July 1995, the BRAC Commission recommended closing most Fort McClellan facilities. The installation formed a BRAC cleanup team in FY96 to develop a process for cleanup of sites, and completed a BRAC cleanup plan with community input in FY 98 to prioritize sites requiring environmental restoration. In FY95, the installation established information repositories at three locations, and the community formed a local redevelopment authority. In FY96, the installation formed a Restoration Advisory Board (RAB) to discuss the cleanup progress with the community. The installation provided funding for technical assistance for public participation to the RAB in FY02 through FY05, FY08, and FY09. To ensure continuous monitoring and improvement, the installation completed a five-year review report for the General Service Administration (GSA) warehouse area in FY09.

To date, the installation has transferred 18,556 acres. The installation also has completed 6 action memoranda, 95 decision documents (DDs), and a Record of Decision, which selected cleanup actions at environmental restoration sites. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort McClellan for FY05 through FY08 is summarized below.

In FY05, the installation transferred five acres and completed a modification to the Environmental Services Cooperative Agreement to comply with a two-year funding restriction. Fort McClellan also completed negotiations for a second

modification to the Environmental Services Cooperative Agreement technical specification and requirements statement to include additional early transfer parcels. The installation also completed a removal action for lead-contaminated soils in a portion of the Iron Mountain Road Range that extended into the Eastern Bypass. Additionally, Fort McClellan completed DDs determining no further cleanup action is necessary for several small arms firing ranges. The installation also completed a clearance to depth within the construction debris area of the Eastern Bypass. Fort McClellan also extended the funding for technical assistance for public participation for the RAB, and the BRAC cleanup team held facilitated meetings.

In FY06, the installation completed X-ray fluorescence surveys at the Snap Lane and Bains Gap Road Tank Sites, and erosion control measures at Iron Mountain Road Ranges. The BRAC cleanup team completed a design study for the Baby Bains Gap Road Ranges. Under the MMRP, Fort McClellan completed a clearance on 19 acres located in the Charlie Area and signed Statements of Clearance for the Eastern Bypass Y Area Junction, the Water Tank Sites, and the Bains Gap Road.

In FY07, the installation signed an Environmental Services Cooperative Agreement inclusive of all early transfer parcels. The installation also completed fieldwork for the Baby Bains Gap Road Ranges baseline assessment of potential risks to the environment and collected groundwater samples at Training Area T 24A. The installation also conducted a recurring review of nine munitions and explosive areas of concern. Under the MMRP, Fort McClellan finalized the removal report and signed the Statement of Clearance for the Eastern Bypass Y Area Junction. The BRAC cleanup team held facilitated meetings.

In FY08, Fort McClellan completed a design study for Training Area T 24A and Choccolocco Corridor Ranges. The installation also completed additional sampling activities required for the remedial investigations (RIs) at the Iron Mountain Road Ranges, Bains Gap Road Ranges, and Baby Bains Gap Road Ranges; completed X-ray fluorescence soil sampling at a former pistol range; and completed the RI for the 81-mm Mortar Range. Under the MMRP, Fort McClellan developed a strategy for supplemental sampling required for the Charlie Area engineering evaluation and cost analysis (EE/CA). The installation also awarded funding for technical assistance for

public participation to the RAB, and the BRAC cleanup team held facilitated meetings.

## FY09 IRP Progress

Fort McClellan completed fieldwork for the Choccolocco Corridor Ranges baseline assessment of potential risks to the environment. The installation also completed a five-year review report for the GSA warehouse area. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

The installation awarded funding for technical assistance for public participation to the RAB, and the BRAC cleanup team held facilitated meetings.

## FY09 MMRP Progress

Fort McClellan completed the EE/CA for the Eastern Bypass Iron Mountain Road Addition, and began the interim removal action on 134 acres of the Charlie Area.

## Plan of Action

Plan of action items for Fort McClellan are grouped below according to program category.

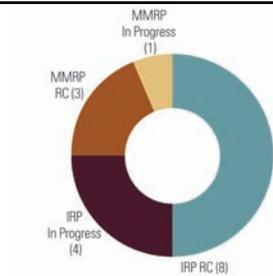
### IRP

- Complete fieldwork at the ranges near Training Area T 24A for the baseline assessment of potential risks to the environment in FY10.
- Complete soil cleanup at Baby Bains Gap Road Range 20 in FY10.

### MMRP

- Complete EE/CA for the Charlie Area in FY11.
- Complete interim removal action on 134 acres at the Charlie Area in FY11.

<b>FFID:</b>	GA421402056500	<b>Funding to Date:</b>	\$ 10.0 million
<b>Location (Size):</b>	Atlanta, Georgia (487 acres)	<b>Est. CTC (Comp Year):</b>	\$ 0.7 million (FY 2014)
<b>Mission:</b>	Served as host to the U.S. Army Forces Command Headquarters, the U.S. Army Reserve Command, and the Headquarters of the Third U.S. Army.	<b>IRP Sites (Final RIP/RC):</b>	12 (FY2014)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	4 (FY2011)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	POs, metals, solvents, VOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-20
<b>Media Affected:</b>	Groundwater		



**Progress To Date**

Fort McPherson houses the U.S. Army Forces Command Headquarters, the U.S. Army Reserve Command, and the Headquarters of the Third U.S. Army. Sites include a contaminated fill area, a surface disposal area, four oil-water separators, former small arms ranges, an active small arms range, aboveground storage tanks (ASTs), and multiple underground storage tanks (USTs). In 2005, the BRAC Commission recommended Fort McPherson for closure and disposal. In FY07, Fort McPherson established a Restoration Advisory Board (RAB) to discuss cleanup progress with the community.

Early activities include a preliminary assessment for all sites, UST removals former Buildings 105 (FTMP 10) and 143 (FTMP 09), and an interim removal action to remove the UST and surrounding soil from Building 41 (FTMP 02). In FY06, Fort McPherson conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP) in FY06; MMRP sites were identified. Cleanup progress at Fort McPherson for FY05 through FY08 is summarized below.

In FY05, the installation conducted the free product recovery and monitoring of the leaking USTs at Buildings 105 (FTMP 10) and 143 (FTMP 09).

In FY06, Fort McPherson began the report to summarize the environmental conditions of all transferable property and CERFA report, which documents all uncontaminated property undergoing closure or realignment, in response to the BRAC 2005 recommendations. Fort McPherson continued the free product recovery and monitoring of the leaking USTs at Buildings 105 (FTMP 10) and 143 (FTMP 09), and installed one additional well. Under the MMRP, Fort McPherson also completed a historical records review to identify all former ranges.

In FY07, Fort McPherson conducted two aggressive recovery events at the leaking sites at FTMPs 10 and 09 to capture as much free product and vapor as possible. The Georgia Environmental Protection Division requested a corrective action plan Part B for these sites. The installation completed the Phase I of the report to summarize environmental conditions of

transferable property and began the site inspection (SI). The installation included the Atlanta National Guard Target Range, Trap and Skeet Range (FTMP 04-R-01), Atlanta National Guard Rifle Range, Pistol Range, and 300 Yard Target Range as part of the SI process. The installation established a RAB and held its first meeting.

In FY08, Fort McPherson conducted sampling at multiple sites. Fort McPherson also installed two additional groundwater monitoring wells at FTMP 09 and two wells at FTMP 10, conducted one groundwater monitoring event, and determined the groundwater flow direction. Fort McPherson also scheduled surface and subsurface sampling to identify the presence of inorganic background metals. Additionally, the installation developed a comprehensive list of all former and current USTs and ASTs, and identified the closure requirements for each tank. Under the MMRP, Fort McPherson conducted sampling at all former small arms ranges. The installation determined no further cleanup action was necessary for the National Guard Rifle Range, Pistol Range, NG Target Range, and the 300 Yard Target Range. Fort McPherson met with the Georgia Environmental Protection Division and Georgia UST divisions monthly to discuss the status of the cleanup program, and agreed on the path forward to cleanup the property prior to closure and disposal.

**FY09 IRP Progress**

Fort McPherson began environmental closure of former USTs and ASTs through the Georgia Environmental Protection Division and Georgia UST divisions, and started supplemental SIs and RIs for Buildings 209 and 302 (FTMP 13). Fort McPherson also reviewed documents in support of no further action on the Ash Disposal Dump Site (FTMP 06), and conducted additional SI sampling at Buildings 341, 356, and 456. The installation also conducted sampling to determine background levels for metals. The cost of completing environmental restoration has changed significantly due to regulatory issues and changes in estimating criteria.

**FY09 MMRP Progress**

Fort McPherson began a supplemental SI and remedial investigation for the Trap and Skeet Range (FTMP 04-R-01).

**Plan of Action**

Plan of action items for Fort McPherson are grouped below according to program category.

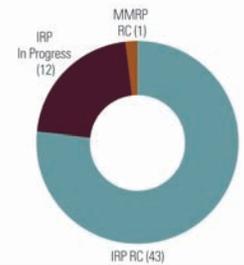
**IRP**

- Conduct SI at the former Water Tower Site and former Crematory Site in FY10.
- Achieve no further action on the Ash Disposal Dump Site (FTMP 06) in FY10.

**MMRP**

- Conduct SI in FY10.

<b>FFID:</b>	NJ221382059700	<b>Funding to Date:</b>	\$ 28.7 million
<b>Location (Size):</b>	Monmouth County, New Jersey (1,338 acres)	<b>Est. CTC (Comp Year):</b>	\$ 10.5 million (FY 2011)
<b>Mission:</b>	Conducted research and development of C4ISR systems	<b>IRP Sites (Final RIP/RC):</b>	55 (FY2011)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2008)
<b>IAG Status:</b>	FFA signed in July 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Petroleum hydrocarbons, VOCs, SVOCs, PCBs, heavy metals, radionuclides	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-116
<b>Media Affected:</b>	Groundwater, Surface Water, Soil		



## Progress To Date

Fort Monmouth's mission is to conduct research and development. Prominent sites at Fort Monmouth include landfills, underground storage tanks, hazardous waste storage areas, polychlorinated biphenyl (PCB) spill areas, asbestos areas, and radiological storage and spill areas. Contaminants in groundwater and soil include chlorinated solvents, volatile organic compounds (VOCs), and heavy metals. DoD and EPA signed a federal facility agreement (FFA) in July 1990 to outline how they were going to proceed with cleanup. In 1993, the BRAC Commission recommended realignment of Fort Monmouth. This realignment resulted in the closure of the Evans Area; the transfer of part of the Charles Wood Area to the Navy; and the relocation of personnel from the leased space, the Evans Area, and Vint Hill Farms Station to the Main Post and the Charles Wood Area. To accelerate transfer, the Army divided the Fort Monmouth BRAC property into eight parcels: the Charles Wood Housing Area and seven parcels in the Evans Area. In 2005, the BRAC Commission recommended closure of the Fort Monmouth Main Post and Charles Wood Area. In FY94, the Evans Area formed a BRAC cleanup team to develop a process for cleanup of sites and completed the BRAC cleanup plan to prioritize sites requiring environmental restoration. In FY96, the Evans Area formed a Restoration Advisory Board (RAB) to discuss the installation's cleanup progress with the community. In FY07, the installation formed another RAB for the BRAC 2005 Main Post and Charles Wood Area. To ensure continuous monitoring and improvement, Fort Monmouth completed a five-year review report in FY06.

To date, the installation has transferred the Evans Area Parcels D and F by deed. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Fort Monmouth for FY05 through FY08 is summarized below.

In FY05, Fort Monmouth assessed and delineated wetlands within the Evans Area Parcel B and completed deed transfer actions. The installation found the Evans Area Parcel G suitable for transfer. The installation also found the Evans Area Parcel E suitable for transfer and completed a deed transfer. Fort Monmouth entered into a memorandum of agreement, agreeing

to remove asbestos-contaminated materials and perform interior demolition activities within historic buildings in the Evans Area Parcel C.

In FY06, the Evans Area completed fieldwork at FTMM 67.

In FY07, Fort Monmouth completed the report to summarize the environmental conditions of all transferable property and submitted it for regulatory review. The installation completed the historical records review and identified a small arms range. The installation also completed the historical site assessment for the use of radiological commodities. The installation formed a RAB for the BRAC 2005 Main Post and the Charles Wood Area.

In FY08, Fort Monmouth completed cleanup of PCBs at the Evans Area Building 9053 in Parcel D. The installation also finalized the Evans Area environmental baseline surveys to determine the presence of potential environmental hazards at Parcel C, and found both parcels suitable for transfer. Additionally, Fort Monmouth also finalized the cleanup report for the Evans Area hazardous materials storage sheds. The installation transferred Parcel G; finalized the classification exception area documentation for four sites; and continued treatment, bioremediation, and long-term management at six sites. Fort Monmouth monitored groundwater treatment at one site.

## FY09 IRP Progress

Fort Monmouth finalized the field delineation and the baseline ecological evaluation at Building 9004. The installation also prepared a draft remedy selection report for cleanup of soils at the Building 9004 septic tank. The installation found Parcel D to be suitable for transfer, and transferred Parcel C to Wall Township. Additionally, Fort Monmouth finalized PCB cleanup at Building 9053, and determined no further cleanup was necessary. The installation also completed biodegradation and classification exception area documentation. Fort Monmouth began the Baseline Ecological Evaluation for the Main Post and the Charles Wood Areas. The cost of completing environmental restoration has changed significantly due to regulatory issues.

Administrative issues delayed the transfer of Parcel D.

## FY09 MMRP Progress

Fort Monmouth conducted no MMRP actions.

## Plan of Action

Plan of action items for Fort Monmouth are grouped below according to program category.

### IRP

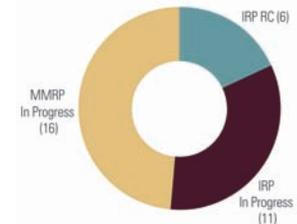
- Complete cleanup at the Building 9004 septic tank, and transfer the remaining two acres in FY10.
- Assign Parcel D to the Department of Education and support transfer to Brookdale College in FY10.
- Continue oxygen injections at Sites M2, M58, M61 and M64 on the Main Post in FY10-FY11.
- Continue to injection compounds that release hydrogen at Sites M5, M22, and M59 on the Main Post and the Charles Wood Area in FY10-FY11.
- Complete the biennial classification exception area reports in FY10-FY11.

### MMRP

- There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	VA321372060300
<b>Location (Size):</b>	Hampton, Virginia (570 acres)
<b>Mission:</b>	Provided quality base operations for five major commands/regional HQs and several national defense agencies
<b>HRS Score:</b>	N/A
<b>IAG Status:</b>	N/A
<b>Contaminants:</b>	Metals, MEC, explosives, propellants, SVOCs, VOCs
<b>Media Affected:</b>	Sediment and Soil

<b>Funding to Date:</b>	\$ 6.6 million
<b>Est. CTC (Comp Year):</b>	\$ 75.8 million (FY 2015)
<b>IRP Sites (Final RIP/RC):</b>	17 (FY2014)
<b>MMRP Sites (Final RIP/RC):</b>	16 (FY2015)
<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>IRP/MMRP Status Table:</b>	Refer to page C-6-172



**Progress To Date**

Fort Monroe provides quality base operations support for several national defense agencies while preparing the Fort Monroe community for the future. Cleanup at Fort Monroe has included the removal of soil or liquid hydrocarbon from leaking underground storage tanks. In 2005, the BRAC Commission recommended closure of Fort Monroe. In FY06, the installation designated a Base Transition Coordinator and an interim BRAC Environmental Coordinator. The installation also formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. In FY07, the Governor of Virginia established the Fort Monroe Federal Area Development Authority.

Approximately 288 acres of Fort Monroe property is under a reversionary clause to the Commonwealth of Virginia, with 77 additional acres of land that is not yet under a deed and where ownership is undetermined. The following sites at Fort Monroe have completed cleanup: Sites 1 and 2 (two former landfills), Site 3 (a classified document incinerator), and Site 4, (unexploded ordnance at the whole installation). In FY04, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Monroe for FY06 through FY08 is summarized below.

In FY06, the installation redefined the MMRP sites identified in the range inventory and evaluated additional sites; several sites were recommended for further investigation.

In FY07, Fort Monroe completed the report to summarize the environmental conditions of all transferable property and submitted the CERFA report to the Virginia Department of Environmental Quality for regulatory comment. The installation, the State, and the Fort Monroe Federal Area Development Authority developed a field sampling plan to gather additional data to determine if new sites requiring cleanup exist. The RAB received training on the types of weapon systems previously used at Fort Monroe, and found munitions and explosives of concern (MEC). The RAB also received training on the CERCLA cleanup process, and held a site tour.

In FY08, Fort Monroe completed an investigation of 25 sites identified in the field sampling plan. The installation also identified 14 new sites that will require further investigation either through an expanded site investigation (SI) or through remedial investigation (RI). Six sites require no further cleanup actions. The installation also completed the historical photographic analysis with the U.S. Army Topographic Engineering Center. Under the MMRP, Fort Monroe recharacterized existing sites and identified one new site based on information from the historical photographic analysis. The installation awarded a contract to conduct an RI on closed ranges, analyze alternatives for risk management or response actions in a feasibility study (FS), develop a proposed plan (PP), and complete a decision document (DD) on actions needed to address explosive hazards posed by MEC.

**FY09 IRP Progress**

Fort Monroe completed an expanded SI on 14 sites. The installation also finalized the technical memorandum for an assessment of potential risks to the environment, and provided the memorandum to the Virginia Department of Environmental Quality and the Fort Monroe Federal Area Development Authority for review. Additionally, Fort Monroe awarded three RI contracts.

**FY09 MMRP Progress**

Fort Monroe conducted an RI/FS at 13 sites. The installation also conducted a historic records review for the moat, munitions area, and armaments; subsequently, Fort Monroe awarded a contract to survey land at the moat, and submitted results to the Virginia Department of Environmental Quality and the Fort Monroe Federal Area Development Authority.

**Plan of Action**

Plan of action items for Fort Monroe are grouped below according to program category.

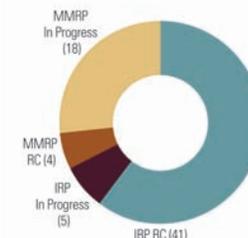
**IRP**

- Award contract for removal actions in FY10.
- Receive regulatory concurrence for no further cleanup action on 12 expanded SI sites and 20 other sites in FY10.

**MMRP**

- Complete the RI/FS report, complete the DD, and prepare the PP in FY10.
- Conduct public meetings in FY10.
- Conduct investigations at the moat and complete report in FY10.

<b>FFID:</b>	CA921372067600	<b>Media Affected:</b>	Groundwater and Soil
<b>Location (Size):</b>	Marina, California (27,827 acres)	<b>Funding to Date:</b>	\$ 459.6 million
<b>Mission:</b>	Served as host to 7th Infantry Division (Light); supports the Defense Language Institute Foreign Language Center, currently at the Presidio of Monterey, California	<b>Est. CTC (Comp Year):</b>	\$ 386.9 million (FY 2037)
<b>HRS Score:</b>	42.24; placed on NPL in February 1990	<b>IRP Sites (Final RIP/RC):</b>	46 (FY2016)
<b>IAG Status:</b>	FFA signed in July 1990	<b>MMRP Sites (Final RIP/RC):</b>	22 (FY2019)
<b>Contaminants:</b>	VOCs, petroleum hydrocarbons, heavy metals, pesticides, SVOCs, explosives, propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-19



**Progress To Date**

From 1917 to 1994, Fort Ord served primarily as a training and staging installation for infantry units. In FY87, a hydrogeological investigation identified the Fort Ord sanitary landfills as potential sources of contamination. Identified sites include landfills; underground storage tanks; motor pools; family housing areas; a fire training area; an 8,000-acre impact area; and an ordnance and explosives disposal area. In addition, Fort Ord has discovered that petroleum hydrocarbons and volatile organic compounds (VOCs) were contaminating the groundwater. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in 1990. DoD and EPA signed a federal facility agreement (FFA) in July 1990 to outline how they were going to proceed with cleanup. In 1991, the BRAC Commission recommended closing Fort Ord and moving the 7th Infantry Division (Light) to Fort Lewis, Washington. The Army closed Fort Ord in September 1994. In FY94, Fort Ord converted its technical review committee, responsible for communicating cleanup progress with the community, into a Restoration Advisory Board (RAB). The installation also formed a BRAC cleanup team to develop a process for cleanup of sites. In FY99, the installation reestablished the technical review committee and dissolved the RAB. To ensure continuous monitoring and improvement, Fort Ord completed five-year review reports for Operable Unit (OU) 1 in FY01 and FY07.

To date, Fort Ord has transferred over 19,100 acres. The installation has completed 13 Records of Decision (RODs). The installation also conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Ord for FY05 through FY08 is summarized below.

In FY05, Fort Ord completed a strategy for improving groundwater treatment systems and also began implementation at OU 2 and Site 2/12. The installation found the Track 0 plug-in properties suitable for transfer. Additionally, the installation completed a ROD for Track 1 and found related property suitable for transfer. Fort Ord also completed a remedial investigation (RI) and feasibility study (FS) to evaluate cleanup alternatives at the carbon tetrachloride site. Under the MMRP, Fort Ord completed cleanup to depth at Ranges 43 through 48.

The installation also began planning the prescribed burn project for munitions response at Site 16.

In FY06, Fort Ord installed an air stripper at the Site 2/12 groundwater treatment system. The installation also installed a landfill gas extraction and treatment system at OU 2 and a groundwater pilot study treatment system at OU 1. Additionally, Fort Ord completed a proposed plan for the groundwater carbon tetrachloride site. Under the MMRP, Fort Ord performed a site safety program for military munitions. The installation also transferred the Track 3 parcel and completed an RI/FS for the Track 2 site.

In FY07, Fort Ord closed Range 36A (an open burn/open detonation treatment facility permitted by RCRA); no further action was necessary at this site. Under the MMRP, Fort Ord conducted a prescribed burn and removed contamination to depth at Site 16. The installation also transferred 165 acres. The installation completed a five-year review report for all sites.

In FY08, Fort Ord constructed a groundwater treatment unit for the OU 1 off-site contaminated area. The installation signed a ROD and began groundwater cleanup at the carbon tetrachloride contaminated area. The installation also transferred 11 acres. Under the MMRP, Fort Ord signed RODs for Tracks 2 and 3, prepared work plans and FFA schedules, and began cleanup. Under the Environmental Services Cooperative Agreement the installation's Fort Ord Reuse Authority completed clearance activities at the Seaside 1-4 group.

**FY09 IRP Progress**

Fort Ord signed the ROD amendment and issued a work plan for Site 39. The installation continued to operate the groundwater treatment systems at Site 2/12 and OUs 1 and 2. The installation also constructed and began operation of a groundwater treatment system for the carbon tetrachloride-contaminated area. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed the excavation of contaminated soil at Site 39

**FY09 MMRP Progress**

Fort Ord completed the ROD and issued a work plan for Track 3 (Del Ray Oaks). The installation transferred the Environmental Services Cooperative Agreement properties (3,340 acres) and 594 additional acres. In addition, Fort Ord conducted prescribed burns followed by munitions clearance at Bureau of Land Management (BLM) Units 18 and 22. The installation also completed removal actions at Track 2 (Parker Flats.)

Regulatory issues delayed the prescribed burns and munitions clearance at BLM Units 1 through 5. Administrative issues delayed completion of removal actions at the California State University and Monterey Bay.

**Plan of Action**

Plan of action items for Fort Ord are grouped below according to program category.

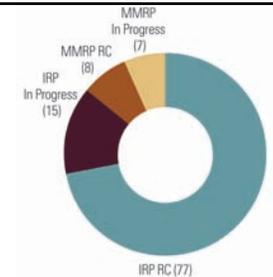
**IRP**

- Excavate soil at Site 39 in FY10-FY11.
- Continue operation of groundwater treatment systems at Site 2/12, OUs 1 and 2, and the carbon tetrachloride in FY10.
- Complete finding of suitability to transfer for Site 11 in FY10-FY11.

**MMRP**

- Conduct prescribed burns and munitions clearance at BLM Units 1 through 5 in FY10.
- Complete removal actions at the California State University and Monterey Bay in FY10.
- Conduct prescribed burns and munitions clearance in Burn Units 14 and 19.
- Begin the RI and FS for all remaining munitions response sites from site work plan in FY10.
- Complete the proposed plan and ROD for the Environmental Services Cooperative Agreement Group 2 munitions response sites in FY10.

<b>FFID:</b>	AK021452215700	<b>Funding to Date:</b>	\$ 92.4 million
<b>Location (Size):</b>	Anchorage, Alaska (64,470 acres)	<b>Est. CTC (Comp Year):</b>	\$ 122.4 million (FY 2039)
<b>Mission:</b>	Support and sustain forces assigned to U.S. Army Alaska	<b>IRP Sites (Final RIP/RC):</b>	92 (FY2012)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	15 (FY2016)
<b>IAG Status:</b>	FFA signed in December 1994	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	White phosphorus, PCBs, heavy metals, POLs, solvents, pesticides, VOCs, dioxins, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-3
<b>Media Affected:</b>	Surface Water and Soil		



## Progress To Date

Since World War II, Fort Richardson has supported combat unit training and operations. These activities contaminated soil, surface water, sediment, and groundwater with petroleum/oil/lubricants (POLs), solvents, and polychlorinated biphenyls (PCBs). Parts of a 2,500-acre wetland (Eagle River Flats) that served as an active ordnance impact area contain white phosphorus. The potential risk to human health and the environment was significant enough for EPA to place Fort Richardson on the NPL in May 1994. DoD and EPA signed a federal facility agreement (FFA) in December 1994 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Fort Richardson for realignment. Cleanup actions addressed PCB-contaminated soil, underground storage tank sites, two drum burial sites, and soil contaminated with volatile organic compounds (VOCs), POLs, and chemical agents. In FY98, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Fort Richardson completed five-year review reports in FY03 and FY08.

To date, five Records of Decision (RODs) have been signed, which selected cleanup actions at environmental restoration sites. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Richardson for FY05 through FY08 is summarized below.

In FY05, the installation completed the ROD for Operable Unit (OU) E, which included natural cleanup processes with institutional controls; these controls will minimize the potential for human exposure. The installation also treated two highly contaminated areas of white phosphorus and developed a long-term management (LTM) plan for OU C. In addition, the installation performed a treatability study (TS) of contaminated soil at OU B. The installation also completed a comprehensive groundwater evaluation. The RAB held two meetings and conducted one site visit.

In FY06, Fort Richardson required no further construction of cleanup systems at all OUs. The installation completed the interim cleanup plan and began the LTM plan strategy at OU E.

In addition, the installation continued groundwater monitoring and modeling to improve cleanup at OU B. Regarding OU C, the installation continued treatments of highly contaminated areas to meet LTM objectives. The installation, EPA, and the State of Alaska signed a decision document for the Eagle River training area which indicated that approximately 60 percent of the area is available for training year-round. The RAB met once.

In FY07, Fort Richardson completed LTM for the whole base. Fort Richardson also installed two sets of wells (deep and shallow) at OU B to determine whether solvent contamination was spreading off-site. At OU C, the installation achieved cleanup goals and completed a TS. The installation also completed a site investigation and groundwater monitoring at OU E, and granted approval for the interim cleanup report and final LTM plan. The installation held quarterly FFA meetings with EPA and the State. The RAB met twice and distributed quarterly newsletters.

In FY08, Fort Richardson capped 10 ponds at OU C. The installation, the State of Alaska, and EPA developed an LTM plan for OU C. The installation also updated the geographic information system for the base and the land use controls, which restrict the use of or access to sites. Additionally, Fort Richardson completed the second five-year review report.

## FY09 IRP Progress

Fort Richardson evaluated the TS at OU C. Fort Richardson also began the bedrock model, and developing the LTM plan for OU B (Poleline Road). The installation also began the remedial investigation (RI) at Nike Site Summit.

## FY09 MMRP Progress

Fort Richardson evaluated the site inspection report. The installation also reevaluated two sites that required further investigation and determined that no further cleanup actions were necessary.

## Plan of Action

Plan of action items for Fort Richardson are grouped below according to program category.

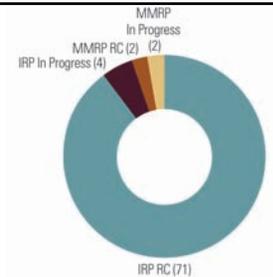
### IRP

- Complete LTM plans for OUs B and E in FY10.
- Complete bedrock model at Poleline Road in FY10.
- Implement LTM plan for OU C in FY10.
- Conduct RI at Nike Site Summit in FY10.
- Evaluate cleanup requirements for new sites in FY10-FY11.
- Transfer environmental restoration responsibilities to Elmendorf Air Force Base in FY11.

### MMRP

- Receive no further cleanup action concurrence from regulatory agencies for 11 sites in FY10.
- Begin RI activities at one site in FY10.

<b>FFID:</b>	KS721402075600	<b>Funding to Date:</b>	\$ 75.3 million
<b>Location (Size):</b>	Junction City, Kansas (100,656 acres)	<b>Est. CTC (Comp Year):</b>	\$ 7.8 million (FY 2014)
<b>Mission:</b>	Provide training, readiness, and deployability for three component combat brigades, one combat aviation brigade, and one sustainment brigade; active and reserve component units	<b>IRP Sites (Final RIP/RC):</b>	75 (FY2014)
<b>HRS Score:</b>	33.8; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	4 (FY2012)
<b>IAG Status:</b>	IAG signed in June 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Pesticides, lead, VOCs, metals, solvents	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-25
<b>Media Affected:</b>	Groundwater and Soil		



## Progress To Date

Fort Riley provides facilities for several active and reserve Army combat brigades. The installation has five operable units (OUs): Southwest Funston Landfill (OU 1), Pesticide Storage Facility (OU 2), Dry Cleaning Facilities Area (OU 3), Former Fire Training Area - Marshall Army Airfield (OU 4), and 354 Area Solvent Detections (OU 5). The potential risk to human health and environment was significant enough for EPA to place Fort Riley on the NPL in August 1990. The installation established a Restoration Advisory Board (RAB) in 1997 to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed one five-year review report for OUs 1 and 2 in FY02, and another for OUs 1, 2, 4, and 5 in FY07.

To date, the installation has completed five Records of Decision (RODs), which selected cleanup actions for OUs 1 through 5. In FY05, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Riley for FY05 through FY08 is summarized below.

In FY05, Fort Riley completed the feasibility study (FS) addendum to evaluate cleanup alternatives for OU 3. The installation completed a ROD for OU 4, an FS and a proposed plan (PP) for OU 5, and an engineering evaluation and cost analysis for the abandoned gasoline line. The installation also completed a technical memorandum for the open burning and open detonation area and installed a new monitoring well. Additionally, the installation completed Phase II of the site inspection (SI) for the petroleum/oil/lubricant tank farm and developed a plan to address multiple sites previously listed as having completed cleanup under an expanded SI. Under the MMRP, Fort Riley generated the historical records review report, conducted SI sampling, and submitted the SI report. The installation held a public comment period and public meeting for the OU 5 PP in conjunction with a RAB meeting. The installation also developed a revised community involvement plan.

In FY06, Fort Riley completed the pilot study at OU 3. The installation also completed the design and plan for cleanup at OU 4, and began monitored cleanup using natural processes.

In addition to performing sampling and analysis for an expanded SI, the installation completed the ROD for OU 5. Fort Riley began an agreement similar to a performance-based contract for long-term management at OUs 3, 4, and 5. Under the MMRP, the installation submitted the SI report.

In FY07, Fort Riley completed five-year review reports for OUs 1, 2, 4, and 5. The installation also completed the design and plan for cleanup, and began monitored cleanup using natural processes at OU 5. The installation continued this process at OU 4. In addition, the installation completed a removal action for the abandoned gasoline line and began site monitoring. The installation completed a PP for OU 3.

In FY08, Fort Riley signed a ROD for OU 3 and began the design for cleanup. The installation also continued monitoring cleanup using natural processes at OUs 4 and 5. The installation also retreated and proceeded with monitoring at the abandoned gasoline line. Under the MMRP, Fort Riley conducted the remedial investigation (RI) and FS at Sherman Heights Small Arms Range Impact Slope and Forsyth Landfill Area 2. The installation developed work plans and received approval from the DoD Explosives Safety Board on the explosives safety submissions.

## FY09 IRP Progress

Fort Riley continued to monitor OUs 1, 3, 4, and 5. The installation retreated the abandoned gasoline line and implemented cleanup at FTRI 063, 066, and 068 in Camp Funston. Additionally, the installation developed a cleanup report and completed cleanup actions at OU 1. Regarding OU 2, Fort Riley conducted sampling and developed an explanation of significant differences. The cost of completing environmental restoration has changed significantly due to technical issues.

## FY09 MMRP Progress

Fort Riley began the work plans for Sherman Heights Small Arms Range Impact Slope and Forsyth Landfill Area 2.

## Plan of Action

Plan of action items for Fort Riley are grouped below according to program category.

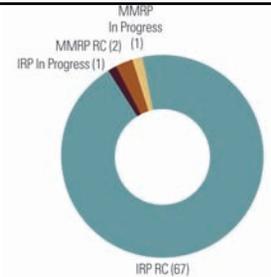
### IRP

- Continue monitoring at OUs 1 and 3 in FY10.
- Complete retreatment and continue monitoring abandoned gasoline line in FY10.
- Begin preparation for cleanup at Sites FTRI 063, 066, and 068 in Camp Funston in FY10.
- Complete report on cleanup actions at OUs 1, 4, and 5 in FY10.
- Complete explanation of significant differences for OU 2 in FY10.

### MMRP

- Complete RI work plans and start fieldwork at Sherman Heights Small Arms Range Impact Slope and Forsyth Landfill Area 2 in FY10.

<b>FFID:</b>	IL521402083800	<b>Funding to Date:</b>	\$ 57.3 million
<b>Location (Size):</b>	Fort Sheridan, Illinois (709 acres)	<b>Est. CTC (Comp Year):</b>	\$ 13.1 million (FY 2011)
<b>Mission:</b>	Provided administrative and logistical support; non-excess property currently used as Army Reserve installation and Navy housing area	<b>IRP Sites (Final RIP/RC):</b>	68 (FY2011)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2011)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Metals, VOCs, UXO, fuel hydrocarbons, PAHs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-81
<b>Media Affected:</b>	Soil		



## Progress To Date

Fort Sheridan's missions have included cavalry and infantry training, Nike systems maintenance, and administrative and logistical support. Contaminated sites include landfills (LFs), pesticide storage areas, hazardous material storage areas, underground storage tanks, polychlorinated biphenyl (PCB)-containing transformers, and unexploded ordnance areas. Petroleum hydrocarbons, volatile organic compounds (VOCs), and polyaromatic hydrocarbons (PAHs) affect groundwater and soil. Early cleanup included removal of underground storage tanks and contaminated soil. In December 1988, the BRAC Commission recommended closure of Fort Sheridan. The installation formed a BRAC cleanup team in 1994 to develop a process for cleanup of sites. In FY95, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. In FY99, the RAB requested and received funding for technical assistance for public participation. To ensure continuous monitoring and improvement, Fort Sheridan completed a five-year review report in FY08.

In FY03, Fort Sheridan conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Sheridan for FY05 through FY08 is summarized below.

In FY05, the installation completed the operation and maintenance (O&M) and groundwater monitoring plans for LFs 6 and 7, and implemented the O&M plan. The installation also completed decision documents (DDs), which selected cleanup actions for Cold Storage Area 3, and LFs 1 and 5. In addition, Fort Sheridan prepared removal action completion reports for sites Cold Storage Area 4, Vehicle Storage Area 8, the water tower, and Building 70.

In FY06, Fort Sheridan implemented the groundwater monitoring plan for LFs 5, 6, and 7. The installation also implemented O&M and long-term management of Cold Storage Area 3 and LF 5, and completed the closure reports for these sites.

In FY07, Fort Sheridan continued O&M of sites, started a pilot study at LFs 6 and 7, and completed interim cleanup at LF 1. Fort Sheridan completed the final proposed plan (PP) and DDs for sites requiring no further cleanup action and for LFs 6 and 7. The installation completed a site inspection on excess properties.

In FY08, Fort Sheridan completed a DD, which determined that no further cleanup actions were necessary at the Barlett Ravine, Van Horn Ravine, Shenck Ravine, Excavation Area 8, Beach Pistol/Machine Gun Range, Wells Ravine Northern Tributary, and Wells Ravine Extension. The installation also completed a five-year review report.

## FY09 IRP Progress

Fort Sheridan prepared a document that uses land use controls, to restrict the use of and access to LFs 6 and 7. Fort Sheridan also conducted O&M at all sites.

## FY09 MMRP Progress

Fort Sheridan conducted no MMRP actions.

## Plan of Action

Plan of action items for Fort Sheridan are grouped below according to program category.

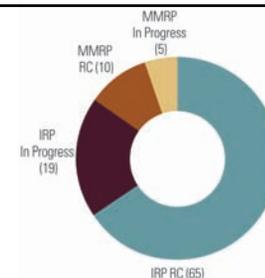
### IRP

- Complete the ROD and all related cleanup at LF 1 in FY10.

### MMRP

- Conduct a survey of munitions of concern at one of the anti-aircraft artillery firing points in FY10.

<b>FFID:</b>	AK021452242600	<b>Funding to Date:</b>	\$ 168.9 million
<b>Location (Size):</b>	Fairbanks, Alaska (917,993 acres)	<b>Est. CTC (Comp Year):</b>	\$ 50.4 million (FY 2039)
<b>Mission:</b>	Serve as headquarters of the 172nd Infantry Brigade (Separate)	<b>IRP Sites (Final RIP/RC):</b>	84 (FY2039)
<b>HRS Score:</b>	50.00; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	15 (FY2015)
<b>IAG Status:</b>	FFA signed in November 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	PCBs, SVOCs, POLs, heavy metals, solvents, pesticides, paints, UXO, VOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-3
<b>Media Affected:</b>	Groundwater and Soil		



## Progress To Date

Since World War II, Fort Wainwright has housed light infantry brigades, most recently the 172nd Stryker Brigade Combat Team and the 1-501st Airborne Battalion. Studies at the installation identified drum burial sites, underground storage tanks, a railroad car off-loading facility, an open burn and open detonation area, a former ordnance disposal site, solvent groundwater contaminated areas, petroleum/oil/lubricant (POL) contaminated areas, and pesticide-contaminated soil. The potential risk to human health and the environment was significant enough for EPA to place Fort Wainwright on the NPL in 1990. DoD and EPA signed a federal facility agreement (FFA) in 1991 to outline how they were going to proceed with cleanup. In FY97, Fort Wainwright formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. The RAB adjourned in FY04 at the recommendation of the community co-chair and community RAB members. The installation determined there was insufficient interest to reestablish the RAB in FY07. To ensure continuous monitoring and improvement, Fort Wainwright completed five-year review reports in FY01 and FY06.

To date, the installation has signed five Records of Decision (RODs), which selected cleanup actions at environmental restoration sites. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Wainwright for FY05 through FY08 is summarized below.

In FY05, the installation conducted the beginning stages of a preliminary site evaluation and removed polychlorinated biphenyl (PCB)-contaminated soils at the former communications site. The installation also conducted additional sampling at the Birch Hill Tank Farm aboveground storage tank site to determine if the site required further cleanup action.

In FY06, Fort Wainwright determined additional cleanup actions (removal, disposal, sampling) were required at the Birch Hill Tank Farm aboveground storage tank site. The installation also completed the five-year review report and closeout of additional POL-contaminated sites. At the Former Communications Site, the preliminary source evaluation fieldwork uncovered several pieces of discarded military munition, two of which required site

clearances and stop work orders until the discarded military munition could be identified and removed from the area. The installation continued to solicit community interest to warrant reestablishment of the RAB.

In FY07, Fort Wainwright began a remedial investigation (RI) at the Former Communications Site, now OU 6, and formally established land use controls, which restrict the use of or access to the site. During the RI at OU 6, several discarded military munitions were found under the surface. The installation used the cleanup operations and site exit strategy evaluations to revise operations and maintenance (O&M) requirements at the other sites, which resulted in reductions of groundwater monitoring requirements and some remedial operations to stop. Under the MMRP, the installation completed cleanup actions required by the five-year review report. The installation also conducted site inspections (SIs).

In FY08, Fort Wainwright completed the first phase of the OU 6 RI, and started Phase II, which included full-scale intrusive investigations of areas with potential drums of waste and discarded military munition. Fort Wainwright also completed summary reports for OU 3 Birch Hill and Mile Post Pipeline Breaks. Fort Wainwright and regulators agreed to switch to a process to optimize treatment systems and monitoring plans. Additionally, Fort Wainwright decommissioned unnecessary treatment systems and non-serviceable wells. Under the MMRP, Fort Wainwright received and evaluated the SI report, and provided public notice for comment. The installation conducted emergency investigation and removal actions at three sites due to the potential for immediate threat to human health and safety by exposure to discarded military munition.

## FY09 IRP Progress

Fort Wainwright continued using monitoring and optimization processes to revise O&M requirements and to evaluate site progress. The installation also began a treatability study (TS) at OU 2. The installation also completed the soil vapor extraction (SVE) and air sparging systems decommissioning work plans for OUs 3 and 5. In addition, Fort Wainwright conducted negotiations for the CERCLA timeline, received closure letters from the State of Alaska for Building 1002, and submitted the draft RI report for OU 6. Fort Wainwright solicited public interest in reconvening the RAB, and also conducted town hall

meetings to provide the general public with information on the status of OU 6. The cost of completing environmental restoration has changed significantly due to regulatory and technical issues.

## FY09 MMRP Progress

Fort Wainwright created RI work plans for approximately 10 acres on Training Area 101, which concluded that there were no munitions or explosives of concern in the area and no contaminants of concern. The installation also began RI work plans for another 14 acres on Training Area 101. Additionally, the installation completed an RI for the Bayoned Assault Course within Training Area 101.

## Plan of Action

Plan of action items for Fort Wainwright are grouped below according to program category.

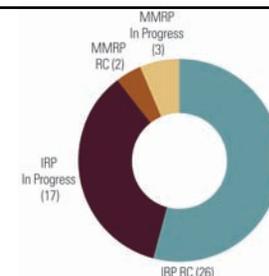
### IRP

- Continue using monitoring and optimization processes to revise O&M requirements and evaluate site progress in FY10.
- Execute work plans for decommissioning SVE and air sparging systems at OUs 3 and 5 source areas in FY10.
- Begin proposed plan, ROD, and feasibility study to evaluate cleanup alternatives for OU 6 in FY10.
- Negotiate future investigations and O&M requirements at multiple source areas in FY10-FY11.
- Complete the TS for OU 2, and propose investigation and removal of abandoned pipelines, product, and associated contaminated soils at other IRP sites in FY10-FY11.

### MMRP

- Prepare remaining RI work plans in FY10.

<b>FFID:</b>	NM621382097400	<b>Media Affected:</b>	Groundwater, Sediment, Soil
<b>Location (Size):</b>	Gallup, New Mexico (21,881 acres)	<b>Funding to Date:</b>	\$ 48.2 million
<b>Mission:</b>	Stored, shipped, and received ammunition components and disposed of obsolete or deteriorated explosives and ammunition	<b>Est. CTC (Comp Year):</b>	\$ 144.4 million (FY 2020)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	43 (FY2020)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	5 (FY2020)
<b>Contaminants:</b>	UXO, PCBs, pesticides, heavy metals, asbestos, lead-based paint, explosive compounds, VOCs, SVOCs, propellants	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-119



## Progress To Date

Fort Wingate's former mission was to store, test, and demilitarize munitions. Restoration efforts have focused on land affected by ordnance-related wastes, unexploded ordnance, and other contaminants. The affected areas are the open burning and open detonation (OB/OD) grounds, soil at a pistol range, pesticide-contaminated soil at Building 5, explosives-contaminated soil at the former bomb washout plant lagoons, polychlorinated biphenyl (PCB) contamination in Buildings 11 and 501, the former explosive washout plant (Building 503), and three solid waste landfills. In 1988, the BRAC Commission recommended closure of Fort Wingate. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. In FY95, the BRAC cleanup team revised the BRAC cleanup plan. The installation also formed a Restoration Advisory Board (RAB) in FY94 to discuss the installation's cleanup progress with the community. The RAB adjourned in 2004. In FY06, the installation developed a community relations plan.

To date, the installation has transferred over 5,400 acres. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Fort Wingate for FY05 through FY08 is summarized below.

In FY05, Fort Wingate removed ash and soil from the deactivated furnace area. The installation also negotiated RCRA post-closure permit requirements and developed a work schedule and funding requirements for future cleanup. Under the MMRP, the installation completed groundwater sampling at the OB/OD grounds and completed groundwater investigations at the Eastern Landfill by installing four borings and two wells.

In FY06, the New Mexico Environmental Department issued Fort Wingate a RCRA permit. The installation hired a permanent, on-site BRAC Environmental Coordinator to oversee the cleanup program and execution of the RCRA permit. Fort Wingate prepared and submitted a historical aerial photo interpretation report and a hydrogeologic summary report to the New Mexico Environmental Department. Under the MMRP, the installation included a detailed map in the community relations plan of all munitions and explosives of

concern (MEC) found since Fort Wingate closed. Additionally, the installation constructed a three-mile long fence to contain the MEC. The installation held a BRAC cleanup team meeting. Fort Wingate also began extensive consultation with the Pueblo of Zuni and the Navajo Nation, which will continue for the duration of the cleanup program.

In FY07, Fort Wingate completed the summary report of historical information. The installation also submitted and negotiated a conceptual plan for the corrective action management unit to support MMRP operations. Additionally, the installation awarded a contract to develop a closure plan for the OB/OD hazardous waste management unit. The BRAC cleanup team held two meetings. The installation also determined there was insufficient interest to reestablish the RAB.

In FY08, Fort Wingate submitted a RCRA permit modification, which removed Parcel 25 from the permit; no further action is required. Fort Wingate also sampled all monitoring wells on the depot and three off-post wells. The installation awarded a background study work plan for the base, and RCRA facility investigation (RFI) work plan for Parcels 5, 6, and 23. In addition, Fort Wingate sampled all igloos and revetments in Parcels 4, 9, and 24. Under the MMRP, the installation established the conditional exemption storage site (temporary MEC storage igloos). Fort Wingate also completed the programmatic agreement between the Army, Pueblo of Zuni, Navajo Nation, and State Historic Preservation Office to address both compensation and Zuni and Navajo cultural resources during the cleanup.

## FY09 IRP Progress

Fort Wingate revised the interim groundwater work plan, and completed the RFI work plans. The installation also conducted groundwater sampling for the base. In addition, the installation submitted final cleanup action reports for Parcels 4, 6, 11, 12, 14, 22, 23, 24, and 25 to stakeholders. Fort Wingate also conducted seismic and resistivity studies of Parcels 11, 21, and 22; RFI fieldwork at Parcels 11, 12, 14, 21, 22, 25; and cleanup action field work for Parcels 4, 5, 6, and 10.

Regulatory and technical issues delayed completion of the ecological risk assessment work plan and the transfer of Parcels 4b, 5b, 8, 14, and 25.

## FY09 MMRP Progress

Fort Wingate completed the Phase I closure work plan for the OB/OD unit and completed the Kickout Area report. The installation also obtained the permit modification for the corrective action management unit. Additionally, Fort Wingate conducted aerial geophysical studies of its munitions response sites and landfills. The installation also cleared MEC and managed conditional exemption storage for MECs from Arroyos.

Regulatory issues delayed the construction of the corrective action management unit.

## Plan of Action

Plan of action items for Fort Wingate are grouped below according to program category.

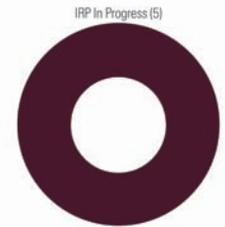
### IRP

- Complete the ecological risk assessment work plan for the base in FY10.
- Submit transfer documents for Parcels 4b, 5b, 8, 12, 14, and 25 in FY10.
- Conduct groundwater sampling for the base in FY10.
- Complete RFI work plans in FY10.
- Complete RFI fieldwork for Parcels 11, 21, and 22 in FY10.

### MMRP

- Award contract to perform the field investigation at the OB/OD unit and Parcel 3 in FY10.
- Begin hazardous waste management removal and the corrective action management unit construction in FY10.
- Continue to remove MEC from Arroyos in FY10.

<b>FFID:</b>	MN517002291400	<b>Est. CTC (Comp Year):</b>	\$ 9.0 million (FY 2020)
<b>Location (Size):</b>	Fridley, Minnesota (83 acres)	<b>IRP Sites (Final RIP/RC):</b>	5 (FY2002)
<b>Mission:</b>	Design and manufacture advanced weapons systems	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	30.83; placed on NPL in November 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in March 1991	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-32
<b>Contaminants:</b>	POLs, VOCs, SVOCs, TCE, metals, cyanide		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 38.1 million		



**Progress To Date**

Fridley Naval Industrial Reserve Ordnance Plant (NIROP) designs and manufactures advanced weapons systems. Site types include waste disposal pits and trenches, source areas beneath the main industrial plant, a foundry core butt disposal area, and site-wide groundwater contamination. Wastes and contaminants associated with these site types include petroleum/oil/lubricants (POLs), solvents, plating sludge, construction debris, and foundry sands. Investigations conducted at this government-owned, contractor-operated installation identified trichloroethylene (TCE) in groundwater, which discharges into the Mississippi River upstream from the Minneapolis drinking water plant. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in March 1991 to outline how they were going to proceed with cleanup. The installation formed a technical review committee responsible for communicating cleanup progress to the community in FY93, and converted it to a Restoration Advisory Board in FY95. The installation prepared the community relations plan in FY91 and updated it in FY97. The installation also compiled an administrative record, and established an information repository in FY95. Naval Sea Systems Command sold the NIROP site in June 2004. To ensure continuous monitoring and improvement, Fridley NIROP completed five-year review reports in FY04 and FY09.

To date, Fridley NIROP has completed Records of Decision, which selected cleanup actions for Operable Units (OUs) 1, 2, and 3. In addition, the installation has completed cleanup for Sites 1 and 2. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Fridley NIROP for FY05 through FY08 is summarized below.

In FY05, Fridley NIROP operated the OU 1 pump-and-treat groundwater containment system. The installation also monitored the enhanced bioremediation pilot study approved by the Minnesota Pollution Control Agency and EPA. In addition, the installation conducted a first round of extended monitoring at the Anoka County Riverfront Park.

In FY06, Fridley NIROP continued operation of the OU 1 groundwater pump-and-treat system. The installation conducted additional monitoring of the enhanced bioremediation pilot study and completed the final pilot study report.

In FY07, Fridley NIROP continued operation of the OU 1 pump-and-treat groundwater system. The U.S. Geological Survey completed their final effectiveness report of the groundwater pump-and-treat system to capture and control the contaminated area. The installation continued monitoring the effects of the vegetable oil injection study and issued the vegetable oil study final report. The Minnesota Pollution Control Agency began a statewide survey of facilities that may have stored or used perfluorochemicals, which identified the installation as a possible location where these chemicals were stored. The installation and the Department of Justice continued to resolve the cost recovery and potentially responsible party issue. The Navy awarded a new operation and maintenance (O&M) contract.

In FY08, Fridley NIROP continued operations of the OU 1 pump-and-treat containment system. The installation performed perfluorochemical testing and found no evidence of contamination. Additionally, the installation increased monitoring of specific wells to assess potential bypasses at an additional site. Fridley NIROP renewed the permit for a groundwater treatment system.

**FY09 IRP Progress**

Fridley NIROP completed a five-year review report and finalized annual monitoring plans. The installation also improved systems operation and management by modifying the O&M contract. The installation also finalized consent decrees and began to develop an exit strategy.

**FY09 MMRP Progress**

Fridley NIROP has identified no MMRP sites.

**Plan of Action**

Plan of action items for Fridley Naval Industrial Reserve Ordnance Plant are grouped below according to program category.

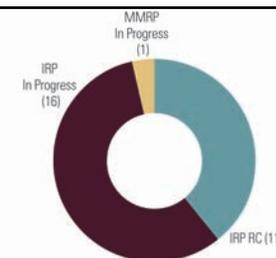
**IRP**

- Continue O&M in FY10-FY11.
- Evaluate potential to replace two extraction wells in FY10-FY11.
- Evaluate and optimize the extraction system in FY10-FY11.
- Continue to develop an exit strategy in FY10-FY11.
- Complete the annual monitoring report as required in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	AK057302865500	<b>Media Affected:</b>	Groundwater and Soil
<b>Location (Size):</b>	Galena, Alaska (162 acres)	<b>Funding to Date:</b>	\$ 23.3 million
<b>Mission:</b>	Served as an active refueling stop for aircraft bound for the Soviet Union under the Lend-Lease program in World War II, and later as a forward operating location for the Air Force as part of the NORAD Mission	<b>Est. CTC (Comp Year):</b>	\$ 65.9 million (FY 2020)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	27 (FY2011)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2011)
<b>Contaminants:</b>	TCE, POLs, benzene, VOCs, SVOCs, metals	<b>Five-Year Review Status:</b>	Planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-5



## Progress To Date

Galena Forward Operating Location (FOL) formerly served as an active refueling stop for Soviet Union-bound aircraft, and later as part of the North American Aerospace Defense Command mission. The airport was constructed in 1940, and the Air Force has had joint civilian-military use of the airfield since 1951. Most facilities at Galena Airport are owned by the Air Force, although other non-Air Force properties are also present. Military operations have released hazardous chemicals via spills or historical disposal practices. The Air Force reduced the active duty force at the installation in 1993. In 2005, the BRAC Commission recommended closure of Galena FOL. The installation formed a Restoration Advisory Board (RAB) to discuss the installation's cleanup progress with the community in 2004, but it adjourned due to insufficient interest. Galena FOL and the Alaska Department of Environmental Conservation coordinate with local stakeholders (including the Loudon Tribal Council, City of Galena, and Galena City Schools) through the Galena Technical Project Team to address environmental concerns.

The installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Galena FOL for FY05 through FY08 is summarized below.

In FY05, Galena FOL sampled base drinking water monthly. The installation conducted a feasibility study (FS) to evaluate cleanup alternatives and a remedial investigation (RI) for multiple sites. The installation also began preliminary assessments (PAs) for all MMRP site locations.

In FY06, Galena FOL continued the RI/FS to assess the extent of contamination. As part of that work, the installation began assessing potential risks to the environment at each IRP site, including potential risks to subsistence resources. The installation continued the PAs at all identified MMRP site locations, and began prioritizing them for cleanup. Galena FOL briefed the RAB on current cleanup activities.

In FY07, Galena FOL continued work on the RI/FS and site characterizations to ensure lands would be transferred properly and facilities released in accordance with BRAC requirements.

Galena FOL continued working to finalize institutional controls (ICs), which minimize the potential for human exposure, and land use controls (LUCs), which restrict use or access to the site, associated with the closure of cleanup operations. Galena FOL completed PAs at all MMRP site locations. The installation briefed the RAB on progress to date and held meetings with the community to maintain awareness and communication.

In FY08, Galena FOL implemented recommendations to improve cleanup, and closed operations at the installation. Under the MMRP, the installation also completed two site inspections (SIs).

## FY09 IRP Progress

The installation conducted annual groundwater monitoring and SIs for LUCs/ICs at four sites. Galena FOL completed RIs at seven sites, and began RIs at five additional sites. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical issues delayed operations of four cleanup systems.

## FY09 MMRP Progress

Galena FOL began an SI; technical issues delayed its completion.

## Plan of Action

Plan of action items for Galena Forward Operating Location are grouped below according to program category.

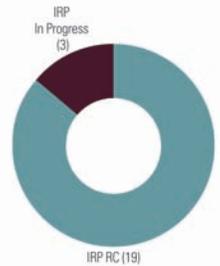
### IRP

- Document that no further cleanup action is necessary at 25 sites in FY10.
- Complete RIs for 16 sites in FY10.
- Complete PAs/RIs for 60 sites in FY10-FY11.
- Operate 13 cleanup systems in FY10-FY11.
- Conduct SI and RI fieldwork for 20 sites in FY10-FY11.

### MMRP

- Complete SI at one site in FY10.

<b>FFID:</b>	OH597152435700	<b>Funding to Date:</b>	\$ 10.9 million
<b>Location (Size):</b>	Kettering, Ohio (164 acres)	<b>Est. CTC (Comp Year):</b>	\$ 1.9 million (FY 2028)
<b>Mission:</b>	Provided logistical support to the military services by supplying electrical and electronic material	<b>IRP Sites (Final RIP/RC):</b>	22 (FY2002)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Underway and planned
<b>Contaminants:</b>	Solvents, pile runoff (VOCs and SVOCs), metals, residual POLs	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-44
<b>Media Affected:</b>	Soil and Groundwater		



**Progress To Date**

Gentile Air Force Station (AFS) formerly provided logistical support to the Military Services by supplying electrical and electronic material. Sites identified at the installation include underground storage tanks; areas of past industrial operations; and landfills (LFs) containing construction debris, hardfill, waste oil, solvents, asbestos, low-level radioactive waste, and a subsurface material suspected to be paint thinner. Releases from these sites have contaminated soil and groundwater. In July 1993, the BRAC Commission recommended closure of the Defense Electronics Supply Center (Gentile AFS) and relocation of its mission to the Defense Construction Supply Center in Columbus, Ohio. Gentile AFS closed in December 1996. In FY93, the installation's BRAC cleanup team developed a BRAC cleanup plan with community input to prioritize sites requiring environmental restoration. The installation formed a Restoration Advisory Board (RAB) in FY94 to discuss the installation's cleanup progress with the community. The RAB formally adjourned in FY05. A memorandum of agreement with the Air Force Real Property Agency terminated DLA's involvement in environmental restoration at the installation at the end of FY98. To ensure continuous monitoring and improvement, Gentile AFS completed a five-year review report in FY04.

Environmental studies have identified 22 sites suspected to contain contamination. Twelve sites were closed between FY97 and FY01 with decision documents (DDs), which determined that no further cleanup actions were necessary. Eighteen sites have conditional DDs, determining no further cleanup is necessary if future access is limited to commercial or industrial use. Ten sites are included in two Installation Restoration Program (IRP) DDs, which determined that institutional controls (ICs), which minimize the potential for human exposure, are needed at all ten sites. In FY04, Gentile AFS conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. As of FY05, Gentile AFS has transferred all property. Cleanup progress at Gentile AFS for FY05 through FY08 is summarized below.

In FY05, the Gentile AFS transferred the 26-acre Parcel E to the local redevelopment authority. The installation performed cleanup operations at LF 008, Spill Sites (SSs) 028 and 035,

and Waste Pit (WP) 026 under a new performance-based contract.

In FY06, Gentile AFS proceeded with cleanup operations through monitoring groundwater at SSs 028 and 035, and WP 026. Cleanup goals were met at LF 008 and the BRAC cleanup team signed a DD, determining no further cleanup action is necessary. An aqueous solution of food grade vegetable oil and simple sugars was added to the groundwater at each of the sites to serve as a long-term electron donor and accelerate site closure.

In FY07, Gentile AFS continued with cleanup operations through sampling groundwater at SSs 028 and 035, and WP 026. The BRAC cleanup team concurred with a groundwater monitoring optimization program by signing a DD that reduced groundwater sampling for SSs 028 and 035, and WP 026. The installation finalized an updated map showing land use controls, which restrict use or access to a site, and ICs. Gentile AFS formally removed monitoring wells no longer in use from service. The BRAC cleanup team met once.

In FY08, Gentile AFS conducted cleanup operations through sampling groundwater at SSs 028 and 035, and WP 026. In addition, the installation updated the administrative record. The BRAC cleanup team met once.

**FY09 IRP Progress**

Gentile AFS continued cleanup operations through sampling groundwater at SSs 028 and 035, and WP 026. The installation formally removed from service monitoring wells no longer in use at SS 028. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical issues delayed completion of the second five-year review report.

The BRAC cleanup team met once.

**FY09 MMRP Progress**

Gentile AFS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Gentile Air Force Station are grouped below according to program category.

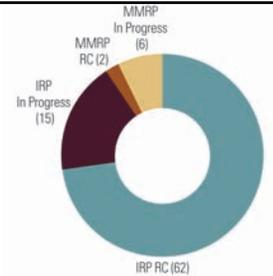
**IRP**

- Complete the second five-year review report in FY10.
- Continue cleanup operations through sampling groundwater at SSs 028 and 035, and WP 026 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA957002445300	<b>Est. CTC (Comp Year):</b>	\$ 34.1 million (FY 2038)
<b>Location (Size):</b>	Victorville, California (5,062 acres)	<b>IRP Sites (Final RIP/RC):</b>	77 (FY2012)
<b>Mission:</b>	Provided tactical fighter operations support	<b>MMRP Sites (Final RIP/RC):</b>	8 (FY2011)
<b>HRS Score:</b>	33.62; placed on NPL in February 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in October 1990	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-29
<b>Contaminants:</b>	POLs, VOCs, lead, SVOCs, metals, radioactive materials		
<b>Media Affected:</b>	Groundwater, Surface Water, Soil		
<b>Funding to Date:</b>	\$ 120.7 million		



**Progress To Date**

George Air Force Base (AFB) formerly provided tactical fighter operations support. Environmental studies conducted at George AFB have identified the following site types: landfills (LFs), petroleum spill sites (SSs), underground storage tanks (USTs), waste storage and disposal units, and fire training areas (FTAs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1990. DoD and EPA signed a federal facility agreement (FFA) in October 1990 to outline how they were going to proceed with cleanup. The 1988 BRAC Commission recommended closure of George AFB; the installation closed in December 1992. In FY92, the installation formed a BRAC cleanup team to develop a process for cleanup of sites at George AFB, and converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB). To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY06.

Sites have been grouped into five operable units (OUs). Interim cleanup actions at the installation have included the removal of contaminated soil and more than 80 USTs, the cleanup and closure of a hazardous waste storage yard, and the removal of jet fuel. George AFB has completed two Records of Decision (RODs) for OUs 1 and 3, selecting cleanup actions at these sites. In FY04, George AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); eight MMRP sites were identified. Cleanup progress at George AFB for FY05 through FY08 is summarized below.

In FY05, George AFB shut down the bioventing system, which was increasing oxygen flow in soil to stimulate microbial activity, at Waste Pit (WP) 017. The installation operated ongoing treatment systems at OUs 1, 2, and 3, and conducted LF monitoring and cap maintenance. George AFB established OU 4 to include eight areas of concern. The OU 1 groundwater treatment system remained in standby mode while George AFB conducted fate and transport modeling, estimating the movement and chemical alteration of contaminants as they move with groundwater. EPA removed the OU 2 fuel-contaminated area from the FFA; cleanup of the fuels and

pesticide sites continued under the State of California corrective action plan. George AFB began evaluating requirements at MMRP sites. The BRAC cleanup team met frequently, and the RAB held one meeting.

In FY06, George AFB continued groundwater modeling for OU 1. The installation identified OU 5, consisting of two volatile organic compound (VOC) soil sources: FTA 082 and SS 083. George AFB installed soil vapor extraction (SVE) systems as interim cleanup at both sites. Jet fuel cleanup and SVE continued at the non-NPL fuel site (formerly OU 2). The installation completed its second five-year review report. The installation cleared and closed the explosive ordnance disposal Proficiency Training Area.

In FY07, George AFB continued to operate SVE systems and monitor groundwater. The installation installed a new SVE system at the former burn pit (FTA 082) and at an aircraft maintenance hangar, Building 676 (SS 083). George AFB calibrated the OU 1 groundwater model and removed jet fuel at non-CERCLA fuel sites. The installation submitted documentation to close the former 40 mm Grenade Range.

In FY08, George AFB documented that no further cleanup actions would be necessary at five soil sites formerly in OU 4, transferred the three remaining OU 4 sites to OU 5, and administratively closed OU 4. The installation continued to fill data gaps for one non-CERCLA fuel site by mapping the extent of the fuel-contaminated groundwater area below Storage Tank (ST) 067b, and began developing a plan for cleanup. George AFB used an updated groundwater model for OU 1 to develop predictive cleanup scenarios. Regulators and the installation agreed to write an updated comprehensive feasibility study (FS) to evaluate cleanup alternatives and support updates to the proposed plan (PP) for OU 1. The installation continued to operate SVE and jet fuel cleanup systems, and to monitor groundwater. Regulators approved George AFB's explanation of significant differences for the ROD for FTA 019a. The installation closed several MMRP sites.

**FY09 IRP Progress**

George AFB installed additional monitoring wells at Site OU 1 and the non-CERCLA fuel site to support the petroleum corrective action plan (which includes flightline sites) and the

pesticide corrective action plan (which includes the pesticide Dieldrin). The installation continued monitoring and sampling for fuel movement and Dieldrin, and used the data to update groundwater models in support of the corrective action plans. The installation has installed a new SVE system with six extraction wells, at ST 067b, to remove fuel while the Petroleum corrective action plan is prepared. George AFB also completed a field investigation of trichloroethylene (TCE) in groundwater in the floodplain aquifer of the Mojave River to support a future FS/PP and ROD amendment for OU 1. The installation revised the long-term management plan to support the OU 3 Site Other 069 cleanup. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

George AFB closed one site (ZZ 050).

Technical issues delayed the closure of all MMRP sites.

**Plan of Action**

Plan of action items for George Air Force Base are grouped below according to program category.

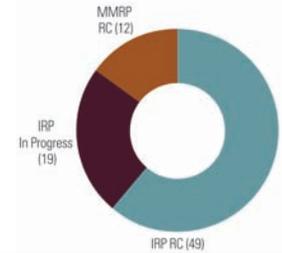
**IRP**

- Draft petroleum corrective action plan in FY10.
- Complete OU 1 FS/PP and revise groundwater models to support a final ROD amendment for OU 1 in FY11.
- Complete final pesticide corrective action plan and final Petroleum corrective action plan in FY11.
- Complete OU 5 FS/PP in FY11.
- Conduct a five-year review report in FY11.

**MMRP**

- Complete closure documentation for remaining sites in FY10.

<b>FFID:</b>	NY257002445100	<b>Funding to Date:</b>	\$ 147.4 million
<b>Location (Size):</b>	Rome, New York (3,638 acres)	<b>Est. CTC (Comp Year):</b>	\$ 21.7 million (FY 2050)
<b>Mission:</b>	Supported bomber and tanker operations	<b>IRP Sites (Final RIP/RC):</b>	68 (FY2010)
<b>HRS Score:</b>	34.20; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	12 (FY2004)
<b>IAG Status:</b>	FFA signed in June 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Heavy metals, PCBs, grease, degreasers, caustic cleaners, dyes, penetrants, VOCs, TCE, UXO, SVOCs, radioactive materials, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-125
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The mission of Griffiss Air Force Base (AFB) was to support bomber and tanker aircraft operations. Sites identified at the installation include landfills (LFs), underground storage tanks (USTs), fire training areas, disposal pits, and spill areas, and identified possible off-site groundwater contamination. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987; in March 2009, however, EPA delisted 2,897 acres. DoD and EPA signed a federal facility agreement (FFA) in June 1990 to outline how they were going to proceed with cleanup. The 1993 BRAC Commission recommended realignment of Griffiss AFB and the 1995 BRAC Commission recommended further realignment. Following the realignment actions, Griffiss AFB retained 136 acres for Rome Laboratory and Air National Guard Northeast Air Defense Sector facilities. In FY95, Griffiss AFB formed a BRAC cleanup team to develop a process for cleanup of sites at the installation and, with community input, completed the BRAC cleanup plan to prioritize sites requiring environmental restoration. Also in FY95, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. The installation received funding for technical assistance for public participation in FY99. To ensure continuous monitoring and improvement, Griffiss AFB completed a five-year review report in FY05.

To date, the installation has signed 32 Records of Decision (RODs) which selected cleanup actions at environmental restoration sites. Griffiss AFB has completed eight RODs documenting no further cleanup action is necessary. Interim cleanup conducted at the facility between FY86 and FY91 included modification of an LF cap; and the removal of contaminated soil and USTs from a tank farm, various disposal pits, and the area adjacent to an aircraft nosedock. In FY04, Griffiss AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. In FY07, Griffiss AFB closed 12 MMRP sites because no further cleanup was required. Cleanup progress at Griffiss AFB for FY05 through FY08 is summarized below.

In FY05, Griffiss AFB awarded the long-term management and long-term operation performance-based contract (PBC). The

installation completed three RODs and its first five-year review report. In addition, Griffiss AFB began cleanup of Three Mile Creek (Storm Drain [SD] site 031) and submitted proposed plans (PP) to select cleanup actions for six additional sites. The RAB met twice and the BRAC cleanup team met four times.

In FY06, Griffiss AFB issued a PBC for cleanup of the trichloroethylene (TCE)-contaminated areas and four petroleum-contaminated groundwater sites. The installation completed cleanup of LF 6 and Three Mile Creek, and completed cleanup at all MMRP sites.

In FY07, Griffiss AFB awarded a three-year PBC for the completion of the petroleum landfarming operation, in which soil would be spread in a thin layer and microbial activity stimulated. The installation completed screening sampling on identified soil vapor intrusion sites, where volatile chemicals were moving from the soil to the indoor air of the building above. Griffiss AFB completed the ROD for the Small Arms Range, and regulators concurred on the PPs for three of four chlorine-contaminated areas. The installation closed 12 MMRP sites.

In FY08, Griffiss AFB began installing cleanup systems at three chlorine-contaminated areas. The installation sampled additional soil vapor and obtained concurrence on future cleanup plans for the majority of the sites. Griffiss AFB awarded a project for soil vapor cleanup evaluation and installation. The installation started fieldwork for the new landfarming project and continued cleanup at four petroleum-contaminated sites. Griffiss AFB issued a revised PP for LF 1. Griffiss AFB held one public meeting, two RAB meetings, and four BRAC cleanup team meetings.

**FY09 IRP Progress**

EPA delisted 2,897 acres from the NPL in March. Griffiss AFB completed five PPs, and five RODs covering six sites. Griffiss AFB installed cleanup systems at three chlorine-contaminated areas, and awarded a contract to select and install the cleanup system at the fourth site. A ROD amendment eliminated the requirement for a system to collect and treat leachate, which is liquid that seeps from an LF. The installation completed two RODs associated with soil vapor intrusion. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues delayed the PP for Building 101.

The RAB met twice and the BRAC cleanup team met four times.

**FY09 MMRP Progress**

Griffiss AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Griffiss Air Force Base are grouped below according to program category.

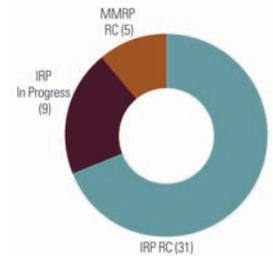
**IRP**

- Complete cleanup of petroleum-contaminated soils and decommission landfarming operations in FY10.
- Complete six PPs in FY10.
- Complete five RODs and conduct a five-year review report in FY10.
- Complete five-year review report in FY10.
- Begin installing cleanup systems at the fourth chlorinated area in FY11.
- Begin installing the final soil vapor intrusion system in FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	IN557212447200	<b>Media Affected:</b>	Groundwater and Soil
<b>Location (Size):</b>	Peru, Indiana (2,722 acres)	<b>Funding to Date:</b>	\$ 28.8 million
<b>Mission:</b>	Supports tanker aircraft operations of the 434th Air Refueling Wing; formerly supported bomber aircraft operations	<b>Est. CTC (Comp Year):</b>	\$ 15.4 million (FY 2042)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	40 (FY2011)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	5 (FY2002)
<b>Contaminants:</b>	Household and industrial waste, radioactive contamination, spent solvents, metals, fuels, SVOCs, lead, waste oils, asbestos, VOCs, explosives, propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-84



**Progress To Date**

Grissom Air Force Base (AFB) was established as Bunker Hill Naval Air Station in 1942 and became an Air Force installation in 1954 that supported bomber aircraft operations. Grissom AFB has most recently supported tanker aircraft operations of the 434th Air Refueling Wing. Contaminated sites include outdoor and indoor small arms firing ranges, a munitions burn/burial area, a grenade training range, a firing-in butt site, oil-water separator sites, underground storage tank (UST) sites, aboveground storage tank sites, a B-58 aircraft burial site, a central heat plant site, fire training areas, landfills, and various maintenance shops and spill sites (SSs). In July 1991, the BRAC Commission recommended realignment of the installation. Following realignment in September 1994, the Air Force retained 1,400 acres as Grissom Air Reserve Base (ARB). In FY07, the Air Force Real Property Agency used BRAC funding to complete cleanup and transfer the other 1,322 acres to the Miami County Economic Development Authority, the State of Indiana, and several private entities. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. The BRAC cleanup team developed a BRAC cleanup plan with community input in FY94 to prioritize sites requiring environmental restoration. In FY95, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Grissom AFB and Grissom ARB both completed five-year review reports in FY06.

Records of Decision (RODs) or decision documents (DDs) have been signed for 12 sites at Grissom AFB and 27 sites at Grissom ARB, selecting cleanup actions or determining that no further cleanup action is necessary. In FY04, Grissom AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Grissom AFB and Grissom ARB for FY05 through FY08 is summarized below.

In FY05, Grissom AFB demonstrated that natural processes had cleaned up the petroleum groundwater contamination migrating from the flightline gas station at Building 14. The Indiana Department of Environmental Management approved the cleanup plans for Buildings 14, 407, and 424. Grissom AFB completed the investigation and cleanup of the UST site at

Building 747 and the groundwater remedial investigation at Building 190 (SS 190). The installation revised the groundwater monitoring plan for Fire Protection Training Areas (FPTAs) 1 and 2 to reduce long-term groundwater monitoring costs. Grissom AFB transferred 94 acres to the Grissom Redevelopment Authority and began evaluating requirements at identified MMRP sites. The BRAC cleanup team met monthly.

In FY06, Grissom ARB closed sites with previously leaking USTs at Buildings 14, 407, and 424; the installation took all monitoring wells at Buildings 14, 407, 424, and 747 out of service. Grissom AFB completed a feasibility study to evaluate cleanup alternatives for SS 190 and submitted a draft ROD to the Indiana Department of Environmental Management and EPA Region 5. Grissom ARB and Grissom AFB completed their first five-year review reports. The BRAC cleanup team met monthly and the RAB met twice.

In FY07, Grissom AFB completed the ROD for SS 190 and continued groundwater monitoring. The installation also developed supplemental surveys, documents finding property suitable to transfer, and deeds for Parcel C1-D1 and the central heat plant. These documents completed the transfer of Grissom AFB. Grissom ARB took over hosting the RAB from the Grissom AFB.

In FY08, Grissom AFB prepared documentation for participation in the regional performance-based contract (PBC) for voluntary investigation and cleanup of the central heat plant. Grissom AFB submitted a report on the completion of cleanup for the central heat plant, which the State of Indiana approved. Grissom AFB managed land use controls (LUCs), which restrict use of or access to the site, as well as institutional controls (ICs), which are tools that minimize the potential for human exposure. The Indiana Department of Environmental Management agreed that Grissom AFB need only monitor groundwater at SS 190 and FPTAs 1 and 2 once every five years, in support of five-year review reports. Grissom AFB briefed the RAB for the final time on the status of cleanup.

**FY09 IRP Progress**

Grissom AFB sampled groundwater at FPTAs 1 and 2, and SS 190. Grissom ARB awarded a PBC that applies to Sites Oil/Water Separator site 741 and Storage Tank (ST) site 08. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Grissom AFB and Grissom ARB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Grissom Air Force Base are grouped below according to program category.

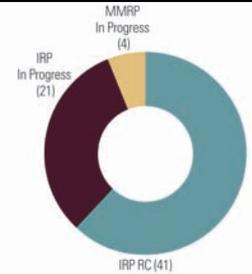
**IRP**

- Modify three RODs or DDs to remove groundwater restrictions at three sites in FY10.
- Close five sites with continued cleanup using natural processes in FY10.
- Monitor groundwater at six Grissom ARB sites in FY10.
- Manage LUCs/ICs at 14 sites on Grissom AFB in FY10-FY11.
- Complete five-year review reports for both Grissom ARB and Grissom AFB in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	GU917002753200, GU917002758300, GU917002758500, and GU917002757600	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Apra Harbor, Guam (15,306 acres)	<b>Funding to Date:</b>	\$ 159.9 million
<b>Mission:</b>	Operated facilities; provided services and materials; issued weapons and ordnance in support of operating forces of the Navy; provided services for Guam Naval Activities	<b>Est. CTC (Comp Year):</b>	\$ 61.9 million (FY 2028)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	62 (FY2017)
<b>IAG Status:</b>	IAG signed in FY93	<b>MMRP Sites (Final RIP/RC):</b>	4 (FY2018)
<b>Contaminants:</b>	PCBs, POLs, pesticides, heavy metals, VOCs, SVOCs	<b>Five-Year Review Status:</b>	Planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-65 and C-7-21



**Progress To Date**

Guam Apra Harbor Complex consists of Navy commands in the Apra Harbor area and the former Naval Magazine area southeast of the harbor. The BRAC Commission recommended four of the commands (Guam Naval Activities [NAVACTS], Naval Fleet and Industrial Supply Center, Naval Ship Repair Facility [NSRF], and Public Works Center) for realignment or closure in 1995. NSRF ceased operations in September 1997. Operations that contributed to contamination included support of naval operating forces and shore activities, photographic and printing shops, a dry cleaning plant, power plants and boilers, pest control operations, and chemical and medical laboratories. Wastes were stored and disposed of in landfills and wastewater treatment plants. The installation formed a BRAC cleanup team to develop a process for cleanup of sites. The complex completed a joint community relations plan in FY92 to prioritize sites requiring environmental restoration. DoD and EPA signed an interagency agreement (IAG) in FY93 to outline how they were going to proceed with cleanup. In FY94, the complex established an information repository. Formed in FY94, the complex converted its technical review committee responsible for communicating cleanup progress with the community, into a Restoration Advisory Board in FY95.

To date, the installation has completed cleanup at 44 sites. The installation also transferred 2,725 acres to the Government of Guam and decided to retain NSRF. In FY03, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. To date, the installation has signed Decision Documents (DDs) determining no further action for five sites, which determined that no further cleanup activities were necessary for these sites. Cleanup progress at Guam Apra Harbor Complex for FY05 through FY08 is summarized below.

In FY05, Guam Apra Harbor Complex completed DDs determining no further action for NAVACTS Site 28. The Complex has also held a public meeting and two BRAC cleanup team meetings. The BRAC cleanup team reviewed a proposed plan for Areas of Concern 1 and 3, and EPA and Guam EPA attended the Navy public meeting to provide cooperative regulator support. The installation worked closely with EPA and Guam EPA to resolve the language used in the

DD for land use controls (LUCs), which restricts use of and access to sites, and institutional controls, which are tools that minimize the potential for human exposure.

In FY06, Guam Apra Harbor Complex continued to resolve LUC language issues concerning transferred parcels.

In FY07, Guam Apra Harbor Complex reached resolution on LUC language issues concerning transferred parcels.

In FY08, Guam Apra Harbor Complex implemented a resolution on LUC language issues in the DD and LUC work plan for NAVACTS Site 28 (Old WESTPAC Area).

**FY09 IRP Progress**

Guam Apra Harbor Complex finalized a DD and LUC work plan for NAVACTS Site 28 (Old WESTPAC Area). The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

The installation conducted no MMRP actions.

**Plan of Action**

Plan of action items for Guam Apra Harbor Complex are grouped below according to program category.

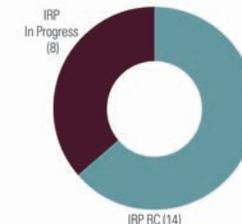
**IRP**

There are no IRP actions scheduled for FY10 or FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	MA157172442400	<b>Est. CTC (Comp Year):</b>	\$ 10.0 million (FY 2020)
<b>Location (Size):</b>	Bedford, Massachusetts (826 acres)	<b>IRP Sites (Final RIP/RC):</b>	22 (FY2003)
<b>Mission:</b>	Support Headquarters Electronic Systems Center	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in September 2009	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-100
<b>Contaminants:</b>	VOCs, chlorinated solvents, gasoline, jet fuel, metals, PCBs		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 38.9 million		



**Progress To Date**

Hanscom Air Force Base (AFB) supports the Air Force Electronic Systems Center. Operations at Hanscom AFB have involved generation, use, and disposal of numerous hazardous substances. Possible sources of contamination include a former industrial wastewater treatment system, a former filter bed and landfill (LF) area, a jet fuel residue and tank sludge area, two LFs, three former fire training areas, a paint waste disposal area, a mercury spill area, former aviation fuel handling and storage facilities, underground storage tanks, and fuel spill areas. The potential risk to human health and the environment was significant enough for EPA to place Hanscom Field/Hanscom AFB on the NPL in May 1994. The NPL site designation includes Hanscom AFB and former portions of the installation leased from the Commonwealth of Massachusetts between 1942 and 1974. The leased property included the flightline and airfield areas of the installation that are now L.G. Hanscom Field, a civilian airport. DoD and EPA signed federal facility agreement (FFA) to outline how they are going to proceed with cleanup in September 2009. The 2005 BRAC Commission recommended Hanscom AFB for realignment. In FY95, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB). To ensure continuous monitoring and improvement, the installation signed three five-year review reports: one in FY97, one in FY02, and one in FY07.

To date, the installation has closed 14 sites; no further construction of cleanup systems is required at the remaining 8 sites. The installation has signed Records of Decisions (RODs) for operable units (OUs) 1 and 3 (Installation Restoration Program [IRP] Sites 6 and 21), which selected cleanup actions at these sites. Hanscom AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Hanscom AFB for FY05 through FY08 is summarized below.

In FY05, the installation operated cleanup systems at OUs 1, 2, and 3 (IRP Sites 6 and 21); the Army and Air Force Exchange Services service station; and base motor pool sites.

In FY06, Hanscom AFB continued operating cleanup systems at OUs 1, 2, and 3 (IRP Sites 6 and 21); the Army and Air Force Exchange Services service station; and base motor pool sites.

In FY07, Hanscom AFB continued operating cleanup systems at OUs 1, 2, and 3 (IRP Sites 6 and 21); Army and Air Force Exchange Services service station; and base motor pool sites. The installation finalized the OU 1 ROD. The installation also completed the third five-year review report for the Hanscom Field/Hanscom AFB NPL site, which concluded that all cleanup systems were protective of human health and the environment. Hanscom AFB completed a five-year review report for the two Massachusetts Contingency Plan sites, which recommended continued monitoring. Under the MMRP, the installation began a preliminary assessment (PA).

In FY08, Hanscom AFB continued operating cleanup systems at OUs 1, 2, and 3 (IRP Sites 6 and 21); Army and Air Force Exchange Services service station; and base motor pool sites. The installation evaluated the arsenic-contaminated area. The RAB held one meeting; EPA and the community were satisfied with cleanup progress.

**FY09 IRP Progress**

Hanscom AFB continued to operate, maintain and monitor the long-term remedies in place at OUs 1, 2, and 3 (IRP Sites 6 and 21); Army and Air Force Exchange Services service station; and base motor pool sites. The installation continued to monitor and enforce land use controls (LUCs) to ensure that groundwater is not used for human consumption, and that future land use does not increase the risk of exposure to contaminants while the remedies operate to meet the cleanup goals. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

The RAB held one meeting; regulators and the community were satisfied with cleanup progress.

**FY09 MMRP Progress**

Technical issues delayed completion of the PA. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the Military Munitions Response Program.

**Plan of Action**

Plan of action items for Hanscom Air Force Base are grouped below according to program category.

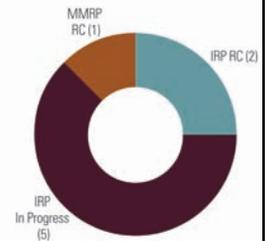
**IRP**

- Complete accelerated cleanup at Site 13 in FY10.
- Complete maintenance of the LF cap at OU 2 in FY10.
- Continue to operate, maintain, and monitor the long-term remedies in place at OUs 1, 2, and 3 (IRP Sites 6 and 21); Army and Air Force Exchange Services service station; and base motor pool sites in FY10-FY11.
- Continue to monitor and enforce LUCs at all sites in FY10.

**MMRP**

- Complete confirmatory soil sampling at two potentially contaminated areas in FY10.
- Complete PAs in FY10.

<b>FFID:</b>	NE79799F041100	<b>Funding to Date:</b>	\$ 97.4 million
<b>Location (Size):</b>	Hastings, Nebraska (48,753 acres)	<b>Est. CTC (Comp Year):</b>	\$ 56.2 million (FY 2040)
<b>Mission:</b>	Produce, load, and store ammunition	<b>IRP Sites (Final RIP/RC):</b>	7 (FY2014)
<b>HRS Score:</b>	42.24; placed on NPL in June 1986	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2002)
<b>IAG Status:</b>	IAG signed in 1998	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	UXO, VOCs, PAHs, heavy metals, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-111
<b>Media Affected:</b>	Groundwater and Soil		



## Progress To Date

Operations at the Blaine Naval Ammunition Depot contributed to groundwater and soil contamination at the Hastings Groundwater Contamination Site. The U.S. Army Corps of Engineers (USACE) designated five operable units (OUs) at the property: three OUs for the 2,900-acre Hastings East Industrial Park and two others. The three OUs at the industrial park are divided into: soil (OU 4), the vadose zone (OU 8), which is directly beneath the surface, and groundwater (OU 14). OU 16 includes the explosives disposal area and the bomb and mine complex at the naval yard dump, and OU 15 contains a 44,500-acre area of the former Blaine Naval Ammunition Depot not included in the other OUs. The potential risk to human health and the environment was significant enough for EPA to place the property on the NPL in June 1986. DoD and EPA signed an interagency agreement (IAG) in FY98 to outline how they were going to proceed with cleanup. In FY99, USACE formed a Restoration Advisory Board (RAB) to discuss the installations cleanup progress with the community. To ensure continuous monitoring and improvement, USACE completed five-year review reports in FY02 and FY09.

To date, the Army has signed Records of Decision (ROD) for two soil contaminants, which selected cleanup actions for numerous locations across the site. One ROD applies the removal of explosives and metal-contaminated surface soil, and the second ROD applies to the removal of carcinogenic polyaromatic hydrocarbons (PAHs)-contaminated surface soil. In FY96, the installation approved a cleanup project for one site suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one site was identified and cleanup at the site is complete. Cleanup progress for the Hastings Groundwater Contamination Site for FY05 through FY08 is summarized below.

In FY05, USACE completed cleanup of soils at the non-residential properties contaminated with carcinogenic PAHs. USACE also installed wells for groundwater tests; which will help to improve the design of groundwater treatment systems. USACE provided technical and legal support to the Department of Justice (DOJ) in the ongoing litigation with a potentially responsible party (PRP) for environmental cleanup at this property.

In FY06, USACE conducted additional groundwater investigations; began the proposed plan (PP) and addendum to the groundwater feasibility study (FS) to evaluate cleanup alternatives; and conducted pre-design efforts for the groundwater cleanup, including completion of groundwater testing and preliminary pipeline design. USACE supported DOJ in settlement efforts. Regulators approved the recurring review report on munitions and explosives of concern.

In FY07, USACE completed cleanup of lead-contamination identified at OU 16 and submitted the final FS to regulators. USACE also continued to evaluate groundwater cleanup options and support pre-design assessments.

In FY08, USACE completed the FS report addendum to evaluate cleanup alternatives for groundwater, identified the preferred groundwater cleanup method, and conducted a public meeting on the proposed groundwater cleanup plan. USACE awarded the design and construction contract for groundwater cleanup. The PRP settlement with the DOJ was approved. The RAB held quarterly meetings.

## FY09 IRP Progress

USACE completed the OU 16 focused FS, submitted the OU 15 PP for regulatory review, began pre-design efforts for groundwater cleanup, and completed the five-year review report. The cost of completing environmental restoration has changed significantly due to regulatory and technical issues and changes in estimating criteria.

Regulatory issues delayed the final DOJ settlement payment from the PRP. Regulatory issues also delayed the groundwater cleanup ROD.

## FY09 MMRP Progress

USACE conducted no actions at this property.

## Plan of Action

Plan of action items for Hastings Groundwater Contamination Site are grouped below according to program category.

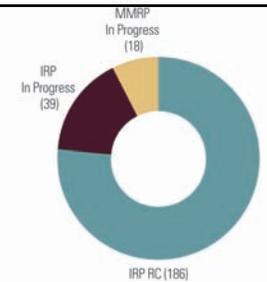
### IRP

- Complete the OU 14 groundwater ROD, OU 15 PP, and OU 16 focused FS addendum in FY10.
- Obtain final payment of DOJ settlement payment from the PRP in FY10.
- Complete the design and begin construction of the OU 14 groundwater cleanup system in FY11.
- Complete the decision document to select cleanup actions at OU 15 in FY11.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	UT857172435000	<b>Funding to Date:</b>	\$ 335.6 million
<b>Location (Size):</b>	Ogden, Utah (6,698 acres)	<b>Est. CTC (Comp Year):</b>	\$ 352.1 million (FY 2027)
<b>Mission:</b>	Provide logistics support for weapons systems	<b>IRP Sites (Final RIP/RC):</b>	225 (FY2012)
<b>HRS Score:</b>	49.94; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	18 (FY2016)
<b>IAG Status:</b>	FFA signed in April 1991; IAG signed in September 2006	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Solvents (TCE, PCE, TCA, 1,2 DCA, DCE), metals, petroleum products, PCBs, VOCs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-168
<b>Media Affected:</b>	Groundwater, Surface Water, Soil		



**Progress To Date**

The mission of Hill Air Force Base (AFB) is to provide logistics support for weapons systems, host two fighter wings, and operate the Utah Test and Training Range. Site types at Hill AFB include disposal pits, landfills, surface impoundments, underground storage tanks, fire training areas, firing ranges, discharge and wastewater ponds, a contaminated building, a munitions dump, and spill sites. Contaminants include solvents (primarily trichloroethylene [TCE]), fuels, acids, bases, and plating solutions. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in April 1991 to outline how they were going to proceed with cleanup at Hill AFB. The Air Force also signed an interagency agreement (IAG) in September 2006 covering the Utah Test and Training Range and the Little Mountain Test Annex that outlined cleanup procedures for each site. The 2005 BRAC Commission recommended Hill AFB for realignment. In FY95, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY98, FY03, and FY08.

To date, the installation has signed Records of Decision (RODs) which selected cleanup actions for nine operable units (OUs). In FY07, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); eight sites were added to the inventory. Cleanup progress at Hill AFB for FY05 through FY08 is summarized below.

In FY05, Hill AFB constructed and operated cleanup systems at four sites, completed cleanup at three sites, completed the study phase for four sites, closed one site, and reduced the risk of OU 9. The installation also signed a ROD for OU 8, installed a groundwater extraction well system to prevent further spreading of the contaminated area at OU 8, and constructed a treatment system at OU 12. Hill AFB held four public meetings and made 11 presentations to city councils and planning boards representing cities adjacent to the base. The RAB held 12 meetings.

In FY06, Hill AFB constructed and operated cleanup systems at 2 sites and completed cleanup at 27 areas of concern at the Utah Test and Training Range. The installation also signed a ROD for OU 5. Hill AFB implemented a performance monitoring program to evaluate and manage the effectiveness of cleanup system operations. Additionally, the installation completed the proposed plan for OU 9 and successfully recycled 400 tons of iron practice bombs into material suitable for use in a permeable reactive barrier to treat TCE-contaminated groundwater. The installation participated in six city council meetings, held five public meetings, and held meetings with five local city mayors to discuss cleanup activities affecting surrounding communities. The RAB held 12 meetings.

In FY07, Hill AFB constructed and operated cleanup systems at one site, and completed cleanup at two AOCs at the Utah Test and Training Range. The installation discovered polychlorinated biphenyl (PCB) contamination in soils at an on-site military housing area and began a removal action. Hill AFB submitted RODs for OUs 9 and 12 to regulatory agencies for review. The installation completed preliminary assessment work for all previously identified MMRP sites and eight sites (formerly FUDS) that were added to the inventory.

In FY08, Hill AFB finalized and signed the ROD for OU 12, and completed its third five-year review report; no significant deficiencies were identified. The installation also completed removal of PCB-contaminated soils at the on-site military housing area and received regulatory concurrence. Hill AFB constructed the cleanup system at OU 1 and performed remedial investigations (RIs) at four OUs. The installation participated in five city council meetings and held three public information meetings. The RAB held 10 meetings.

**FY09 IRP Progress**

Hill AFB completed the construction of the cleanup system at OU 12. The installation also constructed and operated cleanup systems at OU 12 and OU North Range (NR) 1. Hill AFB completed an indoor air sampling study that resulted in a significant reduction in liability. Additionally, Hill AFB completed a removal action at OU South Range (SR) 2, consolidating asbestos debris and multiple waste piles into an on-site landfill. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative and technical issues delayed the removal action at OU 1.

The RAB held quarterly meetings, two working group meetings, and eight training sessions. Hill AFB participated in seven city council meetings and held two public information meetings.

**FY09 MMRP Progress**

Hill AFB completed site inspection (SI) fieldwork at eight sites.

Administrative issues delayed the completion of SI fieldwork at five sites and the completion of surface clearances at all sites.

**Plan of Action**

Plan of action items for Hill Air Force Base are grouped below according to program category.

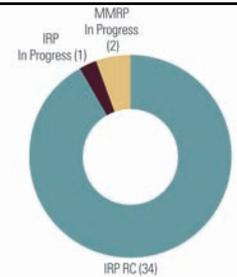
**IRP**

- Submit RODs for OUs 11, 13, A, and NR 1 for regulatory review in FY10.
- Install and operate the cleanup system at OU 2, and require no further construction of cleanup systems in FY10.
- Submit RODs for OUs 9, NR 2, and SR 1 for regulatory review in FY11.
- Require no further construction of cleanup systems at OUs 11, 13, SR 2, A, and NR 2 in FY11.

**MMRP**

- Complete SI fieldwork at remaining five sites in FY10.
- Complete surface clearances at all sites in FY10.
- Begin RI fieldwork at sites requiring further characterization in FY10.

<b>FFID:</b>	FL457212403700	<b>Funding to Date:</b>	\$ 34.4 million
<b>Location (Size):</b>	Homestead, Florida (2,938 acres)	<b>Est. CTC (Comp Year):</b>	\$ 1.1 million (FY 2038)
<b>Mission:</b>	Houses the 482rd Reserve Fighter Wing and is host to several other government agencies	<b>IRP Sites (Final RIP/RC):</b>	35 (FY2006)
<b>HRS Score:</b>	42.24; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2016)
<b>IAG Status:</b>	FFA signed in February 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Pesticides, solvents, VOCs, PCBs, heavy metals, jet fuel, PAHs, cyanide	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-17
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



**Progress To Date**

Homestead Air Force Base (AFB) was established as an Army airfield in 1942 and became an Air Force installation in 1955 to house the Strategic Air Command. Sites identified at the installation include the JP-4 jet fuel leak area, a landfill, fire pit training areas, various spill sites, underground storage tanks (USTs), aboveground storage tanks, and oil-water separators. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in February 1991 to outline how they were going to proceed with cleanup. In July 1993, the BRAC Commission recommended realignment of the installation. Following realignment in March 1994, the Air Force retained 852 acres and the Army retained 10 acres. In 2003, the Air Force acquired an additional 1,091 acres that included the airfields; the combined 1,943 acres became known as Homestead Air Reserve Base (ARB). Homestead ARB's environmental restoration program is managed by the Air Force Reserve Command (AFRC). To date, 976 acres of the former Homestead AFB have been transferred, primarily to the local redevelopment authority and other federal agencies; the Air Force Real Property Agency (AFRPA) manages restoration on this 976-acre BRAC property. In 1994, AFRC and AFRPA formed a BRAC cleanup team to develop a process for the cleanup of sites. AFRC and AFRPA formed a Restoration Advisory Board (RAB) in FY94 to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, AFRC completed a five-year review report for sites on Homestead ARB. Also in FY05, AFRPA completed a five-year review report for sites on the BRAC property.

Interim cleanup has included the removal of USTs and contaminated soil, groundwater extraction and treatment, and the removal of oil-water separators. By FY95, the installation closed 400 restoration sites after determining that no further cleanup actions were required; the installation consolidated the remaining sites into 5 major fuel areas and 30 operable units (OUs). The installation signed Records of Decision (RODs) selecting cleanup actions for OUs 1 through 7, 11, 12, 15, 18, 20, 21, and 25 through 31. In FY04, AFRC conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Homestead ARB and

the BRAC property for FY05 through FY08 is summarized below.

In FY05, AFRC completed a five-year review report of sites on Homestead ARB in concurrence with regulators. EPA approved AFRPA's demonstration of proper and successful cleanup system operation at OU 26. The installation updated the solid waste management unit inventory to reflect current ownership for renewal of the RCRA Hazardous and Solid Waste Amendments permit. The BRAC cleanup team and RAB each met twice.

In FY06, AFRC and AFRPA finalized the RCRA Hazardous and Solid Waste Amendments permit renewal with the state. AFRC and AFRPA completed and signed RODs for four AFRC sites (OUs 12, 15, 25, and 27) and four BRAC sites (OUs 20, 21, 30, and 31). AFRC and AFRPA also completed the ROD for the land portion of OU 11 (BRAC), designating responsibilities to AFRC. AFRPA transferred 24 acres to Miami-Dade County. Under the MMRP, AFRC completed a pilot evaluation of potential environmental hazards at a former practice grenade range (Grenade Range 047). The BRAC cleanup team and RAB continued to meet twice per year.

In FY07, AFRC and AFRPA continued cleanup operations and long-term management (LTM) at AFRC and BRAC sites as required by individual RODs, including: groundwater monitoring; inspections of land use controls, which restrict use of or access to a site; and inspections of institutional controls, which minimize the potential for human exposure. AFRPA transferred LTM of the land portion of OU 11 to AFRC. Under the MMRP, AFRC completed fieldwork for a follow-up expanded site inspection (SI) to the initial evaluation of Grenade Range 047. AFRC completed a limited site assessment and removed lead-contaminated soil at the former small arms firing range.

In FY08, AFRC and AFRPA continued cleanup operations and LTM at AFRC and BRAC sites.

**FY09 IRP Progress**

AFRC and AFRPA continued cleanup operations and LTM at AFRC and BRAC sites. The cost of completing environmental

restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

AFRC finalized the expanded SI report for Grenade Range 047.

Administrative issues delayed the follow-up work at Grenade Range 047 and the former small arms firing range.

**Plan of Action**

Plan of action items for Homestead Air Force Base are grouped below according to program category.

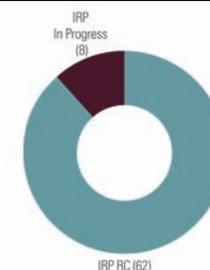
**IRP**

- Complete five-year review reports for sites on the ARB and on the BRAC property in FY10.
- Continue cleanup operations and LTM in FY10-FY11.

**MMRP**

- Complete follow-up environmental investigations through site closure at two MMRP sites in FY10-FY11.

<b>FFID:</b>	CA917002278400	<b>Funding to Date:</b>	\$ 594.6 million
<b>Location (Size):</b>	San Francisco, California (934 acres)	<b>Est. CTC (Comp Year):</b>	\$ 531.6 million (FY 2042)
<b>Mission:</b>	Repaired and maintained ships	<b>IRP Sites (Final RIP/RC):</b>	70 (FY2017)
<b>HRS Score:</b>	48.77; placed on NPL in November 1989	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in September 1990 and revised in January 1992	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Heavy metals, PCBs, petroleum hydrocarbons, VOCs, SVOCs, radioactive materials, explosives and propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-27
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The mission at Hunter's Point Annex-Treasure Island Naval Station (NS) was to repair and maintain ships. Military activities have resulted in environmental contamination. Site types include landfills and land disposal areas, containing primarily heavy metals, volatile organic compounds (VOCs), and radioactive materials. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) with the Navy in September 1990, which was revised in January 1992, to outline how they were going to proceed with cleanup. In July 1991, the BRAC Commission recommended closure of Hunter's Point Annex-Treasure Island NS. The station ceased operations in April 1994, and is now under the responsibility of Naval Facilities Engineering Command, Southwest. Parts of the installation have been leased to private parties. The installation formed a BRAC cleanup team in FY94 to prioritize sites requiring environmental restoration. The installation also converted its technical review committee, responsible for communicating cleanup progress with the community, into a Restoration Advisory Board in FY94. The installation revised its community relations plan in FY97 and in FY04. The BRAC cleanup team updates the site management plan every quarter.

The installation completed a Record of Decision (ROD), which determined that no further cleanup activities were necessary at Parcel A and conveyed the parcel to the San Francisco Redevelopment Agency. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Hunter's Point Annex-Treasure Island NS for FY05 through FY08 is summarized below.

In FY05, the installation conveyed Parcel A to the San Francisco Redevelopment Agency. The installation also treated additional sites on Parcels B and C. In addition, the installation issued a new proposed plan (PP) to support a ROD amendment. The installation completed feasibility studies (FSs) to evaluate cleanup alternatives at Parcels C, D, and F; a remedial investigation and FS at Parcel E2; and three removal actions on Parcel E.

In FY06, Hunter's Point Annex-Treasure Island NS completed four removal actions at Parcels E and E2. The installation also completed contaminant investigations to support the transfer of Parcel B. The installation also completed removal actions at the Metal Reef, Metal Slag, and polychlorinated biphenyl (PCB) sites.

In FY07, Hunter's Point Annex-Treasure Island NS completed a removal action at Parcel B to investigate and remove radioisotopes at Installation Restoration (IR) site 50. The installation also completed the removal action at IR 02.

In FY08, Hunter's Point Annex-Treasure Island NS finalized the FS and associated radiological addenda at Parcels C and D. The station also obtained radiological free-release clearances at Buildings 813 and 819. The installation completed the removal action at Site 26 and the closeout at Metal Reef, Metal Slag, and PCB sites. The Navy also completed radiological surveys on high priority structures at Parcels B and D.

**FY09 IRP Progress**

Hunter's Point Annex-Treasure Island NS signed three RODs for Parcels C and G, and Utility Corridor (UC) site 1. The installation also completed a treatability study (TS) for the Parcel D groundwater at Sites 9, 33, and 71. Additionally, the installation issued a PP, and continued to draft the ROD for Parcel C. Hunter's Point Annex-Treasure Island NS continued removal actions at UC 1 and UC 2, Parcels B and G, the design for cleanup for Parcel B (Sites 7 and 18), and Parcel G; and the FS and associated radiological addendum for Parcels E2 and F.

Contractual issues delayed the TS for Parcel E.

**FY09 MMRP Progress**

Hunter's Point Annex-Treasure Island NS has identified no sites.

**Plan of Action**

Plan of action items for Hunter's Point Annex-Treasure Island Naval Station are grouped below according to program category.

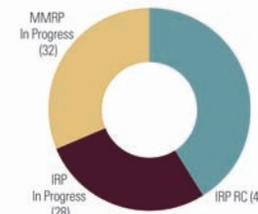
**IRP**

- Complete groundwater TS for Parcel E in FY10.
- Finalize the FS and associated radiological addendum for Parcels E2 and F in FY10.
- Complete no further action ROD for Parcel D, and radiological data gaps investigation for Parcel F in FY10.
- Draft a ROD for Parcel C, and continue removal actions at UC 1 and UC 2 in FY10.
- Complete design for cleanup for Parcel B (Sites 7 and 18), and complete the radiological removal actions and design for cleanup for Parcels B and G in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	MD317002410900	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Indian Head, Maryland (3,423 acres)	<b>Funding to Date:</b>	\$ 54.9 million
<b>Mission:</b>	Provide services in energetics through engineering, operational support, manufacturing technology; conduct research, development, and testing of energetic and ordnance device	<b>Est. CTC (Comp Year):</b>	\$ 75.0 million (FY 2021)
<b>HRS Score:</b>	50.00; placed on NPL in February 1995	<b>IRP Sites (Final RIP/RC):</b>	70 (FY2020)
<b>IAG Status:</b>	FFA signed in December 2000.	<b>MMRP Sites (Final RIP/RC):</b>	32 (FY2020)
<b>Contaminants:</b>	Propellants, explosives, acids, paints, solvents, heavy metals, radioactive material, TCE, wastewater, VOCs, SVOCs	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-96



**Progress To Date**

Naval Support Facility, Indian Head (Indian Head) provides services in energetics for all warfare centers, including engineering, fleet and operational support, manufacturing technology, limited production, and industrial base support. The installation produces and handles complex chemicals to accomplish this mission. Lead, silver, and mercury are the primary contaminants of concern. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1995. DoD and EPA signed a federal facility agreement (FFA) in FY01 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Indian Head for realignment. A technical review committee was formed in FY93, responsible for communicating cleanup progress with the community, which converted to a Restoration Advisory Board in FY95. The installation prepared a community relations plan and established an information repository. In FY98, the administrative record became available in an electronic format, which is updated periodically. To ensure continuous monitoring and improvement, Indian Head completed five-year review reports for Sites 12 and 42 in FY07.

To date, Indian Head has signed Records of Decision (RODs), which selected cleanup actions for eight sites and No Further Action RODs, or equivalent decision documents (DDs), which determined no further cleanup activities were necessary at 28 sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Indian Head for FY05 through FY08 is summarized below.

In FY05, Indian Head completed a baseline assessment of potential risks to the environment for Sites 11, 17, and 47. The installation also completed investigation fieldwork at Sites 2, 4, 7, 18, 23, 36, 38, and 43. The installation signed DDs determining no further action for Sites 3, 9, 20, 33, 39, 45, 46, 48, 58, 59, and 61, and RODs for Sites 39, 42, and 45. Indian Head completed preliminary assessments, site recommendations, site prioritization, and cost analysis documents for all sites.

In FY06, Indian Head completed removal and cleanup actions at Sites 17, 42, and 57. The installation also completed engineering evaluations and cost analyses (EE/CA) for Sites 6 and 28, and a feasibility study (FS) to evaluate cleanup alternatives for Site 57. Additionally, the installation completed a baseline assessment of potential risks to the environment for Sites 28, 47, and the Lab Area. The installation completed investigation reports for Sites 2, 4, 7, 18, and 23, and signed a ROD for Site 42. The installation also signed DDs determining no further action for Sites 2, 4, 7, 18, 23, 26, 56, the wetland area adjacent to Site 45, and Solid Waste Management Unit (SWMU) 30. Under the MMRP the installation restarted removal actions at Unexploded Ordnance (UXO) 32, and completed the identification, demilitarization, and disposal of scrap munitions items.

In FY07, Indian Head completed an FS for Site 11 and completed a baseline assessment of potential risk to the environment for Site 6. The installation also completed investigations at Sites 1, 8, 19, 26, 27, 36, and SWMUs 14 and 30. Indian Head signed DDs determining no further action for Sites 24 and 26, and completed the ROD for Site 57. Indian Head also completed a five-year review report for Sites 12 and 42.

In FY08, Indian Head completed investigation reports for Sites 36 and 38. The installation also completed FSs for Sites 17 and 47.

**FY09 IRP Progress**

Indian Head signed a ROD for Site 11 and completed field investigations for Sites 8 and 43. The installation also completed FSs for Sites 17 and 47, and completed investigation reports for Sites 1, 19, 27, and SWMU 14. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed cleanup actions at Sites 11, 17, 21, and 57.

**FY09 MMRP Progress**

Regulatory issues delayed completion of the work plan for eight MMRP sites and four water ranges at the main installation. Regulatory issues also delayed fieldwork and sampling at 16 MMRP sites at Stump Neck Annex and the removal action at UXO 32.

**Plan of Action**

Plan of action items for Indian Head Naval Surface Warfare Center are grouped below according to program category.

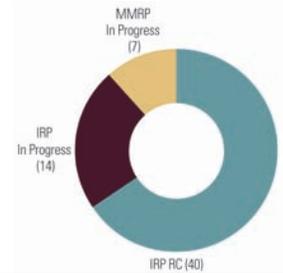
**IRP**

- Complete cleanup actions at Sites 11, 17, 21, and 57 in FY10.
- Complete FSs for the Lab Area and Site 38 in FY10-FY11.
- Complete EE/CA for Sites 19 and 27 in FY10-FY11.
- Complete cleanup actions for Sites 47 and 57 in FY10-FY11.
- Complete RODs for Sites 6, 17, and 28 in FY10-FY11.

**MMRP**

- Complete SIs for eight sites and four water ranges at the main installation in FY10.
- Complete SIs for 16 sites at Stump Neck Annex in FY10.
- Complete removal actions at UXO 32 in FY10.
- Complete cleanup actions at UXO 32 in FY10-FY11.

<b>FFID:</b>	IA721382044500	<b>Funding to Date:</b>	\$ 101.7 million
<b>Location (Size):</b>	Middletown, Iowa (19,011 acres)	<b>Est. CTC (Comp Year):</b>	\$ 23.9 million (FY 2039)
<b>Mission:</b>	Load, assemble, and pack munitions	<b>IRP Sites (Final RIP/RC):</b>	54 (FY2011)
<b>HRS Score:</b>	29.73; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	7 (FY2013)
<b>IAG Status:</b>	IAG signed in September 1990	<b>Five-Year Review Status:</b>	Completed and underway
<b>Contaminants:</b>	Explosives, low-level radioactive materials, heavy metals, VOCs, SVOCs, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-85
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

In 1941, the Army constructed the Iowa Army Ammunition Plant (AAP) to load, assemble, and pack various conventional ammunition and fuzing systems. The installation has three operable units (OUs): soil (OU 1), groundwater (OU 3), and overall (OU 4). During operations, industrial process wastewater and by-products were disposed at the installation. Site types include surface impoundments, production areas, landfills, and a fire-training pit. Soil and groundwater contamination resulted primarily from disposal of explosives and heavy metal-containing wastes directly onto the soil. The installation also identified small amounts of contamination by volatile organic compounds (VOCs). The potential risk to human health and the environment was significant enough for EPA to place Iowa AAP on the NPL in August 1990. DoD and EPA signed an interagency agreement (IAG) in December 1990 to outline how they were going to proceed with cleanup. Restoration activities through FY00 included closing one cell in the inert landfill, removing aboveground treatment tanks, removing lead-contaminated soil from a production line, and cleaning up an abandoned coal storage yard. The installation formed a Restoration Advisory Board (RAB) in FY97 to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY05.

To date, the installation has completed two interim Records of Decision (RODs) and one final ROD, which selected cleanup actions for sites with soil contamination. In FY02, Congress designated the installation for inclusion into the Formerly Utilized Sites Remedial Action Program to address impacts from former Atomic Energy Commission industrial activities. The installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Iowa AAP for FY05 through FY08 is summarized below.

In FY05, Iowa AAP completed the design for cleanup at OU 1 and supplemental remedial investigation (RI) sampling at OU 4. Additionally, the installation conducted the off-site groundwater pilot study and also began the on-site groundwater treatability study. Iowa AAP completed the five-year review report. The

installation's RAB received training on endangered species, well monitoring, and the CERCLA process.

In FY06, Iowa AAP continued soil treatment at Site IAAP 020 and completed the on-site groundwater treatability study. The installation also completed the baseline assessment of potential risks to the environment. At Bush Creek, the installation implemented point source controls. Under the MMRP, Iowa AAP began site inspections (SIs) at three suspected sites. The RAB reviewed project activities and provided stakeholder input.

In FY07, Iowa AAP completed the soil removal at OU 1, and an explanation of significant differences to remove radiological contaminants as an area of analysis from the interim ROD for soils at OU 1. The installation also completed the feasibility study (FS) to evaluate cleanup alternatives and the proposed plan for the OU 4 Inert Disposal Area. Under the MMRP, Iowa AAP completed an SI and historical records review for seven sites. All sites proceeded to the RI phase in accordance with the statement of dispute resolution.

In FY08, Iowa AAP completed the explanation of significant differences to merge soil actions from OU 4 with OU 1; these additional soil removals were completed. The installation completed and signed the interim ROD for closure of the inert disposal area at OU 4. The RAB held four meetings to receive advice and conduct training. Iowa AAP held one on-site tour of restoration sites.

**FY09 IRP Progress**

Iowa AAP completed the cleanup action report for OU 1 and off-site groundwater design for cleanup at OU 3. The installation also completed the explanation of significant differences to change the soil treatment method from bioremediation, which uses natural processes for cleanup, to alkaline hydrolysis, which is a faster chemical process.

**FY09 MMRP Progress**

Iowa AAP completed the RI fieldwork at seven sites.

**Plan of Action**

Plan of action items for Iowa Army Ammunition Plant are grouped below according to program category.

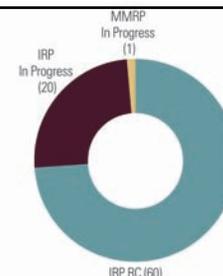
**IRP**

- Complete soil treatment for OUs 1 and 4 in FY10.
- Close inert disposal area in FY10
- Complete an FS and ROD for OU 3 in FY10-FY11.
- Complete an RI and FS for OU 4 in FY10-FY11.

**MMRP**

- Complete RI report in FY10.

<b>FFID:</b>	FL417002441200	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Jacksonville, Florida (3,820 acres)	<b>Funding to Date:</b>	\$ 97.4 million
<b>Mission:</b>	Maintain and operate facilities; provide services and materials to support aviation activities and aircraft overhaul operations	<b>Est. CTC (Comp Year):</b>	\$ 21.6 million (FY 2021)
<b>HRS Score:</b>	31.02; placed on NPL in November 1989	<b>IRP Sites (Final RIP/RC):</b>	80 (FY2014)
<b>IAG Status:</b>	FFA signed in October 1990	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2016)
<b>Contaminants:</b>	Waste solvents, caustics, cyanide, heavy metals, POLs, low-level radioactive wastes, oils, paints, PCBs, pesticides, phenols, radioisotopes, VOCs, SVOCs, explosives, propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-53



**Progress To Date**

Jacksonville Naval Air Station (NAS) maintains and operates facilities and provides services and materials to support aviation activities and aircraft overhaul operations. The installation includes the following site types: fire fighting training areas, waste storage and disposal areas, transformer storage areas, radioactive-waste disposal areas, and other miscellaneous support and maintenance areas. Typical operations have generated solvents, sludge (from on-site treatment plants), and low-level radioactive waste, which have migrated into nearby soil and local groundwater supplies. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in October 1990 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Jacksonville NAS for realignment. In FY88, the installation formed technical review committee responsible for communicating cleanup progress with the community, and converted it to a Restoration Advisory Board in FY95. In FY91, the installation completed its community relations plan and established an administrative record and information repository. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY05.

To date, the installation has completed Records of Decision (RODs), which selected cleanup actions for Operable Units (OUs) 2 and 3, and Point Sources of Contamination (PSCs) 11, 16, 21, 46, 47, 51, and 52. The installation also concluded that no further action was necessary for cleanup of Underground Storage Tanks 13 and 17. In FY02, Jacksonville NAS conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Jacksonville NAS for FY05 through FY08 is summarized below.

In FY05, Jacksonville NAS completed RODs for PSCs 46 and 51. The installation also completed a five-year review report and completed optimizations of PSCs 11 (Building 780), 26, and 48 (Building 106). The installation performed cleanup at PSC 46 and conducted a treatability study (TS) at PSC 47. The installation determined no further action was required for Petroleum-Contaminated Area 14. Under the MMRP,

Jacksonville NAS developed the cost-to-complete cleanup for the identified site.

In FY06, Jacksonville NAS completed the ROD for PSC 11 Area A. The installation also completed a proposed plan for PSCs 11 and 52. Under the MMRP, the installation began site assessments for seven potential MMRP sites.

In FY07, Jacksonville NAS completed and received regulatory approval for the TS at PSC 47, and completed the remedial investigation and feasibility study to evaluate cleanup alternatives. The installation also completed the ROD for PSC 52 and received regulatory approval. The installation continued the groundwater contaminated area assessment at OU 3, and also continued monitoring cleanup using natural processes and long-term management (LTM). Under the MMRP, Jacksonville NAS started a site inspection (SI) for unexploded ordnance (UXO) site 1.

In FY08, Jacksonville NAS completed and received regulatory approval for the ROD at PSC 47. The installation continued the groundwater contaminated area assessment at OU 3, and continued monitored cleanup using natural processes and LTM. The installation began excavation of contaminated soils at OU 8. Under the MMRP, Jacksonville NAS developed a uniform federal policy quality assurance plan to complete the explosives safety submission for the site.

**FY09 IRP Progress**

Jacksonville NAS continued the groundwater contaminated area assessment at OU 3. The installation also continued cleanup and LTM at OU 1, and PSCs 15 and 47. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Jacksonville NAS drafted the explosives safety submission for OU 8. The installation also started SIs for UXO 1 and PSCs 22 and 23.

**Plan of Action**

Plan of action items for Jacksonville Naval Air Station are grouped below according to program category.

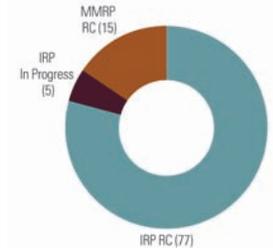
**IRP**

- Complete five-year review reports at several sites in FY10-FY11.
- Continue monitored cleanup using natural processes and LTM at OU 3 in FY10-FY11.
- Complete RODs for several sites in FY10-FY11.

**MMRP**

- Complete SI at UXO 1, and PSCs 22 and 23 in FY10.
- Implement explosives safety submission for OU 8 in FY10.

<b>FFID:</b>	IN521382045400	<b>Funding to Date:</b>	\$ 28.9 million
<b>Location (Size):</b>	Madison, Indiana (55,270 acres)	<b>Est. CTC (Comp Year):</b>	\$ 4.1 million (FY 2035)
<b>Mission:</b>	Performed production acceptance testing of ammunition, weapons, and their components	<b>IRP Sites (Final RIP/RC):</b>	82 (FY2005)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	15 (FY2003)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Solvents, petroleum products, VOCs, PCBs, heavy metals, depleted uranium, UXO	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-24
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Jefferson Proving Ground was built to perform production acceptance testing of ammunition, weapons, and their components. The sites south of the firing line, identified during environmental studies, included landfill and disposal areas, hazardous waste storage areas, fire training areas, underground storage tanks (USTs), and buildings with asbestos-containing materials. Contaminants at Jefferson Proving Ground include depleted uranium, heavy metals, unexploded ordnance (UXO), solvents, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and petroleum hydrocarbons. Interim cleanup actions have included a landfill cap, removal of USTs, and excavation of contaminated soil. In December 1988, the BRAC Commission recommended closure of Jefferson Proving Ground and relocation of its mission to Yuma Proving Ground in Arizona. The installation closed on September 30, 1995. The 50,774 acres north of the firing line, included in the 1995 BRAC program, is contaminated with UXO. The installation plans to retain the site indefinitely for use as a wildlife sanctuary and for other government uses. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites, and a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. In FY96, the installation issued an updated community relations plan. In FY99, the installation procured technical assistance for public participation funding to support the RAB.

To date, Jefferson Proving Ground has transferred approximately 1,200 acres, including: the Defense Reutilization and Marketing Office Parcel area, the Airfield Parcel, the Western Wooded Parcel, the Northeast Parcel, and the central cantonment area. The installation has signed one Record of Decision (ROD), which selected cleanup actions for areas south of the firing range. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Jefferson Proving Ground for FY05 through FY08 is summarized below.

In FY05, Jefferson Proving Ground completed the ROD for areas south of the firing line.

In FY06, Jefferson Proving Ground received a license amendment from the Nuclear Regulatory Commission to grant

a five-year site characterization report of the depleted uranium area. The installation, the Nuclear Regulatory Commission, and a local environmental group discussed concerns about the depleted uranium area. The installation transferred the Northeast Parcel.

In FY07, Jefferson Proving Ground obtained EPA approval of the proposed plan and completed soil restoration fieldwork for the Open Burn Unit. The installation also continued the five-year site characterization report of the depleted uranium area to support the restricted release license termination plan.

In FY08, Jefferson Proving Ground obtained EPA Region V approval of the construction completion report for the Open Burn Unit. The installation continued the five-year site characterization report of the depleted uranium area. The Nuclear Regulatory Commission held an administrative law hearing and received a final decision from the Nuclear Regulatory Commission Atomic Safety and Licensing Board panel, which concluded that the installation's five-year site characterization field sampling plan was adequate.

**FY09 IRP Progress**

Jefferson Proving Ground continued the five-year depleted uranium area site characterization report. The installation also completed the soil removal action at the Open Burn Unit and received EPA concurrence for cleanup completion. Additionally, the installation continued monitored cleanup using natural processes at the groundwater solvent pits.

**FY09 MMRP Progress**

Jefferson Proving Ground conducted no MMRP actions.

**Plan of Action**

Plan of action items for Jefferson Proving Ground are grouped below according to program category.

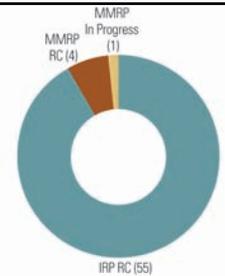
**IRP**

- Continue five-year depleted uranium area site characterization report in FY10.
- Continue monitored cleanup using natural processes at the groundwater solvent pits in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	IL521382046000	<b>Media Affected:</b>	Groundwater and Soil
<b>Location (Size):</b>	Wilmington, Illinois (1,730 acres)	<b>Funding to Date:</b>	\$ 126.0 million
<b>Mission:</b>	Manufacture, load, assemble, and pack munitions and explosives	<b>Est. CTC (Comp Year):</b>	\$ 15.1 million (FY 2014)
<b>HRS Score:</b>	35.23 (Loading, Assembling, and Packing Area); placed on NPL in March 1989; 32.08 (Manufacturing Area); placed on NPL in July 1987	<b>IRP Sites (Final RIP/RC):</b>	55 (FY2008)
<b>IAG Status:</b>	IAG signed in June 1989	<b>MMRP Sites (Final RIP/RC):</b>	5 (FY2014)
<b>Contaminants:</b>	Explosives, heavy metals, VOCs, PCBs, SVOCs, propellants	<b>Five-Year Review Status:</b>	Completed and underway
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-81



**Progress To Date**

The Army constructed Joliet Army Ammunition Plant (AAP) in the early 1940s. It was one of the largest munitions and explosives manufacturers in the Midwest. Installation operations included manufacturing explosives and loading, assembling, and packing munitions for shipment. The potential risk to human health and the environment was significant enough for EPA to place the 9,159-acre Manufacturing Area and the 14,385-acre Loading Area on the NPL in July 1987, and March 1989, respectively. The installation consolidated all environmental restoration sites into two operable units (OUs): one for groundwater contamination and another for soil contamination. DoD and EPA signed an interagency agreement (IAG) in June 1989 to outline how they were going to proceed with cleanup. In FY95, the installation formed a Restoration Advisory Board to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports for the Soil and Groundwater OUs in FY05.

To date, the installation has transferred nearly 22,000 acres, including: 15,000 acres to the U.S. Forest Service; approximately 2,800 acres to the State of Illinois for reuse as industrial parks; 2,630 acres to U.S. Department of Agriculture (USDA); 982 acres to U.S. Department of Veterans Affairs; and 455 acres to Will County, Illinois. The installation also has completed three Records of Decision (RODs), which selected cleanup actions at environmental restoration sites. Joliet AAP completed an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Joliet AAP for FY05 through FY08 is summarized below.

In FY05, Joliet AAP completed cleanup at the TNT Area. The installation also awarded a performance-based contract (PBC) for landfills and groundwater. Under the MMRP, the PBC included line items to conduct post-site inspection (SI) actions at four sites.

In FY06, Joliet AAP completed cleanup and developed documentation to transfer 235 acres to the State of Illinois. The installation also completed cleanup and developed documentation to transfer 580 acres to USDA. Joliet AAP completed cleanup at Sites L1, L4, L7, L8, L9, L10, M2, and

M9, and continued the long-term management (LTM) program for groundwater.

In FY07, Joliet AAP excavated all contaminated soil located in the Soil OU. The installation also completed bioremediation of all soils contaminated by explosives, totaling 276,000 tons. Joliet AAP continued LTM. Under the MMRP, the installation completed cleanup at all sites and identified one new site.

In FY08, Joliet AAP completed cleanup at Soil OU sites and started LTM. The installation also completed the final three landfill caps and started LTM at landfills, and continued LTM at Groundwater OU sites.

**FY09 IRP Progress**

The installation implemented LTM for groundwater, landfills, and institutional controls, which are tools that minimize the potential for human exposure. The installation also completed five-year review reports for Soil and Groundwater OUs with EPA approval. The cost of completing environmental restoration has changed significantly due to technical issues.

Administrative issues delayed acreage transfers to USDA and the State of Illinois.

**FY09 MMRP Progress**

Joliet AAP completed SI fieldwork for the new extended buffer site.

Regulatory issues delayed completion of the ROD to close three sites.

**Plan of Action**

Plan of action items for Joliet Army Ammunition Plant are grouped below according to program category.

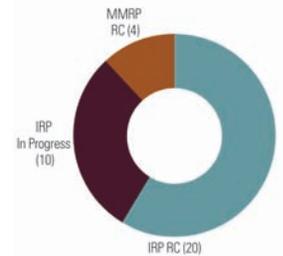
**IRP**

- Continue LTM of groundwater sites and long-term operations of closed landfills in FY10.
- Transfer acreage to USDA and the State of Illinois in FY10.

**MMRP**

- Begin remedial investigation for the new extended buffer site and obtain regulatory approval in FY10.
- Complete ROD to close three sites in FY10.

<b>FFID:</b>	MI557002476000	<b>Funding to Date:</b>	\$ 60.1 million
<b>Location (Size):</b>	Gwinn, Michigan (4,953 acres)	<b>Est. CTC (Comp Year):</b>	\$ 24.1 million (FY 2038)
<b>Mission:</b>	Conducted long-range bombardment and air refueling operations	<b>IRP Sites (Final RIP/RC):</b>	30 (FY2006)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	4 (FY1999)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	POLs, pesticides, heavy metals, solvents, SVOCs, VOCs, PCBs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-103
<b>Media Affected:</b>	Soil, Groundwater, Surface Water, Sediment		



**Progress To Date**

K.I. Sawyer Air Force Base (AFB) formerly conducted long-range bombardment and air refueling operations. Environmental studies have been in progress at the installation since FY84. Sites identified include landfills, fire training areas (FTAs), underground storage tanks (USTs), aboveground storage tank spill sites, drainage pits, and a drainage pond. The primary contaminants affecting soil and groundwater are petroleum hydrocarbons, trichloroethylene (TCE), tetrachloroethylene (PCE), vinyl chloride, and heavy metals. In July 1993, the BRAC Commission recommended closure of K.I. Sawyer AFB, deactivation of the 410th Wing, and transfer of the base's mission. In September 1995, the installation closed. In 1994, the installation formed a BRAC cleanup team to develop a process for cleanup of sites, and formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. In FY99, the installation received funding for technical assistance for public participation. To ensure continuous monitoring and improvement, the installation completed its first five-year review report in FY06.

Interim cleanup has included removal of USTs, removal and cleanup of contaminated soil, installation of groundwater extraction wells, construction and operation of a groundwater treatment plant, removal of fuel from groundwater at the former petroleum/oil/lubricant (POL) storage area (Storage Tank [ST] 004), and installation of bioventing systems that increase oxygen flow in the soil to stimulate microbial activity. To date, no further cleanup action is required at 21 sites. In FY03, the installation transferred 93 acres to the County of Marquette. The installation transferred all remaining property to the Hannah Indian Community in FY07. In FY04, K.I. Sawyer AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at K.I. Sawyer AFB for FY05 through FY08 is summarized below.

In FY05, the installation completed sampling for the soil vapor extraction (SVE) system at FTA 006 in anticipation of system shutdown and removal from service. K.I. Sawyer AFB also began closeout sampling at Drainage Pond 002. The installation developed a shutdown plan at Site Other (OT) 013. Groundwater monitoring continued at various sites. K.I. Sawyer

AFB transferred additional property. The RAB held one meeting.

In FY06, the installation completed improvements to groundwater monitoring, which reduced the frequency and number of wells sampled. K.I. Sawyer AFB also continued limited groundwater sampling at Drainage Pond 002. K.I. Sawyer AFB continued working toward completion of cleanup at the Defense Fuels Supply Point (OT 013) and combined Escanaba Areas 1 and 2 for purposes of property transfer. The installation completed its first five-year review report. K.I. Sawyer AFB continued monitoring and routinely inspecting sites. The installation evaluated requirements at MMRP sites. The RAB held its annual meeting.

In FY07, the installation transferred the 40-acre OT 013 to the Hannah Indian Community, which completed the transfer of all remaining property.

In FY08, K.I. Sawyer AFB continued long-term management of Installation Restoration Program (IRP) sites. The installation dismantled and removed the SVE system at FTA 006. K.I. Sawyer AFB prepared documentation to support the regional performance-based contract (PBC).

**FY09 IRP Progress**

K.I. Sawyer AFB completed removing soil at OT 013 for areas not responding to either biosparging, in which contaminants in groundwater are dissolved by stimulating microbial activity, or SVE. The installation prepared the OT 013 treatment system to remain in place for long-term inactivity. K.I. Sawyer AFB also completed improvements at ST 004. The installation refreshed the groundwater improvements for the base and improved routine inspections. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

The installation decided not to award the PBC in the form proposed in FY08.

**FY09 MMRP Progress**

K.I. Sawyer AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for K.I. Sawyer Air Force Base are grouped below according to program category.

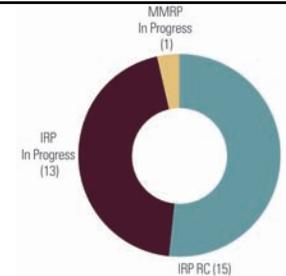
**IRP**

- Complete second five-year review report in FY10.
- Award performance-based restoration contract for the installation in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	KS721382046700	<b>Funding to Date:</b>	\$ 41.3 million
<b>Location (Size):</b>	Labette County, Kansas (13,727 acres)	<b>Est. CTC (Comp Year):</b>	\$ 10.4 million (FY 2039)
<b>Mission:</b>	Produce munitions and maintain replenishment production capability	<b>IRP Sites (Final RIP/RC):</b>	28 (FY2012)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2010)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Underway
<b>Contaminants:</b>	Explosives, metals, dioxins, furans, VOCs, SVOCs, propellants, PCBs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-86
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The Army established Kansas Army Ammunition Plant (AAP) in 1941 to produce munitions and maintain replenishment production capability during World War II. The original construction consisted of three load lines, four component areas, an ammonium nitrate area, five explosive storage areas, an inert storage area, and a maintenance and administration area. Areas of environmental concern include production areas, landfills, open burning cages, open burning pads, an open detonation area, and miscellaneous maintenance and support areas. Kansas AAP has detected explosives in groundwater in some production areas and some contamination at all landfill areas. Primary contaminants of concern in the production and open burning areas are explosives and metals. Two closed landfill areas contained volatile organic compounds (VOCs), semivolatle organic compounds (SVOCs), and metals in surface soils and groundwater. The 2005 BRAC Commission recommended Kansas AAP for closure.

Kansas AAP has removed explosives contamination and metals-contaminated soils at the 900 Area, 1000 Area, 1100 Area, and open burn areas. Cleanup progress at Kansas AAP for FY05 through FY08 is summarized below.

In FY05, Kansas AAP completed the closure and post-closure plan for the 700 Area Groundwater. Kansas AAP also completed a corrective measures study (CMS) to identify sites requiring corrective action for groundwater and landfill covers. Additionally, the installation completed remedial investigations at KAAP 43.

In FY06, Kansas AAP presented the installation's selected cleanup actions in a Statement of Basis to the public. In response to the BRAC 2005 recommendation for closure, the installation started a report summarizing the environmental conditions of all transferable property.

In FY07, Kansas AAP completed the CERFA report, which documented all uncontaminated property undergoing closure or realignment. and the report on the environmental condition of all transferable property. The installation upgraded the landfill covers at KAAP 03, 04, and 05, and continued long-term management (LTM) of groundwater.

In FY08, Kansas AAP continued LTM of groundwater, removed three solid waste management units (SWMUs) (300, 500, and 800) from the LTM program, with concurrence from EPA and the Kansas Department of Health and Environment. Kansas AAP also completed an environmental assessment to support land transfer. Kansas AAP awarded a contract for a site inspection (SI) of the site suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**FY09 IRP Progress**

Kansas AAP completed an investigation of tetrachloroethylene (PCE) at 1100 Area and began an investigation of the Open Detonation Area. The installation also capped and covered the remaining landfill areas at SWMU 15 (Active Landfill). The State of Kansas approved the cap upgrades at SWMUs 14 and 16. Kansas AAP developed the CERFA technical memorandum. Kansas AAP continued removal actions at the 1200 Area and conducted groundwater monitoring. Kansas AAP began to close the Great Plains Development Authority hazardous waste storage igloos, explosive waste incinerator, and the pistol range. The cost of completing environmental restoration has changed significantly due to technical issues and changes in estimating criteria.

Technical issues delayed completion of the 1200 Area soil removal project.

**FY09 MMRP Progress**

Kansas AAP completed the Old Ammunition Storage Area expanded SI, which determined that no further cleanup action was necessary.

**Plan of Action**

Plan of action items for Kansas Army Ammunition Plant are grouped below according to program category.

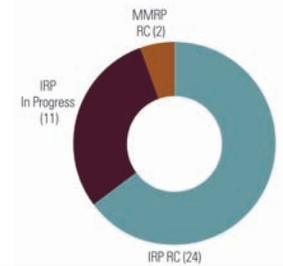
**IRP**

- Complete the 1200 Area soil removal project in FY10.
- Close the hazardous waste storage igloos, Burn Pads 5 and 6, explosive waste incinerator, the pistol range, the contaminated waster processor, and Active Landfill in FY10.
- Complete the five-year review report for sites listed in the CMS in FY10.
- Complete corrective measures at the skeet range and sewage treatment plant in FY10.

**MMRP**

- Complete a report documenting no further cleanup action is required at the Old Ammunition Storage Area in FY10.

<b>FFID:</b>	TX657172433300	<b>Est. CTC (Comp Year):</b>	\$ 51.6 million (FY 2023)
<b>Location (Size):</b>	San Antonio, Texas (3,997 acres)	<b>IRP Sites (Final RIP/RC):</b>	35 (FY2006)
<b>Mission:</b>	Provided depot-level aircraft and engine repair	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2008)
<b>HRS Score:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	N/A	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-160
<b>Contaminants:</b>	Metals, VOCs, SVOCs, PCBs		
<b>Media Affected:</b>	Groundwater, Surface Water, Soil		
<b>Funding to Date:</b>	\$ 285.4 million		



**Progress To Date**

Kelly Air Force Base (AFB) formerly provided depot-level aircraft and engine repair. Sites identified at the installation include landfills, spill sites (SSs), former fire training areas, low-level radioactive waste sites, underground storage tanks, aircraft maintenance areas, sludge lagoons, and sludge-spreading beds. In July 1995, the BRAC Commission recommended closure and realignment of Kelly AFB. The airfield and all associated support activities were realigned to Lackland AFB, Texas. In FY96, the installation formed a BRAC cleanup team to develop a process for cleanup of sites at Kelly AFB. That same year, the BRAC cleanup team developed the first BRAC cleanup plan with community input to prioritize sites requiring environmental restoration. The installation formed a Restoration Advisory Board (RAB) in FY94 to discuss cleanup progress with the community. In FY99, the installation received technical assistance for public participation funding. In FY04, the installation updated the community relations plan. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY06.

To date, the installation has transferred 1,517 acres to the local redevelopment authority. In FY04, Kelly AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Kelly AFB for FY05 through FY08 is summarized below.

In FY05, Kelly AFB completed installing Zone 4 off-base shallow groundwater cleanup systems, and completed construction of the final groundwater and soil cleanup system in Zone 2. The installation submitted the closure report for the former industrial wastewater treatment plant. Kelly AFB discussed the assessments of potential risks to the environment around Leon Creek with regulators. The installation began evaluating requirements at the installation's MMRP sites. The RAB met quarterly; the BRAC cleanup team met once a month.

In FY06, regulators approved the assessments of potential risks to the environment around Leon Creek and the Zones 2 and 3 corrective measures. Regulators further approved closure of 10 Installation Restoration Program (IRP) sites in Zone 2. Kelly AFB transferred approximately 106 acres to the local

redevelopment authority. The installation completed the first five-year review report and submitted it to regulators. The installation developed a sampling plan for soils, associated with the small arms firing range. The installation conducted long-term management (LTM) and operations of cleanup systems. The RAB met quarterly; the BRAC cleanup team met five times.

In FY07, regulators approved the modification to the RCRA compliance plan for final cleanup systems for Zones 4 and 5 sites, including cleanup for the off-base shallow groundwater. In addition, the installation submitted a modification to the RCRA compliance plan to regulators for approval of final cleanup for sites in Zones 2 and 3. Kelly AFB completed the installation of soil cleanup systems at four Zone 3 sites. The installation closed Site D 10. Kelly AFB demolished the former small arms firing range (Building 3430) and took soil samples to prepare a closure report. Kelly AFB continued LTM and operations of cleanup systems. The RAB and BRAC cleanup team each met quarterly.

In FY08, Kelly AFB submitted the RCRA permit renewal application to regulators. Regulators determined cleanup systems in Zones 4 and 5 were operating properly and successfully, which supported the property transfer of 1,017 acres to the local redevelopment authority. The installation completed the planned soil cleanup for Zone 3. Kelly AFB continued LTM and operations of cleanup systems (including permeable reactive barriers). Under the MMRP, the installation closed the indoor small arms firing range (Site Ordnance Ranges 00008). The RAB and BRAC cleanup team each met three times.

**FY09 IRP Progress**

Kelly AFB renewed their RCRA permit and received approval for modifications to the RCRA permit for final remedies at sites in Zones 2 and 3. The installation complied with the Texas Commission on Environmental Quality permit and compliance plan. Kelly AFB continued operations and maintenance (O&M) on soil and groundwater treatment systems, and excavated and restored SS 040. The installation transferred 72 acres to the local redevelopment authority, after obtaining a determination of operating properly and successfully from the regulators. The

cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Kelly AFB closed the small arms firing range.

**Plan of Action**

Plan of action items for Kelly Air Force Base are grouped below according to program category.

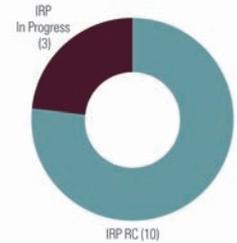
**IRP**

- Install and operate Electrical Resistive Heating System at SS 003 to enhance current cleanup actions in FY10.
- Initiate five-year review report in FY10.
- Continue O&M on soil and groundwater treatment systems in FY10-FY11.
- Continue compliance with the Texas Commission on Environmental Quality Permit and Compliance Plan in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	WA017002341900	<b>Funding to Date:</b>	\$ 34.6 million
<b>Location (Size):</b>	Keyport, Washington (340 acres)	<b>Est. CTC (Comp Year):</b>	\$ 8.8 million (FY 2036)
<b>Mission:</b>	Test, prove, overhaul, and issue torpedoes	<b>IRP Sites (Final RIP/RC):</b>	13 (FY2007)
<b>HRS Score:</b>	32.61; placed on NPL in October 1989	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in FY90	<b>Five-Year Review Status:</b>	Completed and underway
<b>Contaminants:</b>	VOCs, heavy metals, petroleum hydrocarbons, herbicides, fuel, PCBs, pesticides, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-57
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Operations at the Keyport Naval Undersea Warfare Center (NUWC), including torpedo plating, refurbishing, and disposal, contributed to contamination at the property. Environmental investigations at the installation have identified sites such as underground storage tanks, sumps, spill sites, a landfill, and an underground trench. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1989. DoD and EPA signed a federal facility agreement (FFA) in FY90 to outline how they were going to proceed with cleanup. In September 1995, the BRAC Commission recommended realignment of Keyport NUWC. The center's responsibility for maintaining combat system consoles and its general industrial workload were moved to Puget Sound Naval Shipyard. In FY89 the installation formed a technical review committee, responsible for communicating cleanup with the community, and converted it to a Restoration Advisory Board in FY95. Keyport NUWC completed a community relations plan in FY90 and updated it in FY00. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY00 and FY05.

The installation has completed a Record of Decision, which selected cleanup actions at Operable Units (OUs) 1 and 2. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Keyport NUWC for FY05 through FY08 is summarized below.

In FY05, Keyport NUWC operated a cleanup system at OU 1 and conducted long-term management (LTM) at OUs 1 and 2. The installation also completed a second five-year review report. Additionally, the installation resolved sediment issues.

In FY06, Keyport NUWC continued to operate a cleanup system at OU 1 and continued LTM at OUs 1 and 2. The installation also completed an optimization study for OU 1.

In FY07, Keyport NUWC continued to operate a cleanup system at OU 1 and continued LTM at OUs 1 and 2.

In FY08, Keyport NUWC continued to operate a cleanup system at OU 1 and continued LTM at OUs 1 and 2.

**FY09 IRP Progress**

Keyport NUWC continued to operate a cleanup system at OU 1 and continued LTM at OUs 1 and 2.

**FY09 MMRP Progress**

Keyport NUWC has identified no MMRP sites.

**Plan of Action**

Plan of action items for Keyport Naval Undersea Warfare Center are grouped below according to program category.

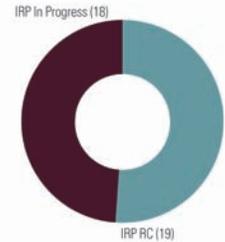
**IRP**

- Complete a five-year review report in FY10.
- Continue to operate the cleanup system at OU 1 in FY10-FY11.
- Continue LTM at OUs 1 and 2 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	MO721382048900	<b>Funding to Date:</b>	\$ 145.6 million
<b>Location (Size):</b>	Independence, Missouri (3,935 acres)	<b>Est. CTC (Comp Year):</b>	\$ 72.3 million (FY 2038)
<b>Mission:</b>	Manufacture, store, and test small-arms munitions	<b>IRP Sites (Final RIP/RC):</b>	37 (FY2009)
<b>HRS Score:</b>	33.62; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	IAG signed in September 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Explosives, heavy metals, solvents, VOCs, POLs, SVOCs, propellants, radiologicals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-108
<b>Media Affected:</b>	Groundwater, Surface Water, Soil		



**Progress To Date**

Lake City Army Ammunition Plant (AAP) is a government-owned, contractor-operated facility. Its mission is to manufacture, store, and test of small arms munitions. Principal site types at the installation include abandoned disposal pits, sumps, firing ranges, old lagoons, old dumps, closed RCRA lagoons, and burning grounds. Groundwater contaminants include volatile organic compounds (VOCs), explosives, and heavy metals. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed an interagency agreement (IAG) in September 1989 to outline how they were going to proceed with cleanup. Lake City AAP formed a Restoration Advisory Board in FY97 to discuss the installation's cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY05.

To date, Lake City AAP has signed 6 Records of Decision (RODs), which selected cleanup actions for 37 sites. In FY04, the installation completed an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Lake City AAP for FY05 through FY08 is summarized below.

In FY05, Lake City AAP completed the remedial investigation (RI) and removal actions at Areas 15a, 25, and 26. Lake City AAP also updated the monitoring plan for groundwater at all sites, and began sampling at two off-site wells. The installation completed the characterization of an engineering evaluation and cost analysis for the inactive sumps and continued pump-and-treat operations to cleanup groundwater. Lake City AAP completed its first five-year review report.

In FY06, Lake City AAP continued to operate the pump -and-treat system. Lake City AAP also completed a RI and feasibility studies (FSs) to evaluate cleanup alternatives for the Northeast Corner, Installationwide, and Area 18 Operable Units (OUs).

In FY07, Lake City AAP continued operation of the pump -and-treat system, and completed removal actions at

Area 31 and the inactive sumps. Lake City AAP signed the RODs for the Northeast Corner and Area 18 OU.

In FY08, Lake City AAP selected cleanup actions and began cleanup for the Installationwide, Northeast Corner, and Area 18 OUs. The installation completed the ROD for the Installationwide OU and began groundwater treatment by injecting a solution to remove contaminants. Additionally, the installation continued monitoring at all three OUs, and cleanup at Area 10. Under the MMRP, Lake City AAP began an RI/FS for three sites under investigation.

**FY09 IRP Progress**

Lake City AAP continued cleanup at Areas 16 and 17B. The installation completed cleanup actions and a removal action at Area 10, which included cleanup of depleted uranium and treatment of lead-contaminated soil. Lake City AAP also completed decision documents and signed the ROD for Area 10. The installation implemented land use controls (LUCs), which restrict the use of and access to four OUs.

Regulatory issues delayed the ROD and LUC implementation at Area 10.

**FY09 MMRP Progress**

Lake City AAP has identified no MMRP sites.

**Plan of Action**

Plan of action items for Lake City Army Ammunition Plant are grouped below according to program category.

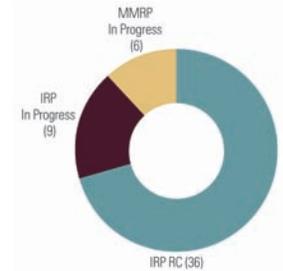
**IRP**

- Complete a five-year review report in FY10.
- Complete the ROD and implement LUCs for Area 10 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	NJ217002727400	<b>Est. CTC (Comp Year):</b>	\$ 56.3 million (FY 2049)
<b>Location (Size):</b>	Lakehurst, New Jersey (7,382 acres)	<b>IRP Sites (Final RIP/RC):</b>	45 (FY2000)
<b>Mission:</b>	Perform technology development and engineering	<b>MMRP Sites (Final RIP/RC):</b>	6 (FY2017)
<b>HRS Score:</b>	50.53; placed on NPL in July 1987	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in October 1989	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-116
<b>Contaminants:</b>	PCBs, solvents, TCE, waste oils, fuels, VOCs, SVOCs, metals		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 62.9 million		



**Progress To Date**

Historical operations at Lakehurst Naval Air Engineering Station (NAES) involved handling, storage, and onsite disposal of hazardous substances. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in October 1989 to outline how they were going to proceed with cleanup. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY06.

To date, the installation has completed Records of Decision, which selected cleanup actions for all environmental restoration sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Lakehurst NAES for FY05 through FY08 is summarized below.

In FY05, Lakehurst NAES conducted testing of the groundwater treatment at Site 16. The installation also performed operation and maintenance (O&M), monitoring, data interpretation, and reporting for three pump-and-treat systems, six spray irrigation systems, one natural restoration site, and four soil vapor extraction (SVE)/bioventing/sparge systems. Under the MMRP, the installation conducted data collection, a site visit, and prepared a preliminary assessment (PA) for the Lakehurst Proving Grounds.

In FY06, Lakehurst NAES completed a five-year review report. The facility expanded treatment of groundwater in Areas I and J, and completed an expansion specification of the treatment systems at Sites 10, 13, 16, 17, and 32. The installation continued O&M, monitoring, data interpretation, and reporting for three pump-and-treat systems, four SVE/bioventing/sparge systems, six spray aeration systems, and one natural restoration site.

In FY07, Lakehurst NAES conducted sampling of buildings in Areas B, H, and K, and installed an additional well in Area B to accelerate treatment of contaminated groundwater. The installation abandoned recovery and monitoring wells at Site 28. The installation updated the quality assurance plan for the remaining sites, and expanded treatment systems at Sites 10,

13, and 17. Under the MMRP, Lakehurst NAES completed the PA and awarded site inspections (SIs) for all sites.

In FY08, Lakehurst NAES conducted an investigation and recovery of contaminants at Site 32. The installation also completed an additional soil and groundwater investigation for Site 42. Lakehurst NAES expanded treatment systems at Sites 10, 13, 16, and 17 to accelerate cleanup of groundwater contamination. Under the MMRP, Lakehurst NAES completed the draft work plan for small range Sites 2, 4, 5, and 6. The installation also conducted a review of the planning process and data quality objectives review for MMRP Lakehurst Proving Ground, including stakeholder review and participation.

**FY09 IRP Progress**

Lakehurst NAES updated the groundwater transport model for Areas I and J. The installation also began vapor intrusion sampling at Areas B and K. Lakehurst NAES moved the air sparge and SVE systems from Site 10 to Site 42 and prepared to start cleanup.

**FY09 MMRP Progress**

Regulatory and technical issues delayed SI fieldwork for MMRP small ranges.

**Plan of Action**

Plan of action items for Lakehurst Naval Air Engineering Station are grouped below according to program category.

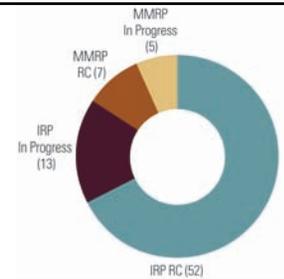
**IRP**

- Discontinue groundwater recovery and treatment system at Areas A and B in FY10.
- Transfer environmental restoration responsibilities to McGuire Air Force Base in FY10.
- Complete vapor intrusion sampling for Areas B and K in FY10-FY11.
- Develop cleanup completion plans for all remaining sites with regulatory approval in FY10-FY11.
- Update five-year review report for natural restoration progress at Areas I and J in FY10-FY11.

**MMRP**

- Complete SI work plan and sampling at UXOs 4, 5, and 6, and complete fieldwork at these sites in FY10-FY11.
- Complete SI work plan, draft SI, and sampling at UXOs 1 and 3 in FY10-FY11.
- Complete proposed cleanup plan for UXOs 4, 5, and 6 in FY11.
- Complete final SI at UXOs 1 and 3 in FY11.

<b>FFID:</b>	VA357212447700	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment
<b>Location (Size):</b>	Hampton, Virginia (3,152 acres)	<b>Funding to Date:</b>	\$ 83.8 million
<b>Mission:</b>	Hosted many organizations, including Air Combat Command Headquarters and 480th Reconnaissance Wing	<b>Est. CTC (Comp Year):</b>	\$ 7.3 million (FY 2014)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>IRP Sites (Final RIP/RC):</b>	65 (FY2010)
<b>IAG Status:</b>	NASA signed a FFA in October 1993; Air Force FFA signed in September 2009	<b>MMRP Sites (Final RIP/RC):</b>	12 (FY2014)
<b>Contaminants:</b>	Pesticides, PCBs, solvents, heavy metals, petroleum products, SVOCs, radioactive materials, VOCs, PAHs, BTEX	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-56



## Progress To Date

Since 1917, Langley Air Force Base (AFB) has been an airfield, an aeronautical research center, and the home base of the 1st Fighter Wing and Headquarters Air Combat Command. Sites at the installation include landfills (LFs), underground storage tanks, a bulk fuel distribution system, waste pits (WPs), fire training (FT) areas, other sites, and storm sewers. Investigations determined that contaminants are migrating into Tabbs Creek, Back River, and the Chesapeake Bay. The potential risk to human health and the environment was significant enough for EPA to place the installation and the adjacent NASA Langley Research Center on the NPL in May 1994. In FY09, DoD, EPA, and the State signed a federal facility agreement (FFA) to outline how they would proceed with cleanup at Langley AFB. The 2005 BRAC Commission recommended Langley AFB for realignment. The installation formed a Restoration Advisory Board in FY94 to discuss cleanup progress with the community.

To date, the installation has signed 15 Records of Decision (RODs), which selected cleanup actions at 20 environmental restoration sites. The installation also completed two decision documents (DD), requiring no further cleanup activities at areas of concern (AOCs) Disposal Pit (DP) 66 and Drainage Ditches (DDs) 66 and 68. The installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Langley AFB for FY05 through FY08 is summarized below.

In FY05, Langley AFB awarded a five-year performance-based contract (PBC) for the whole installation. The contract includes feasibility studies (FSs) to evaluate cleanup alternatives at LF 17 and AOC 70, Other (OT) site 25, Spill Site (SS) 63, and Waste Pit (WP) 08; and long-term management (LTM) at LFs 01, 05, 07, 10, 11, 12, 18, 22, FT 41, SS 61, and OT 64. The installation also developed an NPL deletion strategy as part of the PBC. The installation began preliminary assessments (PAs) for all MMRP sites.

In FY06, Langley AFB completed interim cleanup actions at OT 06A and SS 61. The installation also amended FSs for LF 17 and OT 25. The installation issued a revised proposed plan (PP) and ROD amendment for LF 01 and completed the

construction of cleanup systems at LFs 01, 11, and 22. Additionally, Langley AFB continued LTM at LFs 05, 07, 12, 18, FT 41, and SS 61. The installation also completed cleanup actions at LF 11; completed FSs at LF 17, SS 63, and OT 25; and drafted RODs and PPs for LF 17, OT 25 and SS 63/Back River Sediments.

In FY07, Langley AFB installed the soil cover at LF 10. The installation drafted a ROD for LF 15, and another ROD for LFs 01, 05, 07, 18, and FT 41. Under the MMRP, Langley AFB completed the PA and began the site inspection (SI).

In FY08, Langley AFB began installing cleanup systems at LF 17, OT 25, and the Lighter-Than-Air Cove portion of SS 63. EPA accepted the finalized FS addendum for WP 02. The installation signed seven RODs: WP 14, LF 17 soil cover, OT 25 soil removal, SS 63 sediment removal, no further cleanup actions at WPs 02 and 08, and LFs 01, 05, 18, 22, and FT 41.

## FY09 IRP Progress

DoD and EPA signed an FFA. Langley AFB completed cleanup at LF 17, OT 25, and the Lighter-Than-Air Cove portion of SS 63. The installation also signed RODs for LF 15 and OT 56, which received State concurrence. Langley AFB, EPA, and the State agreed that no further cleanup activities were necessary at AOCs DP 66 and DDs 67 and 68. Langley AFB completed additional groundwater monitoring to determine the effectiveness of the interim cleanup action at OT 64 and SS 06A. The installation completed the final long-term monitoring work plan for 11 sites. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues delayed the ROD for LFs 07, 10, 11, and 12. Technical issues delayed the FS for OT 64 and the cleanup at the Southwest Branch portion of SS 63.

## FY09 MMRP Progress

Langley AFB completed the SI and fieldwork at four sites.

## Plan of Action

Plan of action items for Langley Air Force Base are grouped below according to program category.

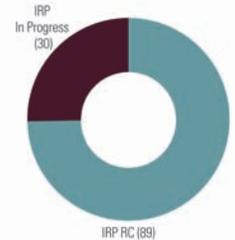
### IRP

- Finalize the five-year review report in FY10.
- Begin cleanup at the Southwest Branch portion of SS 63 in FY10.
- Finalize the ROD for LFs 07, 10, 11, and 12 in FY10.
- Finalize cleanup report for LF 17, OT 25, and the Lighter-Than-Air Cove portion of SS 63 in FY10.
- Complete FS, PP, and ROD for OT 64 in FY11.
- Assume environmental restoration responsibilities from Fort Eustis in FY11.

### MMRP

- Submit draft SI report and conduct additional site fieldwork in FY10.
- Begin remedial investigation in FY10.

<b>FFID:</b>	PA321382050300	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Franklin County, Pennsylvania (18,683 acres)	<b>Funding to Date:</b>	\$ 134.7 million
<b>Mission:</b>	Store, maintain, and decommission ammunition; rebuild and store vehicles; rebuild, store, and maintain missiles	<b>Est. CTC (Comp Year):</b>	\$ 10.4 million (FY 2039)
<b>HRS Score:</b>	34.21 (Southeastern Area); placed on NPL in July 1987; 37.51 (Property Disposal Office); placed on NPL in March 1989	<b>IRP Sites (Final RIP/RC):</b>	119 (FY2011)
<b>IAG Status:</b>	IAG signed in February 1989	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	VOCs, POLs, PCBs, heavy metals, explosives, asbestos, SVOCs, propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-143



**Progress To Date**

The mission of Letterkenny Army Depot (AD) is to store, maintain, and decommission ammunition and to rebuild and store vehicles. Contaminated sites include disposal lagoons and trenches, oil burn pits, an open burning and open detonation area, an explosives washout plant, two scrap yards, landfills (LFs), industrial wastewater treatment plant lagoons, and industrial wastewater sewer lines. The potential risk to human health and the environment was significant enough for EPA to place two areas of the installation on the NPL: the Southeastern Area in July 1987 and the Property Disposal Office in March 1989. DoD and EPA signed an interagency agreement (IAG) in February 1989 to outline how they were going to proceed with cleanup. The 1995 BRAC commission recommended the installation for closure. In FY96, Letterkenny AD established a BRAC cleanup team to develop a process for cleanup of sites. Also in FY96, the community formed a local redevelopment authority, and the installation established a Restoration Advisory Board to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Letterkenny AD completed five-year review reports for the Southeastern Area NPL site in FY02 and FY08.

To date, Letterkenny AD has signed five BRAC Records of Decision (RODs), which selected cleanup actions for 16 sites. The installation also has transferred approximately 761 acres. Cleanup progress at Letterkenny AD for FY05 through FY08 is summarized below.

In FY05, Letterkenny AD signed a ROD for Southeastern Operable Unit (OU) 4.

In FY06, Letterkenny AD installed additional deep groundwater monitoring wells and began sampling at Southeastern OUs 3A, 6, and 11. The installation signed a ROD for the Phase IV parcels and found them suitable for transfer. The installation also signed RODs for the Southeastern OU 10 groundwater and Southeastern OU 2 industrial wastewater sewers and associated contaminated soils. Additionally, Letterkenny AD began work in the Ammunition Area on the TNT Washout Plant and Southeastern OU 12 LF 5 (Area G).

In FY07, Letterkenny AD completed all environmental documentation for Phase IV parcels property transfer.

In FY08, Letterkenny AD entered into a performance-based contract (PBC), which identified 5 OUs with 44 sites. The installation continued work at Southeastern OUs 3A, 6, and 11, and the Property Disposal Office OU 4. Letterkenny AD completed its second five-year review report on the Southeastern Area NPL site. Letterkenny AD also completed the first of two scheduled rounds of off-post residential home vapor intrusion sampling at Southeastern Area OU 6. Letterkenny AD continued ammunition work under the PBC at Southeastern OU 12 LF 5 (Area G), the TNT Washout Plant, and Burning Ground 2. Additionally, the installation found the Air Hill Parcel suitable for transfer and continued to address LF issues at Southeastern OU 9 LF 2 (Area J).

**FY09 IRP Progress**

Administrative issues delayed the completion of Phase IV parcels property transfer. Administrative and regulatory issues delayed the proposed plan (PP), ROD, and finding Phase V parcels suitable for transfer. Regulatory issues delayed the completion of the design for cleanup and the focused feasibility study (FS) to evaluate cleanup alternatives for the contaminated groundwater at Southeastern OUs 3A, 6, and 11. Regulatory issues also delayed the completion of the ROD for the TNT Washout Plant and Southeastern OU 12 LF 5 (Area G) and addressing LF legal issues at Southeastern OU 9 LF 2 (Area J).

**FY09 MMRP Progress**

Letterkenny AD has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Letterkenny Army Depot are grouped below according to program category.

**IRP**

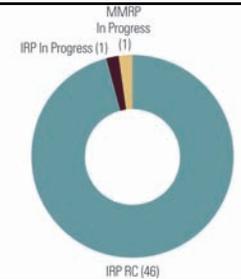
- Complete Phase IV parcels property transfer in FY10.
- Complete PP and ROD for Phase V parcels, and find the parcels suitable for transfer in FY10.
- Complete the focused FS and the design for cleanup of contaminated groundwater at Southeastern OUs 3A, 6, and 11 in FY10.
- Sign the ROD for the TNT Washout Plant and Southeastern OU 12 LF 5 (Area G) in FY10.
- Continue to address landfill legal issues at Southeastern OU 9 LF 2 (Area J) in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

**FFID:** TX621382183100  
**Location (Size):** Texarkana, Texas (15,546 acres)  
**Mission:** Load, assemble, and pack ammunition  
**HRS Score:** 31.85; placed on NPL in July 1987  
**IAG Status:** IAG signed in September 1990  
**Contaminants:** VOCs, petroleum, heavy metals, explosives  
**Media Affected:** Groundwater and Soil  
**Funding to Date:** \$ 28.6 million

**Est. CTC (Comp Year):** \$ 8.7 million (FY 2037)  
**IRP Sites (Final RIP/RC):** 47 (FY2006)  
**MMRP Sites (Final RIP/RC):** 1 (FY2013)  
**Five-Year Review Status:** Completed and planned  
**IRP/MMRP Status Table:** Refer to page C-7-51



**Progress To Date**

Lone Star Army Ammunition Plant (AAP) loads, assembles, and packs munitions. From 1943 to 1944 the Old Demolition Area was the location for the destruction of faulty or nonstandard explosives. RCRA sites investigated include surface impoundments, landfills, fuel storage areas, and load lines. Investigations revealed soil contamination with solvents, metals, explosives, and contaminated groundwater. Environmental studies revealed explosives and metal contamination in the Old Demolition Area. The potential risk to human health and the environment was significant enough for EPA to place the Old Demolition Area on the NPL in 1987. DoD and EPA signed an interagency agreement (IAG) in 1990 to outline how they were going to proceed with cleanup. In May 2005, the BRAC Commission recommended closure of Lone Star AAP. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY06.

To date, Lone Star AAP has signed one Record of Decision, which selected cleanup actions for the Old Demolition Area. In FY08, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response (MMRP); one MMRP site was identified. Cleanup progress at Lone Star AAP for FY05 through FY08 is summarized below.

In FY05, Lone Star AAP completed a remedial investigation (RI) at Site 101 and determined that no further cleanup action was required. The installation began long-term management (LTM) at Site 16 and performed LTM at Sites 17, 24, 33, and 34. The installation also completed cleanup at Sites 9, 16, and 20, and operated the cleanup system at Site 2.

In FY06, Lone Star AAP completed a five-year review report of the Old Demolition Area, which EPA approved. The installation solicited community interest for a Restoration Advisory Board to discuss the installation's cleanup progress with the community; however, there was insufficient interest.

In FY07, Lone Star AAP submitted a report that summarized the environmental condition of all transferable property as well as a CERFA report, which documented all uncontaminated property undergoing closure or realignment to the Texas Commission on Environmental Quality. The installation

completed soil removal at Site 6. Lone Star AAP constructed a restrictive fence; submitted the cleanup report; and plugged and abandoned the five monitor wells at Site 24. The installation plugged and abandoned a total of 17 monitor wells were at Sites 6, 17, and 101. The installation completed a survey describing the geography of Site 16. The installation also continued to operate the cleanup system at Site 2; groundwater and surface water monitoring at Sites 2, 17, 33, and 34; and LTM at Sites 9, 16, 17, 24, 33, and 34.

In FY08, Lone Star AAP continued LTM at Sites 9, 17, 24, 33, and 34, and completed LTM at Site 16. The installation continued to operate the cleanup system at Site 2. Lone Star AAP continued groundwater and surface water monitoring at Sites 17 and 33, and groundwater monitoring at Sites 2 and 34. The installation updated and submitted the final Old Demolition Area closeout report to EPA for approval. Under the MMRP, Lone Star AAP identified one site, Lone Star AAP 001 R 01 (Abandoned Pistol Range).

**FY09 IRP Progress**

Lone Star AAP began RIs at two new sites (LSAAP BA 02 and LSAAP BA 09). The installation requested regulatory approval to delist the Old Demolition Area. The installation continued cleanup using natural processes at Site 2 and began a groundwater classification study. The cost of completing environmental restoration has changed significantly due to regulatory and technical issues.

Regulatory issues delayed approval to delist the Old Demolition Area.

**FY09 MMRP Progress**

Lone Star AAP began an RI at the Abandoned Pistol Range.

**Plan of Action**

Plan of action items for Lone Star Army Ammunition Plant are grouped below according to program category.

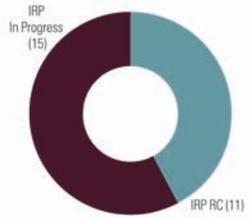
**IRP**

- Receive approval to delist the Old Demolition Area in FY10.
- Begin the report on affected property assessments for all new sites in FY10.
- Complete groundwater study in FY10.
- Begin cleanup actions at two new sites (LSAAP BA 07 and BC 44) in FY10.
- Begin RI at 13 new sites in FY10.

**MMRP**

- Complete RI for Abandoned Pistol Range in FY10-FY11.

<b>FFID:</b>	CA917002727200, CA917002755400, CA917002319000, and CA917002726700	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Long Beach, California (1,563 acres)	<b>Funding to Date:</b>	\$ 66.6 million
<b>Mission:</b>	Supported logistics; worked with construction, dry docking, and outfitting of ships; performed manufacturing and test work	<b>Est. CTC (Comp Year):</b>	\$ 7.0 million (FY 2017)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	26 (FY2014)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Solvents, acids, blasting grit, paints, heavy metals, industrial liquid wastes, VOCs, SVOCs	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-7



**Progress To Date**

The Long Beach Naval Complex (NC) consists of the Long Beach Naval Shipyard (NSY), Naval Station (NS) Long Beach, and the Long Beach Naval Hospital (NAVHOSP). The Long Beach NC provided logistics support, construction, alteration, dry docking, and outfitting of ships and craft. NSY and NS operations that contributed to contamination include ship and vehicle repair and maintenance, utility maintenance and operation, support shops, storage of petroleum products and hazardous materials, laundry and dry cleaning, steam plant operations, and air compressor operations. Portions of housing areas associated with the NSY disposed of ship wastes, drilling mud, and construction debris. The BRAC Commission recommended closure of the NAVHOSP, the NS, and associated housing areas in FY91; closure occurred in FY94. The BRAC Commission recommended closure of the NSY and associated housing areas in FY93 and occurred in FY97. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites, and completed a BRAC cleanup plan to prioritize sites requiring environmental restoration. The joint NS and NSY technical review committee converted to a Restoration Advisory Board (RAB), which is responsible for communicating cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY05 and FY09.

To date, the installation has completed Records of Decision (RODs), which selected cleanup actions for Sites 1 through 6A, 7, and 8 through 13. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Long Beach NC for FY05 through FY08 is summarized below.

In FY05, Long Beach NC conducted long-term management (LTM) at Sites 1, 2, and 11 through 14, and Palos Verdes Housing Operable Unit (OU) 1. The installation also finalized the five-year review reports for Sites 1 through 6A, 14, and Palos Verdes OU 1. Additionally, the installation completed the Site 9 ROD and cleanup plan for Site 9; completed the expanded site inspection at Site 16, obtaining clean closure; and conducted pre-closure groundwater sampling at Buildings 101 and 118.

In FY06, Long Beach NC completed site closure for Buildings 101 and 118. The installation also finalized RODs for Sites 11, 12, and 13; finalized the feasibility study (FS) addendum to evaluate cleanup alternatives for Site 7; and conducted groundwater monitoring at Site 14. Long Beach NC also combined the design for cleanup and cleanup work plans for Sites 8 through 13 into one work plan. Additionally, the installation issued a screening-level assessment of potential risks to the environment, and performed LTM at Palos Verdes OU 1. The installation met with regulators and determined that no further action was required for cleanup operations at Site 6B. The BRAC cleanup team met quarterly and the RAB met twice per year.

In FY07, Long Beach NC completed the technical memorandum detailing the closure strategy for radiological issues, and finalized the cleanup completion report for soil and groundwater at Sites 1 and 2. The installation signed the Site 7 ROD for sediments in the Long Beach Harbor. The installation finalized the groundwater design for cleanup and cleanup work plans for Sites 8 through 13, and continued LTM at these sites and Site 14. Regarding Site 10, the installation received regulatory concurrence for no further action. The installation also completed groundwater monitoring, continued LTM, and finalized the assessment of potential risks to of human exposure at Palos Verdes OU 1. Additionally, the installation worked with regulatory agencies to revise the site management and institutional control (IC) plan to minimize the potential of human exposure. Long Beach NC completed the closure status evaluation for 78 areas of concern (AOCs), and the installation completed a groundwater optimization study for Site 14. The BRAC cleanup team met every other month, and the RAB met once.

In FY08, Long Beach NC received regulatory concurrence to stop groundwater monitoring at Sites 1, 2, and 8. The installation also decommissioned monitoring wells at Sites 3, 4, 5, 6A, and Palos Verdes OU 1. Long Beach NC issued a closure report to update the status of 15 AOCs in a 90-acre parcel scheduled for transfer. The installation and the Department of Toxic Substance Control signed a ROD requiring no further action at Palos Verdes OU 1; the installation continued LTM at the site. The installation reassessed site risk

and determined the IC plan and ROD were no longer required for OU 1.

**FY09 IRP Progress**

Long Beach NC completed radiological survey fieldwork and a draft final report for Sites 1 and 2. The installation achieved regulatory concurrence for no further action at Sites 8 and 10. Long Beach NC continued LTM to achieve no further action for groundwater at Sites 9, 11, 12, and 13. The installation also completed a five-year review report. The cost of completing environmental restoration has changed significantly due to technical issues.

Technical issues delayed no further action concurrence on groundwater at Site 9.

**FY09 MMRP Progress**

Long Beach NC has identified no MMRP sites at this installation.

**Plan of Action**

Plan of action items for Long Beach Naval Complex are grouped below according to program category.

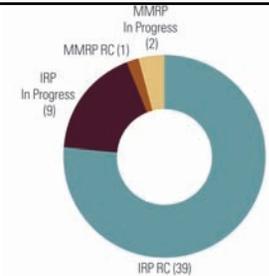
**IRP**

- Adjourn BRAC portion of the RAB in FY10.
- Obtain no further action concurrence at Site 9 groundwater in FY10.
- Obtain no further action determination for unrestricted use at 15 AOCs in FY10.
- Conduct optimization study of groundwater at Sites 12, and 13 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	TX621382052900	<b>Funding to Date:</b>	\$ 103.6 million
<b>Location (Size):</b>	Karnack, Texas (8,416 acres)	<b>Est. CTC (Comp Year):</b>	\$ 14.2 million (FY 2040)
<b>Mission:</b>	Loaded, assembled, and packed pyrotechnic and illuminating signal munitions	<b>IRP Sites (Final RIP/RC):</b>	48 (FY2011)
<b>HRS Score:</b>	39.83; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2010)
<b>IAG Status:</b>	IAG signed in October 1991	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Heavy metals, VOCs, perchlorate, explosives, SVOCs, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-158
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Longhorn Army Ammunition Plant (AAP) manufactured pyrotechnic and illuminating signal munitions and solid-propellant rocket motors. Identified cleanup sites include storage areas, landfills, open burning grounds, industrial areas, burial pits, sumps, and wastewater treatment plants. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed an interagency agreement (IAG) in October 1991 to outline how they were going to proceed with cleanup. Longhorn AAP became inactive in July 1997. The installation updated the community relations plan in FY03. In FY04, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Longhorn AAP completed five-year review reports for Sites Longhorn AAP 12, 16, 18, and 24 in FY02 and FY08; and a five-year review report for Site Longhorn AAP 17 in FY08.

Longhorn AAP has signed two interim Records of Decision (RODs), selecting cleanup actions at four sites, and six RODs requiring no further cleanup actions for ten sites. To date, the installation has transferred approximately 7,400 acres. In FY02, Longhorn AAP conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Longhorn AAP for FY05 through FY08 is summarized below.

In FY05, Longhorn AAP awarded a performance-based contract (PBC) to address most of the remaining environmental restoration work. The installation completed two feasibility studies (FSs) to evaluate cleanup alternatives for Sites Longhorn AAP 12 and 67. The installation also completed an assessment of potential risks to the environment and submitted the report to regulators. Through additional sampling and evaluation, the installation found Site Longhorn AAP 32 to require no further cleanup actions. Longhorn AAP completed MMRP site inspections for three sites and began an engineering evaluation and cost analysis (EE/CA) for each site. The RAB ratified its charter, elected a co-chair, and held quarterly meetings.

In FY06, Longhorn AAP completed the FS for Site Longhorn AAP 37. Longhorn AAP also signed the ROD for Site Longhorn AAP 12 and included land use controls, which restrict access to the site, in the design for cleanup. The installation transferred 288 acres to the U.S. Fish and Wildlife Service (FWS). Under the MMRP, the installation completed the fieldwork for the three EE/CAs.

In FY07, Longhorn AAP transferred 639 acres to FWS. In addition, the installation finalized a report summarizing the environmental condition of Site Longhorn AAP 12. The installation also offered the 51-acre tract, including Site Longhorn AAP 12, to FWS for transfer. Regulators approved proposed plans (PPs) for Sites Longhorn AAP 8, 32, 37, 48, 53, and 67. The installation received regulatory approval for the optimization plan for the groundwater treatment plant (Sites Longhorn AAP 18 and 24). Under the MMRP, the installation completed the EE/CA for three sites and received EPA approval.

In FY08, Longhorn AAP submitted a ROD for five sites (Longhorn AAP 8, 37, 48, 53, and 67) under the Total Environmental Restoration Contract, and eight sites (Longhorn AAP 6, 7, 51, 55, 60, 64, 66, and 68) under the PBC to regulators. The installation finalized the PP for Sites Longhorn AAP 37 and 67. Longhorn AAP completed the second five-year review report of the interim remedies at Sites Longhorn AAP 16, 17, 18, and 24, and the final remedy at Site Longhorn AAP 12. Under the MMRP, Longhorn AAP signed the action memorandum and completed removal actions at two sites. The installation began fieldwork of surface clearance of munitions for approximately 160 acres and clearance beneath the surface for 11 acres.

**FY09 IRP Progress**

Longhorn AAP completed decision documents and RODs for 13 sites. The installation completed the design for cleanup for two sites and the remedial investigation (RI) and FS for six sites. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed the completion of RODs for eight sites.

**FY09 MMRP Progress**

Longhorn AAP completed removal actions at two sites and submitted the data summary report to EPA. The installation found no further cleanup actions were necessary at a third site. The installation completed a ROD for one site.

**Plan of Action**

Plan of action items for Longhorn Army Ammunition Plant are grouped below according to program category.

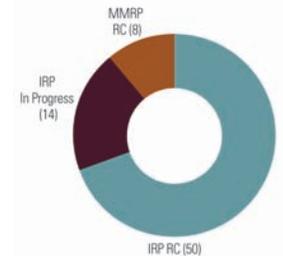
**IRP**

- Complete RI/FS for eight sites in FY10.
- Complete RODs for 11 sites in FY10.
- Complete designs for cleanup and cleanup at four sites in FY10.
- Install and operate cleanup systems at two sites in FY10.

**MMRP**

- Complete PPs and RODs for two sites in FY10.
- Finalize data summary report for two sites in FY10-FY11.

<b>FFID:</b>	ME157002452200	<b>Funding to Date:</b>	\$ 141.2 million
<b>Location (Size):</b>	Limestone, Maine (9,472 acres)	<b>Est. CTC (Comp Year):</b>	\$ 15.3 million (FY 2301)
<b>Mission:</b>	Supported B-52 bombers and KC-135 tankers	<b>IRP Sites (Final RIP/RC):</b>	64 (FY2001)
<b>HRS Score:</b>	34.49; placed on NPL in February 1990	<b>MMRP Sites (Final RIP/RC):</b>	8 (FY1999)
<b>IAG Status:</b>	FFA signed in April 1991; revision signed in 1994	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, POLs, spent solvents, PCBs, pesticides, heavy metals, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-94
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Loring Air Force Base (AFB) was established in 1952 to support bomber and tanker aircraft operations. Sites identified include spill areas, landfills, fire training areas, underground storage tanks, aboveground storage tanks, and low-level radioactive waste areas. The flightline and nose dock areas, where industrial shops and maintenance hangars were located, are the primary areas where wastes were released into soil and groundwater. The potential risk to human health and the environment was significant enough that EPA placed the installation on the NPL in February 1990. DoD and EPA signed a federal facility agreement (FFA) in April 1991, which was last revised in 1994, to outline how they were going to proceed with cleanup. In July 1991, the BRAC Commission recommended closure of the installation; Loring AFB closed in September 1994. In FY94, the installation formed a BRAC cleanup team to develop a process for cleaning up sites at Loring AFB. In FY98, the BRAC cleanup team updated and published the BRAC cleanup plan to prioritize sites requiring environmental restoration. In FY94, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY00 and FY05.

Sites at Loring AFB are grouped into 13 operable units (OUs). To date, 12 Records of Decision, selecting cleanup actions at 9 OUs, have been signed. The Air Force has transferred all property to the Loring Development Authority. In FY04, Loring AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Loring AFB for FY05 through FY08 is summarized below.

In FY05, Loring AFB transferred all remaining property to the Loring Development Authority. The installation performed operations and maintenance (O&M) for all remaining cleanup systems. Loring AFB completed its second five-year review report, and began evaluating requirements at MMRP sites. The RAB and BRAC cleanup team performed community activities.

In FY06, Loring AFB completed cleanup at the Base Laundry. The installation continued to operate, monitor, and optimize

cleanup across the base. Loring AFB began cleaning up the Fuels Tank Farm by excavating approximately 15,000 cubic yards of soil and landfarming it, or spreading the soil in a thin layer and stimulating microbial activity. The installation completed explosives safety certification at all identified sites and continued to evaluate appropriate administrative requirements.

In FY07, Loring AFB continued restoring the Fuels Tank Farm by excavating and landfarming approximately 12,000 cubic yards of soil. The installation completed cleanup of previously identified contamination at the Fuels Tank Farm, although new contamination was found. Loring AFB continued to operate and monitor both cleanup systems and comply with institutional controls that reduce the potential for human exposure.

In FY08, Loring AFB excavated and landfarmed 30,000 cubic yards of fuel-contaminated soil at the nose dock area. The installation improved the former jet engine test cell remedy by fracturing site soils and adding more biovent air injection wells, which increase oxygen flow to stimulate microbial activity. Loring AFB assessed new contamination at the Fuels Tank Farm through a test pit program, and the BRAC cleanup team began developing a cleanup strategy. The installation closed actions for all MMRP sites.

**FY09 IRP Progress**

Loring AFB reviewed contamination at the Fuels Tank Farm and drafted a work plan for its investigation. The installation developed a strategy to evaluate the Entomology Shop/Jet Engine Buildup site and constructed a work plan. Loring AFB continued ongoing O&M and groundwater monitoring.

**FY09 MMRP Progress**

Loring AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Loring Air Force Base are grouped below according to program category.

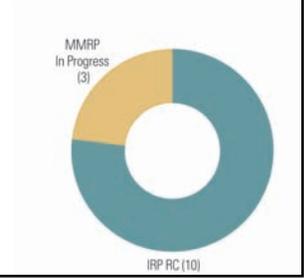
**IRP**

- Complete the installation's third five-year review report in FY10.
- Continue ongoing O&M and monitoring in FY10.
- Complete work plan and begin cleanup of the Fuels Tank Farm contamination in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	LA621382053300	<b>Funding to Date:</b>	\$ 60.4 million
<b>Location (Size):</b>	Doyline, Louisiana (14,974 acres)	<b>Est. CTC (Comp Year):</b>	\$ 0.2 million (FY 2010)
<b>Mission:</b>	Manufacture ammunition metal parts and maintain ammunition production facilities	<b>IRP Sites (Final RIP/RC):</b>	10 (FY2006)
<b>HRS Score:</b>	30.26; placed on NPL in March 1989	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2010)
<b>IAG Status:</b>	IAG signed in 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	TNT, RDX, HMX, oils, grease, degreasers, phosphates, solvents, metal plating sludges, acids, fly ash	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-27
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The mission of Louisiana Army Ammunition Plant (AAP) is to manufacture ammunition parts and maintain ammunition production facilities for the Army. Contaminated sites at the installation include lagoons, burning grounds, and landfills contaminated with explosives and plating wastes. Studies identified groundwater contaminated with the explosive compounds TNT, RDX, and HMX. The potential risk to human health and the environmental was significant enough for EPA to place the installation on the NPL in March 1989. Also in 1989, DoD and EPA signed an interagency agreement (IAG) to outline how they were going to proceed with cleanup. In FY05, the Army transferred Louisiana AAP to the Louisiana Army National Guard. To ensure continuous monitoring and improvement, the installation completed five-year review reports for the the Area P lagoons in FY94 and FY00, and another five-year review report in FY06.

Louisiana AAP has completed two Records of Decision (ROD), selecting cleanup actions for eight sites, and one ROD which required no further cleanup actions at one site. Between FY89 and FY90, Louisiana AAP incinerated almost 102,000 tons of explosives-contaminated soil and treated more than 53 million gallons of contaminated water. In FY03, Louisiana AAP conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Louisiana AAP for FY05 through FY08 is summarized below.

In FY05, the installation completed the remedial investigation (RI) for Sites 09 and 10. In accordance with a Congressional directive, the Army transferred the installation to the Louisiana Army National Guard.

In FY06, Louisiana AAP completed a five-year review report. The installation also completed the ROD for soils at Site 09, and a draft feasibility study (FS) to evaluate cleanup alternatives for groundwater at Site 09. Louisiana AAP held public meetings to discuss the proposed plans (PPs) for soil and groundwater treatment. Under the MMRP, Louisiana AAP briefed stakeholder on the results of the site inspection.

In FY07, Louisiana AAP completed the FS for soil and groundwater at Site 09; these sites require no further

construction of cleanup systems, or have all cleanup actions complete.

In FY08, Louisiana AAP completed a performance-based contract.

**FY09 IRP Progress**

Louisiana AAP continued groundwater monitoring and completed long-term management and long-term optimization. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Louisiana AAP is investigating three sites: Central Proving Ground, Burning Ground 5, and the Small Arms Pistol Range. The installation decided not to complete the FS and will evaluate cleanup alternatives under PPs.

Regulatory issues delayed completing the RI.

**Plan of Action**

Plan of action items for Louisiana Army Ammunition Plant are grouped below according to program category.

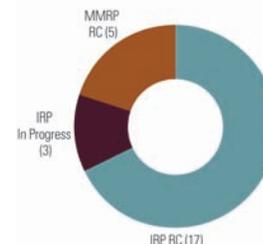
**IRP**

- Complete all cleanup activities in FY10.
- Prepare the five-year review report for all sites in FY10-FY11.

**MMRP**

- Complete the RI, PP, and ROD in FY10.
- Transfer control of environmental activities to the Louisiana Army National Guard in FY10-FY11.

<b>FFID:</b>	CO857002413000	<b>Funding to Date:</b>	\$ 102.2 million
<b>Location (Size):</b>	Denver, Colorado (1,866 acres)	<b>Est. CTC (Comp Year):</b>	\$ 0.0 million (FY 2017)
<b>Mission:</b>	Served as Air Force technical training center	<b>IRP Sites (Final RIP/RC):</b>	20 (FY2012)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	5 (FY2007)
<b>IAG Status:</b>	IAG under negotiation	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	General refuse, fly ash, coal, metals, fuels, VOCs, solvents, TCE, petroleum hydrocarbons, SVOCs, waste oil	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-15
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Lowry Air Force Base (AFB) supported the 3400 Technical Training Wing. Environmental sites at the former base include fire training areas, landfills (LFs), a fly ash disposal area, coal storage yards, and underground storage tanks. An Interagency Agreement (IAG) between DoD and EPA to outline how they are going to proceed with cleanup is currently under negotiation. In 1991, the BRAC Commission recommended closure of all but 108 of the 1,866 acres at Lowry AFB. The base closed in September 1994. The 76-acre Defense Finance and Accounting Service and the Air Force Reserve Personnel Center, also known as Buckley Annex, remained at Lowry until the 2005 BRAC Commission recommended it for closure. The installation's Restoration Advisory Board (RAB), formed to discuss cleanup progress with the community, began receiving funding for technical assistance for public participation in FY99. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY09.

In FY04, Lowry AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Lowry AFB for FY05 through FY08 is summarized below.

In FY05, the installation finalized its assessment of RCRA facilities and removed all polychlorinated biphenyls (PCBs) from Building 402. Lowry AFB conducted quarterly monitoring for radioactive parameters at the LF. The installation investigated and then removed a previously abandoned septic tank near Dayton Street. The installation also removed asbestos-containing materials discovered in soil. Lowry AFB began negotiating an agreement to privatize the remaining environmental cleanup and property transfers.

In FY06, the installation signed a comprehensive agreement to privatize the remaining cleanup of sites suspected to contain contamination for the Installation Restoration Program (IRP) and MMRP sites. Regulators concurred with Lowry AFB that no further cleanup action would be necessary to establish a foreign trade zone, where special customs procedures will apply, pending completion of soil removal, confirmation sampling, and site restoration. Regulators also approved the installation's final reports for the LF cap construction. Lowry AFB abandoned two

deep wells. The installation completed the follow-up investigations at suspected Waste Area PAA 2 and determined that no further action was required. The installation conducted long-term management (LTM) at the LF and Building 606, the investigation at Building 1432, the cleanup of asbestos in soil at various areas, and payments for the privatization cooperative agreements. Lowry AFB completed the first phase and began the second phase of in-place chemical oxidation treatment of chlorinated solvents in groundwater and shut down two active cleanup systems at Operable Unit (OU) 5. The installation completed a risk assessment simulation study to evaluate the risk to human health associated with asbestos in soil at Filing 28. Lowry AFB submitted the final report on quarterly monitoring for radioactive parameters at the LF zone to regulators. Under the MMRP, the installation performed clearance and soil excavation at the outdoor firing range; the site requires no further cleanup actions. The RAB met monthly.

In FY07, Lowry AFB continued monitoring and treating chlorinated solvents in groundwater, the investigation at Building 1432, and LTM at the LF and Building 606. The installation completed cleanup and documented no further cleanup action was necessary for Buildings 777 and 898. Lowry AFB continued the cleanup privatization payments to the local redevelopment authority, and sampled and abated asbestos in soils at the Filing 28 Area and Parcel T. The installation evaluated requirements at MMRP sites. Lowry AFB closed the outdoor firing range.

In FY08, Lowry AFB completed its five-year review report and submitted the report for signature. The installation made the final specified privatization payment to the local redevelopment authority and continued to coordinate with regulators as needed. Lowry AFB assessed asbestos soil contamination and performed cleanup to facilitate redevelopment. The installation continued periodic LF maintenance and monitoring, and no further cleanup action was required at Buildings 606 or 898. Lowry AFB continued to oversee MMRP site management; no sites required closure. The installation continued groundwater cleanup at OU 5. The installation assessed the cleanup program status with the RAB.

**FY09 IRP Progress**

The Air Force Real Property Agency Director signed and issued the final five-year review report. Lowry AFB obtained state concurrence of the RCRA Facilities Assessment Addendum report, a report which evaluated historical data used to assess potential environmental concerns. The installation continued OU 5 groundwater cleanup, and LF maintenance and monitoring. Lowry AFB continued assessing asbestos in soil contamination and conducted cleanup as required. Regulators and the RAB continued involvement with cleanup at the installation. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed closing existing RCRA compliance order.

**FY09 MMRP Progress**

Lowry AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Lowry Air Force Base are grouped below according to program category.

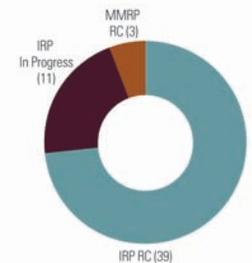
**IRP**

- Obtain regulatory closure of existing RCRA compliance order in FY10.
- Continue OU 5 groundwater cleanup in FY10-FY11.
- Continue LF maintenance and monitoring in FY10-FY11.
- Continue assessing asbestos contamination in soil and cleanup as required in FY10-FY11.
- Continue regulatory and RAB involvement in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA957212452700	<b>Est. CTC (Comp Year):</b>	\$ 31.6 million (FY 2021)
<b>Location (Size):</b>	Riverside, California (6,606 acres)	<b>IRP Sites (Final RIP/RC):</b>	50 (FY2010)
<b>Mission:</b>	Maintain, repair, and refuel aircraft	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY1999)
<b>HRS Score:</b>	31.94; placed on NPL in November 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in September 1990	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-30
<b>Contaminants:</b>	VOCs, POLs, PCBs, SVOCs, metals, explosives, propellants		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 157.2 million		



**Progress To Date**

March Air Force Base (AFB) was established as an Army Air Service airfield in 1918 and became an Air Force installation in 1948. Investigations have identified fire training areas (FTAs), inactive landfills (LFs), underground storage tanks, an engine test cell, sludge drying beds at a sewage treatment plant, and various spill sites. The potential risk to human health and the environment was significant enough for EPA to place March AFB on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in September 1990 to outline how they were going to proceed with cleanup. The Air Force Reserve Command (AFRC) and the Air Force Real Property Agency (AFRPA) signed a memorandum of agreement in FY99 for sharing environmental responsibility. In July 1993, the BRAC Commission recommended realignment of the installation. Following realignment in April 1996, the Air Force retained approximately 2,074 acres as March Air Reserve Base, and the Army and the Navy retained several smaller parcels totaling 95 acres. The installation has transferred the remaining 4,439 acres to the local redevelopment authority, and federal and local government agencies. In 2005, the BRAC Commission recommended the installation for further realignment. In FY94, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB). To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY03 and FY09.

March AFB has grouped Installation Restoration Program (IRP) sites into three Operable Units (OUs): OUs 1, 2, and 4. The installation has signed Records of Decision (RODs), which selected cleanup actions for 25 AFRC IRP sites and 21 BRAC IRP sites. In FY04, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP). Cleanup progress at March AFB for FY05 through FY08 is summarized below.

In FY05, March AFB finalized the OU 4 ROD and the ROD for OU 2 Sites 1, 11, 37, and 39. AFRC began to resolve data gaps at Sites 8 and 36. AFRPA completed additional fieldwork and submitted the Weapon Storage Area preliminary assessment (PA) and site inspection (SI) draft report. The installation

performed cleanup operations at two LFs and Building 550, and monitored groundwater. AFRPA confirmed no further construction of cleanup systems is required at the final BRAC IRP site and began evaluating requirements at MMRP sites. The RAB met four times.

In FY06, March AFB continued cleanup operations at two LFs and Building 550. March AFB also continued the groundwater monitoring program. AFRPA began a PA/SI at Area of Concern (AOC) 048, a potential source of groundwater contamination on the eastern boundary of the installation. AFRPA also began to reevaluate the Site 4 LF remedy after the level of nearby groundwater rose. AFRC completed fieldwork for Sites 8 and 36, and stopped treatment at Site 2. AFRPA completed MMRP requirement evaluations, and either administratively closed or determined, with regulatory concurrence, that no further action would be required at any MMRP sites. The RAB met twice.

In FY07, March AFB continued the cleanup operations at two LFs and Building 550. AFRPA completed the PA/SI at AOC 048 (FTA 007) and the evaluation of cleanup at Site 4. March AFB installed two extraction wells and two monitoring wells at Storage Tank (ST) 048 (Building 550). AFRPA transferred the remaining BRAC property at March AFB. The AFRC completed closure documentation for Site 2, issued draft remedial investigation (RI) and feasibility study (FS) reports for Sites 8 and 36 to collect data and evaluate cleanup alternatives. The installation shut down the Site 27 soil vapor extraction (SVE) system, and confirmed significant amounts of fuel had been removed. March AFB completed a cleanup improvements study of the expanded groundwater extraction and treatment system, and continued groundwater monitoring.

In FY08, regulators concurred that no further cleanup action was required for Sites 12 and 27. The installation completed active cleanup at Site 33. March AFB continued cleanup operations at the LFs and Building 550, and continued groundwater monitoring. The installation prepared closure documentation and obtained closure for the three MMRP sites on BRAC property.

**FY09 IRP Progress**

March AFB completed the second five-year review report. The installation revised the cleanup plan for ST 048 (Building 550)

to apply only to groundwater monitoring. March AFB drafted an explanation of significant differences with the OU 1 ROD at FTA 007, and submitted it to regulators. Cleanup operations continued at Site 4. Regulators determined the Site 4 decision document and draft design were not required. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed the completion of Building 550 cleanup operations.

**FY09 MMRP Progress**

March AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for March Air Force Base are grouped below according to program category.

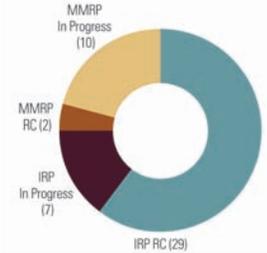
**IRP**

- Complete RI/FS and pilot study at Sites 8 and 36 in FY10.
- Install SVE system for trichloroethylene (TCE) at FTA 007 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA917002477500	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Vallejo, California (5,293 acres)	<b>Funding to Date:</b>	\$ 232.8 million
<b>Mission:</b>	Maintained and repaired ships and provided logistical support for assigned ship and service craft	<b>Est. CTC (Comp Year):</b>	\$ 53.3 million (FY 2014)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	36 (FY2013)
<b>IAG Status:</b>	FFSRA signed in September 1992; renegotiated in July 2002	<b>MMRP Sites (Final RIP/RC):</b>	12 (FY2014)
<b>Contaminants:</b>	Heavy metals, VOCs, PCBs, pesticides, petroleum hydrocarbons, lead oxides, UXO, SVOCs, explosives, propellants	<b>Five-Year Review Status:</b>	Planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-24



**Progress To Date**

Mare Island Naval Shipyard (NSY) maintained and repaired ships and provided logistical support for assigned ship and service craft. Investigations of chemical and munitions contamination began in FY80. Ordnance sites include dredge ponds, storage areas, and the production area. The installation identified munitions of concern at four off-shore areas. DoD and EPA signed a Federal Facility Agreement (FFA) in September 1992, which was last amended in July 2002, to outline how they were going to proceed with cleanup. In July 1993, the BRAC Commission recommended closure of Mare Island NSY and relocation of the Combat Systems Technical School's Command Activity to Dam Neck, Virginia. The installation closed in FY96. The installation converted its technical review committee, responsible for communicating cleanup progress with the community, into a Restoration Advisory Board (RAB) in FY94. An administrative record and information repository were established in FY90. The installation completed its community relations plan in FY92, which was updated in FY94 and again in FY01. The RAB received funding for technical assistance for public participation in FY99, FY02, and FY03.

To date, the installation has transferred approximately 4,000 acres. The Navy has issued a No Further Action (NFA) Record of Decision (ROD), which determined no further cleanup activities were necessary for Installation Restoration Program (IRP) site 22, and a ROD for the H1 landfill area. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Mare Island NSY for FY05 through FY08 is summarized below.

In FY05, Mare Island NSY completed the planning documents and action memo for the removal action at the Defense Reutilization Marketing Office (DRMO) site, and began cleanup work. The installation responded to and disposed of discovered munitions and explosives of concern (MEC).

In FY06, Mare Island NSY completed the remedial investigation (RI) and feasibility study (FS) to evaluate cleanup alternatives, and finalized the ROD for the H1/landfill area. The installation found the elementary school site and Parcel XV B2 suitable for transfer. The installation also completed the Marine Corps firing

range removal action and began MEC validation surveys and investigations for off-shore and on-shore sites from the Production and Manufacturing Area to the Western Magazine Area. The RAB met monthly. The BRAC cleanup team evaluated cleanup and developed the site management plan.

In FY07, Mare Island NSY continued implementation of the final remedy of the H1/landfill area. The installation completed the removal action and submitted a technical memorandum for the DRMO site. Additionally, Mare Island NSY completed MEC validation surveys and investigations for off-shore and on-shore MEC sites at the Production and Manufacturing, Western Magazine, and South Shore Areas. The installation began time-critical removal actions at Area F2 (IRP Site 4), Horse Stables Area, and the Paint Waste Area. The BRAC cleanup team continued to meet, evaluate cleanup, and develop the site management plan.

In FY08, Mare Island NSY abandoned options for an early transfer agreement for the remaining economic development conveyance parcels due to cost considerations. The installation also completed the report for the removal action at the Marine Corps firing range and the revised RI for Investigation Area (IA) A2. Mare Island NSY conducted sampling for the baseline assessment of potential risks to the environment at IA K. The installation also continued investigation of the DRMO petroleum and sampled groundwater at IA F1. In addition, Mare Island NSY closed the interior of the J-lines (pipelines connected to the former wastewater treatment plant) and received regulatory concurrence for no further action. The installation began time-critical removal actions at Site 4, Horse Stables Area, and Paint Waste Area. The Mare Island NSY BRAC cleanup team continued to develop the strategy for the MEC removal action within the Production and Manufacturing and Western Magazine Areas. The installation held regular BRAC cleanup team and RAB meetings.

**FY09 IRP Progress**

Mare Island NSY completed the technical memorandum to remove the total petroleum hydrocarbons at the DRMO site and began fieldwork at the site. The installation issued a proposed plan for no further action at IA A2. Additionally, Mare Island NSY completed an engineering evaluation and cost analysis (EE/CA) and action memo for Site 17. The installation

completed an EE/CA for the Production and Manufacturing and Western Magazine Areas, and Building 742. The installation also developed a revised site management plan. At the Paint Waste Area, the installation issued an amendment to the action memo, revised the work plan to perform a removal action, and began fieldwork for contaminated soil, radiological, and MEC items. The cost of completing environmental restoration has changed significantly due to technical issues.

Administrative issues delayed the final remedy and closure for the H1/landfill area.

The BCT continued to meet. The RAB held monthly meetings, site tours, and various community events.

**FY09 MMRP Progress**

Mare Island NSY submitted the EE/CA and action memo for the Production and Manufacturing and South Shore Areas; however, regulatory issues delayed concurrence. Technical issues delayed the technical memorandum to detect MEC.

**Plan of Action**

Plan of action items for Mare Island Naval Shipyard are grouped below according to program category.

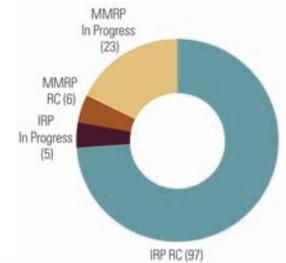
**IRP**

- Complete final remedy and closure for H1/landfill area in FY10.
- Complete cleanup at the DRMO area in FY10.
- Complete the RI for the CERCLA contaminants in the off-shore IA K area in FY10-FY11.
- Complete ROD determining no further action for IA A2 in FY10-FY11.

**MMRP**

- Complete the technical memorandum to detect MEC in FY10.
- Formulate and obtain concurrence for the EE/CA in the Production Manufacturing and South Shore Areas in FY10-FY11.

<b>FFID:</b>	VA317302472200	<b>Funding to Date:</b>	\$ 69.2 million
<b>Location (Size):</b>	Quantico, Virginia (60,000 acres)	<b>Est. CTC (Comp Year):</b>	\$ 37.8 million (FY 2021)
<b>Mission:</b>	Provide military training and support research, development, testing, and evaluation of military hardware	<b>IRP Sites (Final RIP/RC):</b>	102 (FY2012)
<b>HRS Score:</b>	50.00; placed on NPL in June 1994	<b>MMRP Sites (Final RIP/RC):</b>	29 (FY2020)
<b>IAG Status:</b>	FFAs signed in December 1991 and February 1999	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	PCBs, pesticides, VOCs, SVOCs, phenols, heavy metals, petroleum hydrocarbons, arsenic, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-174
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Marine Corps Base (MCB) Quantico's mission is to support training for general combat by providing a varied background in tactical operations and performing research and development of Marine Corps equipment. MCB Quantico operated a municipal landfill throughout the 1970s. After the landfill closed, the area was used as a scrap yard. Sites at the installation include surface disposal areas, underground storage tanks, and disposal pits that contain contaminated soil, surface water, and sediment. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in June 1994. DoD and EPA signed federal facility agreements (FFAs) in December 1991 and in February 1999 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended MCB Quantico for realignment. The installation formed a technical review committee in FY89, which is responsible for communicating cleanup progress with the community. In FY92, the installation established three information repositories, each containing a copy of the administrative record. The installation completed a community relations plan in FY95, which was updated in FY03. To ensure continuous monitoring and improvement, the installation completed five-year review reports for Site 4 in FY02 and FY08.

EPA has identified 303 areas of concern (AOCs) at the installation. MCB Quantico currently recognizes Installation Restoration Program (IRP) sites and RCRA solid waste management units (SWMUs) at the installation. The installation signed No Further Action Records of Decision (RODs), which determined that no further cleanup actions were necessary for Sites 1 and 5 in FY00, and Site 17 in FY01. The installation also signed three RODs for Site 9 and Multi-Site (M13). In FY02, MCB Quantico conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at MCB Quantico for FY05 through FY08 is summarized below.

In FY05, MCB Quantico completed environmental engineering and cost analyses, and interim cleanup at four sites. The installation issued a final site inspection (SI) for the Potomac River sediments.

In FY06, MCB Quantico completed interim cleanup and required no further construction of cleanup systems at six sites. The installation also achieved closeout for six IRP sites. Additionally, the installation began a treatability study (TS) and interim cleanup at one groundwater site. Under the MMRP, the installation awarded and began work on an SI for MMRP sites on the base.

In FY07, MCB Quantico completed interim cleanup at Sites 9 and 95, and closed eight sites. The installation also finalized two RODs for Sites 5 and 20.

In FY08, MCB Quantico signed three RODs for Sites 4, 95, and Multi-Site (8, 9, 10, 21, 32, 34, and 98). MCB Quantico completed a second five-year review report for Site 4.

**FY09 IRP Progress**

MCB Quantico continued to finalize work plans for Site 99/96 (Quantico Embayment) and awarded the Phase II cleanup contract. The installation split Site 100 into two sites (Sites 100 and 102) as a result of long-term management (LTM) plan requirements. The cost of completing environmental restoration has changed significantly due to technical issues.

Technical issues delayed the completion of RODs for the two new sites.

**FY09 MMRP Progress**

MCB Quantico completed the MMRP work plan. The installation started fieldwork and began drafting the uniform federal policy quality assurance plans for the SI work plan and SI report.

**Plan of Action**

Plan of action items for Marine Corps Base Quantico are grouped below according to program category.

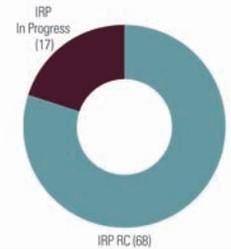
**IRP**

- Finalize three proposed plans, three LTM plans, design for cleanup at two sites (including the Quantico Embayment), and one TS work plan in FY10.
- Complete cleanup at Site 99/96 (Quantico Embayment) in FY10-FY11.
- Sign RODs for Site 100 (Chopawamsic Creek), Site 102 (Abraham's Creek), Site 99/96 (Quantico Embayment), and Multi-site M13 in FY10-FY11.

**MMRP**

- Complete quality assurance plans for the SI work plan and SI report in FY10.
- Complete SIs at all sites in FY10-FY11.

<b>FFID:</b>	MA157282448700	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Falmouth, Massachusetts (22,000 acres)	<b>Funding to Date:</b>	\$ 693.9 million
<b>Mission:</b>	Provide Army and Air National Guard training and support the East Coast Air Defense and Coast Guard Air and Sea Rescue Units	<b>Est. CTC (Comp Year):</b>	\$ 228.7 million (FY 2055)
<b>HRS Score:</b>	45.93; placed on NPL in November 1989	<b>IRP Sites (Final RIP/RC):</b>	85 (FY2009)
<b>IAG Status:</b>	FFA signed in July 1991; last amended in June 2002	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Waste solvents, VOCs, pesticides, metals, SVOCs, explosives, propellants, petroleum-related compounds, PAHs, phenols	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-100



**Progress To Date**

Massachusetts Military Reservation (MR) provides Army and Air National Guard training, and supports the East Coast Air Defense and Coast Guard Air and Sea Rescue Units. Sites at Massachusetts MR include chemical spill (CS) sites, fuel spill sites, storm drains, landfills (LFs), and former firefighter training areas. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in July 1991, which was last amended in June 2002, to outline how they were going to proceed with cleanup. Massachusetts MR formed a Restoration Advisory Board in January 1993 to discuss the installation’s cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY97, FY03, and FY08.

To date, the installation signed Records of Decision (RODs), interim RODs, and decision documents (DDs), which selected cleanup actions for 85 sites; 66 sites have closed. In FY05, Massachusetts MR conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response program (MMRP); no MMRP sites were identified. Cleanup progress at Massachusetts MR for FY05 through FY08 is summarized below.

In FY05, the installation completed removal actions at two sites, completed Phases I and II removal actions at the CS 19 unexploded ordnance (UXO) disposal site, issued cleanup reports for five sites, closed three sites, and determined that no further cleanup actions were necessary at two groundwater sites. The installation also decommissioned a soil vapor extraction (SVE) system. Massachusetts MR continued monitoring, operation, and optimization of eight groundwater treatment systems and an SVE system.

In FY06, Massachusetts MR completed construction on its largest groundwater treatment system, which treats over 4.7 million gallons per day from four sites. Massachusetts MR continued monitoring, operating, and optimizing eight groundwater treatment systems with a combined capacity of over 17 million gallons per day. The installation completed two RODs; one interim ROD, and one DD; resulting in three closed sites, cleanup completion for one site, and installed cleanup

systems at one site. The installation also completed cleanup at Fuel Spill (FS) site 25 and CS 14, and began operating cleanup systems at CSs 4, 20, and 21, and FS 29. Massachusetts MR completed the Phase III removal action at the CS 19 UXO disposal site, and determined that no further cleanup action was necessary for the CS 13 groundwater site. Massachusetts MR submitted an NPL delisting package for 63 sites to EPA.

In FY07, Massachusetts MR completed construction of all groundwater treatment systems and finalized RODs for LF 1 and CS 23. The Air Force Center for Engineering and the Environment awarded a contract for a utility-class wind turbine to offset the large electricity demand of the eight groundwater treatment systems. The installation installed an additional extraction well at the FS 28 groundwater contaminated area, which required six off-base easements. EPA published a notice of partial NPL delisting for 61 Massachusetts MR sites.

In FY08, Massachusetts MR completed its third five-year review report. The installation began a new land use control program that restricted access to the site and addressed potential exposure to off-base contaminated groundwater from legacy private wells. The installation also continued the CS 19 source area removal action, including the removal and disposal of over 2,000 tons of soil. Massachusetts MR determined two potential MMRP sites were ineligible, as they were located on operational range property.

**FY09 IRP Progress**

Massachusetts MR completed RODs for contaminated groundwater at the Ashumet Valley and CSs 10 and 19. The installation completed cleanup construction or removal actions required by the RODs. No further construction of cleanup systems is required; the installation is operating on- and off-base pump-and-treat systems at 12 groundwater cleanup sites. Massachusetts MR also completed DDs for Ashumet Valley and CSs 10, 18, 19. The installation completed the required removal action at CS 18. Massachusetts MR required no further construction of cleanup systems at all sites. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical issues delayed construction of the wind turbine.

**FY09 MMRP Progress**

Massachusetts MR conducted a historical records review at Otis Air National Guard Base. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

**Plan of Action**

Plan of action items for Massachusetts Military Reservation are grouped below according to program category.

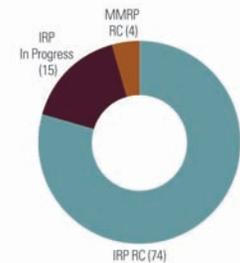
**IRP**

- Complete construction of the wind turbine and use State grant to connect it to the grid in FY10.
- Evaluate potential for additional wind turbines in FY10.
- Complete private well verifications for the LF 1 and CS 23 contaminated areas in FY10.
- Establish a collaborative and repeatable approach for system optimizations with regulatory agencies in FY10.
- Operate an effective groundwater system which protects human health and the environment in FY10-FY11.

**MMRP**

- Conduct a preliminary assessment for sites identified in the historical records review in FY10-FY11.

<b>FFID:</b>	CA957002474300	<b>Funding to Date:</b>	\$ 204.4 million
<b>Location (Size):</b>	Sacramento, California (5,718 acres)	<b>Est. CTC (Comp Year):</b>	\$ 69.2 million (FY 2067)
<b>Mission:</b>	Provided navigation and electronic warfare officer training; housed SAC Bombing and Refueling Squadron	<b>IRP Sites (Final RIP/RC):</b>	89 (FY2006)
<b>HRS Score:</b>	28.90; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	4 (FY2009)
<b>IAG Status:</b>	IAG signed in 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, SVOCs, metals, solvents, jet fuel, petroleum hydrocarbons, lead, PCBs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-30
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Before becoming inactive in FY93, Mather Air Force Base (AFB) housed the 323rd Flying Training Wing, a Strategic Air Command (SAC) Wing, a Reserve air refueling group, and an Army National Guard aviation unit. Site types include landfills (LFs), underground storage tanks, fire training areas (FTAs), a trichloroethylene (TCE) disposal site, a weapons storage area, wash rack areas, spill areas, and waste pits (WPs). The potential risk to human health and the environment was significant enough for EPA to place Mather AFB on the NPL in July 1987. In 1989, DoD and EPA signed an interagency agreement (IAG) to outline how they were going to proceed with cleanup. The BRAC Commission recommended closure of Mather AFB in December 1988. In FY94, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. In the same year, the installation formed a BRAC cleanup team to develop a process for cleanup of sites at Mather AFB. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY00 and FY05.

Mather AFB grouped sites into six operable units (OUs): OU 1, Aircraft Control and Warning Site; OU 2, Groundwater; OU 3, Soil; OU 4, LF; OU 5, Basewide; and OU 6, Supplemental Basewide. Mather AFB has signed Records of Decision (RODs) selecting cleanup actions for OUs 1 through 6. In FY04, Mather AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Mather AFB from FY05 through FY08 is summarized below.

In FY05, Mather AFB began operating a new extraction well in the southwest part of the Main Base/SAC Area. The installation operated the existing groundwater and soil vapor extraction (SVE) systems. Mather AFB obtained concurrence on the second five-year review report. The installation began evaluating requirements at MMRP sites. The RAB and BRAC cleanup team performed community activities.

In FY06, Mather AFB continued to operate existing groundwater and SVE systems. The installation collected site information on the remaining 13 active SVE sites. Mather AFB completed the final OU 6 ROD and verified that no further

construction of cleanup systems was required. The installation continued to evaluate requirements at MMRP sites. RAB and BRAC cleanup team activities continued.

In FY07, the Mather AFB continued to operate existing groundwater and SVE systems. The installation reinstalled the groundwater cleanup system at WP 007 and installed an additional monitoring well at the southwest part of the Main Base/SAC Area to assist in determining the location for a new extraction well. Under the MMRP, Mather AFB began investigating if the practice grenade range site (Ordnance Area [XU] 400) could be closed.

In FY08, Mather AFB continued to operate existing groundwater and SVE systems and installed an additional extraction well at the southwest part of the Main Base/SAC Area. Mather AFB also installed 105 additional SVE monitoring and extraction wells, and 21 additional groundwater monitoring wells. The installation finalized the lead removal work plan at FTA 010C. Under the MMRP, Mather AFB completed the site inspection (SI) work plans for the remaining sites.

**FY09 IRP Progress**

Mather AFB has obtained EPA concurrence of construction complete at all cleanup systems. The installation completed excavating lead at FTA 010C. Mather AFB installed 15 groundwater monitoring wells, and decommissioned 44 groundwater monitoring wells and 8 injection wells. The installation sampled 15 private water wells adjacent to the base. Mather AFB completed the first revision of the Mather Off-base Water Supply Contingency Plan, and submitted several reports for regulatory review: two explanations of significant differences, which clarified institutional controls (ICs) in two RODs and added new ICs to prevent human exposure to indoor air contamination; closure reports for LF 018, FTA 010C, and Storage Tank (ST) 068; a determination that the Northeast Plume (LF 004) cleanup is operating properly and successfully; a capture-zone analysis for WP 007 groundwater cleanup to report on all the water controlled by an extraction well system; and updates to the capture-zone analysis for the Main Base/SAC Area groundwater cleanup. Mather AFB conducted a pump test of perched water, or water that is above the regional water table, and determined that perched water does not need to be removed from the vicinity of WP 007. The cost of

completing environmental restoration has changed significantly due to changes in estimating criteria.

RAB and BRAC cleanup team activities continued.

**FY09 MMRP Progress**

Mather AFB completed clearing fields at Unexploded Munitions (XU) site 400. The installation continued to evaluate the practice bomb range (XU 403) for closure.

Regulatory issues delayed completion of the SI documentation at remaining MMRP sites.

**Plan of Action**

Plan of action items for Mather Air Force Base are grouped below according to program category.

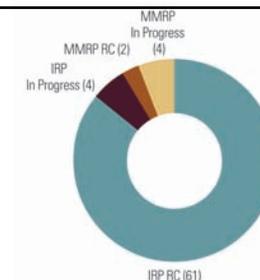
**IRP**

- Solicit performance-based contract in FY10.
- Complete third five-year review report in FY10.
- Achieve operating properly and successfully concurrence for LF 004 in FY10.
- Submit operating properly and successfully documentation for remainder of Groundwater OU in FY10-FY11.

**MMRP**

- Complete SIs and close XU 400 and XU 403 in FY10.

<b>FFID:</b>	WA057182420000	<b>Media Affected:</b>	Groundwater and Soil
<b>Location (Size):</b>	Tacoma, Washington (4,616 acres)	<b>Funding to Date:</b>	\$ 28.3 million
<b>Mission:</b>	Provide airlift services for troops, cargo, and equipment	<b>Est. CTC (Comp Year):</b>	\$ 2.9 million (FY 2044)
<b>HRS Score:</b>	31.94 (Area D/American Lake Garden Tract); placed on NPL in September 1984; 42.24 (Washrack/Treatment Area); placed on NPL in July 1987 and delisted from NPL in September 1996	<b>IRP Sites (Final RIP/RC):</b>	65 (FY2004)
<b>IAG Status:</b>	FFA signed in August 1989; consent decree with State of Washington signed in February 1992	<b>MMRP Sites (Final RIP/RC):</b>	6 (FY2015)
<b>Contaminants:</b>	VOCs, SVOCs, metals, radioactive waste	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-57



**Progress To Date**

McChord Air Force Base (AFB) provides airlift services for troops, cargo, equipment, and mail. Sites at the installation include fire training areas, spill sites (SSs), landfills (LFs), and waste pits (WPs). The potential risk to human health and the environment was significant enough for EPA to place two sites on the NPL: the Area D/American Lake Garden Tract (ALGT) in September 1984, and the Washrack Treatment Area in July 1987. DoD and EPA signed a federal facility agreement (FFA) in August 1989 to outline how they were going to proceed with cleanup. In 1992, the installation signed a consent decree with the State of Washington. EPA delisted the Washrack Treatment Area from the NPL in September 1996. In 2005, the BRAC Commission recommended McChord AFB for realignment. To ensure continuous monitoring and improvement, the installation completed five-year review reports for the Washrack Treatment Area in FY99 and FY04, and for Area D/ALGT in FY00 and FY05.

McChord AFB has identified 65 Installation Restoration Program (IRP) sites since 1982. The installation evaluated 64 sites and installed several cleanup systems as required by the individual cleanup action plans. Six sites are currently listed on the State's hazardous sites list and are managed through long-term monitoring and natural cleanup processes. To date, the installation has treated 600 million gallons of groundwater and recovered 52 pounds of trichloroethylene (TCE) at Area D/ALGT. The installation signed a Record of Decision (ROD) for the Washrack Treatment Area and Area D/ALGT, which selected cleanup actions for these sites. The installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at McChord AFB for FY05 through FY08 is summarized below.

In FY05, McChord AFB completed its second five-year review report and finalized a study to optimize cleanup at Area D/ALGT. The installation monitored progress of SS 34N cleanup and optimized the site inspection (SI) execution strategy. McChord AFB began the preliminary assessments (PAs) for all MMRP sites.

In FY06, McChord AFB pursued options for delisting Area D/ALGT from the NPL. The installation extended the monitoring of progress and refined the SI optimization for SS 34N.

In FY07, McChord AFB continued SS 34N SI optimization. The installation conducted long-term monitoring and cleanup using natural processes at all sites. McChord AFB conducted operation and maintenance for Area D/ALGT and redirected NPL delisting efforts for the site. The installation began dialogue with the State to delist LFs 01 and 02, and Disposal Pit (DP) 61 and WP 64. McChord AFB completed the PAs for all MMRP sites.

In FY08, McChord AFB removed insecticide-contaminated soil from WP 64 and submitted a cleanup report to the State of Washington. The installation continued the SS 34N SI optimization. McChord AFB began the SI for MMRP sites.

**FY09 IRP Progress**

McChord AFB conducted pump-and-treat operations at Area D/ALGT and planned for enhanced natural cleanup. The installation plans to use bio-enhancement to increase the population of resident TCE-reducing bacteria to accelerate cleanup at Area D/ALGT. The installation also continued SS 34N SI optimization and solution injections to reduce the levels of TCE in the contaminated groundwater area. McChord AFB monitored natural cleanup of three petroleum contaminated sites. McChord AFB submitted a Model Toxics Control Act delisting request for LFs 01 and 02, and DP 61 and WP 64 to the State of Washington. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

McChord AFB completed SI fieldwork and began lead cleanup at two ranges and munitions clearing at three sites.

**Plan of Action**

Plan of action items for McChord Air Force Base are grouped below according to program category.

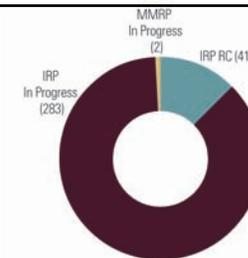
**IRP**

- Continue pump-and-treat operations at Area D/ALGT in FY10.
- Continue monitoring SS 34N optimization progress in FY10.
- Revise long-term monitoring program in FY10.
- Complete third five-year review report in FY10.
- Transfer environmental restoration responsibilities to Fort Lewis in FY11.

**MMRP**

- Finish lead cleanup at two ranges and clear munitions at three sites in FY10.

<b>FFID:</b>	CA957172433700	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Sacramento, California (3,452 acres)	<b>Funding to Date:</b>	\$ 622.2 million
<b>Mission:</b>	Provided logistics support for aircraft, missile, space, and electronics programs	<b>Est. CTC (Comp Year):</b>	\$ 444.4 million (FY 2066)
<b>HRS Score:</b>	57.93; placed on NPL in July 1987	<b>IRP Sites (Final RIP/RC):</b>	324 (FY2015)
<b>IAG Status:</b>	FFA signed in May 1990	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2011)
<b>Contaminants:</b>	Metals, cleaners and degreasers, paints, lubricants, photochemicals, phenols, SVOCs, solvents, PCBs, VOCs, radioactive material, explosives, propellants	<b>Five-Year Review Status:</b>	Underway and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-30



**Progress To Date**

The mission of the former McClellan Air Force Base (AFB) was to provide support for aircraft, missile, space, and electronics programs. Environmental contamination at McClellan AFB has resulted from sumps associated with industrial operations, landfills (LFs), leaks from industrial waste lines, surface spills, and underground storage tanks. The contaminated areas total over 660 acres and consist primarily of trichloroethylene (TCE)-contaminated groundwater. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in May 1990 to outline how they were going to proceed with cleanup. In 1995, the BRAC Commission recommended the closure of McClellan AFB. The installation has formed a BRAC cleanup team to develop a process for cleanup of sites. In FY93, the installation converted its technical review committee, responsible for communicating cleanup progress with the community, into a Restoration Advisory Board (RAB). To ensure continuous monitoring and improvement, McClellan AFB completed two five-year review reports in FY04.

Sites at the installation are grouped into 11 Operable Units (OUs), including an OU for groundwater at base. McClellan AFB has signed six Records of Decision (RODs), which selected cleanup actions at four OUs. The installation has transferred 530 acres, and found another 600 suitable for transfer in FY09. In FY04, McClellan AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at McClellan AFB for FY05 through FY08 is summarized below.

In FY05, McClellan AFB completed the third phase of construction on a groundwater system. The installation awarded a contract guaranteeing cleanup and closure of the Davis Site. The installation held ongoing BRAC cleanup team and RAB activities.

In FY06, McClellan AFB completed cleanup at two of the three contaminated sites in the local redevelopment authority Initial Parcel 1 ROD. The installation operated the biovent system, a system which increases oxygen flow to stimulate microbial activity, at the third contaminated site in the local

redevelopment authority Initial Parcel 1 ROD. McClellan completed a feasibility study (FS) evaluating cleanup alternatives and a proposed plan (PP). The installation minimized the time required for cleanup by completing an agreement on a new flow, fate, and transport model, a model that estimates the movement and chemical alteration of contaminants as they move through groundwater. The installation continued the soil vapor extraction (SVE) program, expanding the number of treatment systems from 14 to 16. The installation conducted verification sampling and completed initial negotiations with regulators to close a completed SVE site. McClellan AFB evaluated MMRP requirements at two sites: the former Skeet Range and a suspected discarded military munitions LF site. BRAC cleanup team activities and active RAB participation continued.

In FY07, McClellan AFB continued to operate and maintain the groundwater pump-and-treat system, biovent system, and multiple SVE systems. Regulators approved the ROD for groundwater contaminated with Volatile Organic Compounds (VOCs). McClellan AFB completed a pilot project involving the early transfer of a 62-acre parcel with privatized cleanup of nine sites suspected to contain contamination for the Installation Restoration Program (IRP). The FFA signed in May 1990 required an amendment. Regulators approved soil vapor cleanup standards, and the installation finalized contract language to require monitoring of soil vapors. BRAC cleanup team activities and active RAB participation continued.

In FY08, McClellan AFB completed the non-VOC groundwater remedial investigation (RI) and FS. With regulator concurrence, the installation completed the ROD for the Initial Parcel 2. Under the MMRP, McClellan AFB began a historical records review.

**FY09 IRP Progress**

McClellan AFB completed the RI/FS documents for the local redevelopment authority Initial Parcel 3, and transferred responsibility for the PP and ROD to EPA. The installation drafted RI/FS documents for Building 252, Small Volume Sites, and Ecological Sites. The installation completed a PP and a ROD amendment for groundwater not contaminated by VOCs. McClellan AFB found 600 acres suitable for early transfer with privatized cleanup. The installation obtained approval of two

five-year review reports. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues delayed the ROD for the focused strategic sites. Regulatory issues delayed completion of RI/FSs, PPs, and RODs for the Small Volume and Ecological Sites.

**FY09 MMRP Progress**

McClellan AFB completed a field investigation of the LF with suspected discarded military munitions; none were found. The installation conducted surface soils characterization and began writing an FS and workplan for cleanup at the former Skeet Range.

**Plan of Action**

Plan of action items for McClellan Air Force Base are grouped below according to program category.

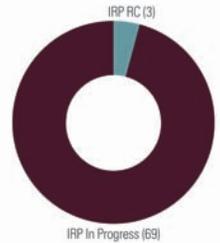
**IRP**

- Complete ROD for focused strategic sites in FY10.
- Complete RI/FS for follow-on strategic sites in FY10-FY11.
- Complete PP and RODs for Building 252, Small Volume Sites, and Ecological Sites in FY10.

**MMRP**

- Close LF site formerly suspected of discarded military munitions contamination in FY10-FY11.
- Complete PP and ROD for the former Skeet Range, and design and begin cleanup in FY10-FY11.

<b>FFID:</b>	NJ257182401800	<b>Funding to Date:</b>	\$ 73.0 million
<b>Location (Size):</b>	Burlington County, New Jersey (3,500 acres)	<b>Est. CTC (Comp Year):</b>	\$ 130.0 million (FY 2032)
<b>Mission:</b>	Provide quick-response airlift capabilities for placing military forces into combat situations	<b>IRP Sites (Final RIP/RC):</b>	72 (FY2012)
<b>HRS Score:</b>	47.20; placed on NPL in October 1999	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in September 2009	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	SVOCs, PAHs, BTEX, TPH, VOCs, metals, PCBs, TCE, pesticides, radioactive materials	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-117
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

McGuire Air Force Base (AFB) provides quick-response airlift capabilities for placing military forces into combat situations. Cleanup sites include landfills (LFs), waste piles (WPs), fire training areas, hazardous waste storage areas, and spill sites (SSs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1999. In FY09, DoD and EPA signed a federal facility agreement (FFA) to outline how they were going to proceed with cleanup. The installation formed a Restoration Advisory Board (RAB) in 1999 to discuss cleanup progress with the community.

To date, McGuire AFB has identified 72 Installation Restoration Program (IRP) sites, including 6 sites at the Boeing Michigan Aeronautical Research Center (BOMARC), a remote location under McGuire AFB jurisdiction. In FY05, the Air Force conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at McGuire AFB for FY05 through FY08 is summarized below.

In FY05, McGuire AFB completed remedial investigation (RI) fieldwork for LF 03 and the RI for Building 2227 (SS 24). The installation began a basewide comprehensive planning process, an ecological study, and a background study. The DOE led a survey at the BOMARC missile accident site (Radioactive Waste [RW] Site 01) and identified numerous discrete particles of contamination. McGuire AFB expanded the fence line around the BOMARC facility to contain some of the identified particles. The installation held two RAB meetings, one partnering meeting at the installation- and state-level, and one partnering meeting at the installation, state, and regional levels.

In FY06, McGuire AFB completed additional site surveys and began cleanup of the Class 1 area at the BOMARC missile accident site (RW 01). The installation continued work on the basewide comprehensive planning process, ecological study, and background study; began RIs for the LF Operable Unit (OU) (LFs 02, 19, 20, and WP 21) and Site ST 07; and completed the RI study for LF 03. McGuire AFB held one installation and state level meeting and two RAB meetings, began the RAB Journal, and distributed two RAB mailings.

In FY07, McGuire AFB began RIs for 4 OUs (16 sites), completed fieldwork for 1 OU (SS 25/26), and submitted work plans for 2 OUs to regulators. The installation also completed RIs for Other (OT) site 16 and SS 24. The installation completed the BOMARC facility and rapid site characterization projects for 11 sites. Under the MMRP, McGuire AFB began the preliminary assessment (PA) to identify potential sites at the installation.

In FY08, McGuire AFB awarded a performance-based contract (PBC) for 24 sites; the contract covers the initial phases of cleanup, including the RI and feasibility study (FS) to evaluate cleanup alternatives. The installation also submitted RI reports for 11 sites for regulatory review. McGuire AFB held one RAB meeting.

**FY09 IRP Progress**

DoD and EPA signed an FFA in September 2009. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical and regulatory issues delayed the completion of the RI/FS at 24 sites under the PBC and the RI/FS at the 14 remaining sites. Technical issues delayed site closure and the request for no further cleanup action at the BOMARC missile accident site (RW 01).

McGuire AFB held three RAB meetings, including a site tour.

**FY09 MMRP Progress**

Technical issues delayed completion of the PA. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

**Plan of Action**

Plan of action items for McGuire Air Force Base are grouped below according to program category.

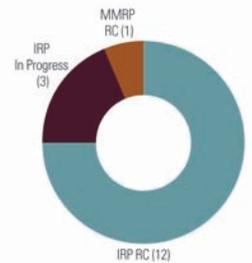
**IRP**

- Complete site closure report and request no further cleanup action at the BOMARC missile accident site (RW 01) in FY10.
- Assume environmental restoration responsibilities from Fort Dix and Lakehurst Naval Air Engineering Station in FY10.
- Conduct quarterly RAB meetings in FY10-FY11.
- Complete RI and begin FS at 14 remaining sites in FY11.
- Complete RI and begin FS at 24 sites under the PBC in FY11.

**MMRP**

- Begin site inspections (SIs) and complete the PA in FY10.
- Complete SIs in FY11.

<b>FFID:</b>	PA317002210400	<b>Funding to Date:</b>	\$ 34.9 million
<b>Location (Size):</b>	Mechanicsburg, Pennsylvania (824 acres)	<b>Est. CTC (Comp Year):</b>	\$ 9.2 million (FY 2025)
<b>Mission:</b>	Provide inventory management and supply support for weapons systems	<b>IRP Sites (Final RIP/RC):</b>	15 (FY2011)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2001)
<b>IAG Status:</b>	FFA signed in November 2004	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	PCBs, heavy metals, pesticides, VOCs, SVOCs, dioxin	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-46
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



**Progress To Date**

Mechanicsburg Naval Inventory Control Point (NICP), currently Naval Support Activity (NSA) Mechanicsburg, provides inventory management and supply support for weapons systems. Historical defense industrial and inventory disposal operations have caused contamination at this installation. The potential risk to human health and the environment was significant enough for EPA to place NSA Mechanicsburg on the NPL in May 1994. DoD and EPA signed a federal facility agreement (FFA) in 2004 to outline how they were going to proceed with cleanup. Formed in FY88, a technical review committee responsible for communicating cleanup progress with the community converted to a Restoration Advisory Board in FY95. The installation created an electronic administrative record and completed a community relations plan in FY99. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY04 and FY09.

Environmental investigations conducted at NSA Mechanicsburg identified 15 Installation Restoration Program (IRP) sites. To date, the installation completed Records of Decision (RODs), which selected cleanup actions for Sites 1 and 3 (soil and groundwater); a ROD determined that no further cleanup activities were necessary at Site 11. In addition, the installation completed Decision Documents determining no further action for Sites 2, 4, 7, 8 (groundwater), 11 through 15, and 49 lower priority areas of concern (AOCs). In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at NSA Mechanicsburg for FY05 through FY08 is summarized below.

In FY05, NSA Mechanicsburg signed an FFA. The installation completed a ROD for Site 3, and remedial investigation (RI) work plan and fieldwork at Site 5.

In FY06, NSA Mechanicsburg completed the RI and feasibility study (FS) to evaluate cleanup alternatives, and an engineering evaluation and cost analysis (EE/CA) for Site 5. The installation also completed an EE/CA for Site 11. Additionally, the installation also completed performance monitoring of the Site 3 pilot study and issued the draft report.

In FY07, NSA Mechanicsburg completed an RI and drafted a focused FS for Site 8 (soil). The installation issued a sampling report for groundwater monitoring at Site 3, and evaluated the relevance of an explanation of significant differences and FS addendum. Additionally, the installation collected sampling and analysis data for Site 9. NSA Mechanicsburg also completed the proposed cleanup plan, cleanup actions, and ROD determining no further action for Site 11. NSA Mechanicsburg received regulatory concurrence for no further action at the former outdoor pistol range (AOC 47).

In FY08, NSA Mechanicsburg completed cleanup and drafted the proposed cleanup plan for Site 5. NSA Mechanicsburg completed groundwater monitoring at Site 3, and determined that an explanation of significant differences, FS addendum, and ROD amendment for Site 3 were not required.

**FY09 IRP Progress**

NSA Mechanicsburg completed a five-year review report. The installation also completed a proposed cleanup plan and ROD determining no further action for Site 5; a cleanup plan and ROD for Site 8; and a focused FS and proposed cleanup plan for Site 9. The installation continued annual groundwater monitoring and completed the site optimization at Site 3.

Regulatory issues delayed completion of the design for cleanup at Site 8 and the ROD and cleanup actions at Site 9.

**FY09 MMRP Progress**

The installation conducted no MMRP actions.

**Plan of Action**

Plan of action items for Mechanicsburg Naval Inventory Control Point are grouped below according to program category.

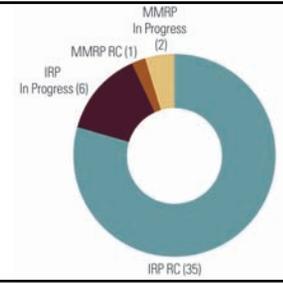
**IRP**

- Complete the ROD, award a cleanup contract, and complete cleanup for Site 9 in FY10.
- Complete remedial design and award cleanup contract for soil removal and site cleanup at Site 8 in FY10.
- Continue annual groundwater monitoring at Site 3 in FY10.
- Complete site management plan in FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	TN421382058200	<b>Funding to Date:</b>	\$ 164.7 million
<b>Location (Size):</b>	Milan, Tennessee (22,357 acres)	<b>Est. CTC (Comp Year):</b>	\$ 63.6 million (FY 2044)
<b>Mission:</b>	Load, assemble, pack, ship, and demilitarize explosive ordnance	<b>IRP Sites (Final RIP/RC):</b>	41 (FY2014)
<b>HRS Score:</b>	58.15; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2015)
<b>IAG Status:</b>	IAG signed in 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Munitions-related wastes, SVOCs, metals, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-155
<b>Media Affected:</b>	Groundwater and Soil		



## Progress To Date

The Milan Army Ammunition Plant (AAP) handles explosive ordnance. In FY91, Milan AAP discovered the explosive compound RDX in the City of Milan's municipal water supply wells. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed an interagency agreement (IAG) in 1989 to outline how they were going to proceed with cleanup. In FY94, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Milan AAP completed five-year review reports in FY01 and FY05.

Since FY87, preliminary assessments and site inspection (SI) activities have identified 25 sites requiring further investigation at Milan AAP. Subsequent studies expanded the number of sites, and the installation grouped the sites into five operable units (OUs). To date, the installation has signed six Records of Decision (RODs), selecting cleanup actions for 15 sites. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Milan AAP for FY05 through FY08 is summarized below.

In FY05, Milan AAP completed a characterization of all explosives-contaminated soils within the Northern Industrial Areas of the facility. The installation also produced a process report, which evaluated a cleanup action for groundwater treatment. Milan AAP completed a five-year review report and submitted an MMRP SI report for comments. The installation attended partnership training sessions with EPA, the Army, and the State of Tennessee, and established a charter.

In FY06, Milan AAP completed soil characterization and excavation for all production lines. EPA indicated concerns about statistically-evaluated sampling procedures. Milan AAP submitted a draft feasibility study (FS) to evaluate groundwater cleanup alternatives to regulators. Milan AAP received comments from EPA and the State of Tennessee, which identified unresolved issues about cleanup objectives and preliminary cleanup goals. In response, the installation developed a state-level management plan to address these

issues. Under the MMRP, Milan AAP completed the SI report for all three sites. RAB members toured all groundwater treatment systems and bioremediation facilities.

In FY07, EPA required that the MMRP be integrated into the Installation Restoration Program (IRP) to receive approval for the OU 5 cleanup completion report.

In FY08, Milan AAP submitted the cleanup reports for soil at OUs 3 and 4 to regulators. The installation developed a ROD modification for OU 4 Region 1, which included the installation of four additional off-site groundwater extraction wells.

## FY09 IRP Progress

Milan AAP completed cleanup and finalized the cleanup report for the ROD for OUs 3 and 4. The installation completed the long-term monitoring plan for groundwater at all sites. The installation optimized the OU 4 groundwater treatment plant by adding three extraction wells at the contaminated area. Milan AAP completed a technical memorandum of the treatment and submitted it for regulatory review. Milan AAP also developed cleanup alternatives and site characterization for soils located at OU 5.

Administrative issues delayed completion of the ROD for groundwater at OUs 1 and 3.

## FY09 MMRP Progress

Milan AAP awarded a contract to conduct a remedial investigation (RI) at three MMRP sites.

Milan AAP informed the RAB of potential MMRP activities.

## Plan of Action

Plan of action items for Milan Army Ammunition Plant are grouped below according to program category.

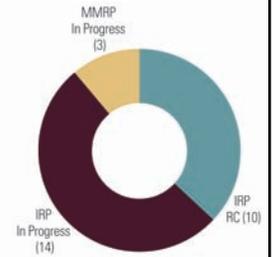
### IRP

- Complete a five-year review report in FY10.
- Complete the ROD for groundwater at OUs 1 and 3 in FY10.
- Continue well monitoring for all contaminated groundwater and long-term monitoring for the ROD for soil at OUs 3 and 4 in FY10-FY11.
- Perform characterization of soil in support of the FS process in FY10-FY11.
- Finalize the ROD for soil at OU 5 and implement cleanup in FY10-FY11.

### MMRP

- Complete the RI report in FY10.
- Complete FS for Milan AAP sites 01 and 03 in FY10-FY11.
- Complete RODs for all MMRP sites in FY10-FY11.

<b>FFID:</b>	CA921350696A00	<b>Funding to Date:</b>	\$ 0.0 million
<b>Location (Size):</b>	Concord, CA (4,324 acres)	<b>Est. CTC (Comp Year):</b>	\$ 123.7 million (FY 2018)
<b>Mission:</b>	Ships, receives, inspects, and classifies munitions (Tidal Area).	<b>IRP Sites (Final RIP/RC):</b>	58 (FY2013)
<b>HRS Score:</b>	30.00; placed on NPL in December 1994	<b>MMRP Sites (Final RIP/RC):</b>	4 (FY2018)
<b>IAG Status:</b>	FFA signed in November 2009	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	Heavy metals, petroleum hydrocarbons, VOCs, SVOCs, explosives, and propellants.	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-19
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Military Ocean Terminal Concord (MOTCO) ships, receives, inspects, and classifies munitions. These activities resulted in the contamination of surface water and sediment at the Tidal Area, which includes tidal and litigation area sites. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in December 1994 when it was part of Naval Weapons Station Concord. DoD and EPA signed a federal facility agreement (FFA) in November 2009 to outline how they would proceed with cleanup. The BRAC Commission recommended realignment of the Tidal Area, and in 2008, the final BRAC determination transferred the Tidal Area from Naval Weapons Station Concord to the Army. Under Naval Weapons Station Concord, the installation received funding for technical assistance for public participation and updated the community relations plan in FY03. To ensure continuous monitoring and improvement, the installation completed a five year review report in FY03. In 2005

To date, the installation determined no further cleanup action was necessary for Site 28. In 2009, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); three MMRP sites were identified. Cleanup progress at MOTCO for FY05 through FY08 is summarized below.

In FY05, the BRAC Commission recommended Naval Weapons Station Concord for partial closure and realignment.

In FY08, Naval Weapons Station Concord transferred the Tidal Area to the Army; Navy closed, transferred, and redeveloped the remaining Inland Area.

**FY09 IRP Progress**

MOTCO conducted long-term management (LTM) for Litigation Area Sites 3 through 6, 25, 26, and 28, and began preparation of the five-year review report for these sites. The installation also submitted a proposed plan (PP), a draft Record of Decision (ROD), and began preparation of the design for cleanup for Litigation Area Sites 32 and 33. Additionally, MOTCO took over the construction of the Site 1 Landfill from the Navy. The installation also finalized the feasibility study (FS)

to evaluate cleanup alternatives for Sites 2, 9, and 11; began a removal action at Site 30; and submitted the final remedial investigation report for Site 31. MOTCO completed the fieldwork for Site 30.

MOTCO held a public meeting.

**FY09 MMRP Progress**

MOTCO began a site inspection (SI) for the MMRP which includes a historical records review.

**Plan of Action**

Plan of action items for Military Ocean Terminal Concord are grouped below according to program category.

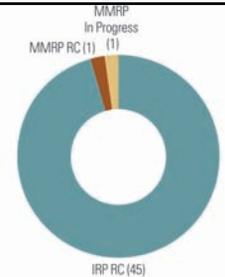
**IRP**

- Finalize the ROD, design for cleanup, and cleanup actions for Litigation Area Sites 32 and 33 in FY10-FY11.
- Continue LTM and finish the five-year review report for Litigation Area Sites 3 through 6, 25, and 28 in FY10-FY11.
- Finalize the Site 1 landfill cap design evaluation and finish construction of the cap in FY10-FY11.
- Finalize the PP, prepare the ROD, and cleanup Sites 2, 9, and 11 in FY10-FY11.
- Prepare the cleanup closure documentation for Site 30 in FY10-FY11.
- Prepare the FS, PP, and ROD, and cleanup of soils and groundwater at Site 31 in FY10-FY11.

**MMRP**

- Issue a draft historical records review for stakeholder review in FY10-FY11.
- Conduct the SI and any necessary follow-on work in FY10-FY11.

<b>FFID:</b>	MS421382296600	<b>Funding to Date:</b>	\$ 0.0 million
<b>Location (Size):</b>	Hancock County, Mississippi (4,214 acres)	<b>Est. CTC (Comp Year):</b>	\$ 1.3 million (FY 2011)
<b>Mission:</b>	Managed, developed, tested, and manufactured the improved conventional munitions artillery	<b>IRP Sites (Final RIP/RC):</b>	45 (FY1990)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2011)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	Metals and solvents	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-32
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Mississippi Army Ammunition Plant (AAP), the only ammunition plant built by the army after the Korean Conflict, served the War Department in the 1940s as a bombing and gunnery range. From 1969 to 1980, Edgewood Arsenal conducted pyrotechnic testing at the Mississippi AAP Kellar Test Range. In 1978, the Army obtained an irrevocable 50-year permit and leased 7,148 acres from NASA to expand construction and operations of Mississippi AAP on the John C. Stennis Space Center. In 1980, the U.S. Army Munitions Production Base Modernization Agency moved the range activities to a more remote location to allow Edgewood Arsenal to continue its operations. In 1990, DoD placed Mississippi AAP on inactive status, and the equipment and facilities were placed in layaway. Ammunition production ceased in FY92, and DoD made the plant available to the private sector to provide or produce commercial services and products through facility-use contracts. In 2005, the BRAC Commission recommended closure of Mississippi AAP.

To date, Mississippi AAP has completed four amendments to the 50-year permit with NASA, returning 2,934 acres to NASA. In FY03, the installation completed an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); two MMRP sites were identified. Cleanup progress at Mississippi AAP for FY05 through FY08 is summarized below.

In FY05, the BRAC Commission recommended closure of Mississippi AAP.

In FY06, Mississippi AAP began a report to summarize the environmental condition of all transferable property.

In FY07, Mississippi AAP completed the report on the environmental condition of all transferable property, and submitted it to EPA and the Mississippi Department of Environmental Quality for approval. The installation also requested and received concurrence on the CERFA report identifying uncontaminated property at the base. Mississippi AAP coordinated with EPA and the Mississippi Department of Environmental Quality to conduct field sampling as part of a site inspection (SI). The installation received and incorporated comments on this plan from regulators, and began field sampling.

In FY08, the installation completed SIs at two MMRP sites: the Kellar Test Range and the Spin Launch Test Site. Mississippi AAP completed cleanup responsibilities at the Kellar Test Range.

**FY09 IRP Progress**

Mississippi AAP received regulatory approval for the work plans to close, decontaminate, and demolish the Industrial Wastewater Treatment Plant (Mississippi AAP Site 047). The installation began fieldwork at the site and completed cleanup operations- including the decontamination of all process tanks and piping, demolition of structures and containment areas, recycling of scrap materials, and soil and groundwater testing. Mississippi determined that chromium was not present above regulatory thresholds for either soil or groundwater. The Mississippi Department of Environmental Quality approved the closure report for the site. The cost of completing environmental restoration has changed significantly due to technical issues and changes in estimating criteria.

**FY09 MMRP Progress**

Mississippi conducted no MMRP actions.

**Plan of Action**

Plan of action items for Mississippi Army Ammunition Plant are grouped below according to program category.

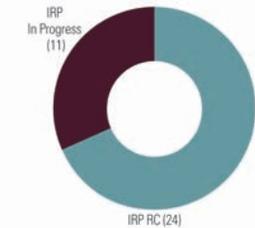
**IRP**

- Begin RI and conduct vapor intrusion studies at Mississippi AAP Site 014 in FY10-FY11.

**MMRP**

- Conduct RI at the Spin Launch Test Site in FY10.

<b>FFID:</b>	CA917002323800	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Sunnyvale, California (3,097 acres)	<b>Funding to Date:</b>	\$ 173.9 million
<b>Mission:</b>	Served as host to 7th Infantry Division (Light); supports the Defense Language Institute Foreign Language Center, currently at the Presidio of Monterey, California	<b>Est. CTC (Comp Year):</b>	\$ 42.8 million (FY 2041)
<b>HRS Score:</b>	42.24; placed on NPL in February 1987	<b>IRP Sites (Final RIP/RC):</b>	35 (FY2014)
<b>IAG Status:</b>	FFA signed in September 1990	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Pesticides, SVOCs, explosives, propellants, VOCs, petroleum hydrocarbons, heavy metals, solvents	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-25



**Progress To Date**

Moffett Field Naval Air Station (NAS) was headquarters of the Commander, Patrol Wings U.S. Pacific Fleet. At that time, Moffett Field NAS was the largest P-3 base in the world and was responsible for submarine patrol operations across the Pacific. Sites at the installation include landfills (LFs), underground storage tanks (USTs), a burn pit, ditches, holding ponds, wetland sediments, French drains, maintenance areas, and fuel spill sites. Contaminants include polychlorinated biphenyls (PCBs), petroleum products, DDT, chlorinated solvents, and heavy metals. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in FY90, amended in FY94 and FY01, which outlined how they were going to proceed with cleanup. In July 1991, the BRAC Commission recommended closure of the installation. The installation closed on July 1, 1994 and transferred to NASA. The Naval Air Manor property transferred to a neighboring city. The associated Moffett Community Housing was transferred to the Army. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. The BRAC cleanup team completed a BRAC cleanup plan to prioritize sites requiring environmental restoration, which was updated in FY97. The installation completed a community relations plan and established an information repository in FY89; the community relations plan was updated in FY02. The installation formed technical review committee, which was responsible for communicating cleanup progress with the community, and converted it to a Restoration Advisory Board (RAB) in FY95. To ensure continuous monitoring and improvement, the installation completed a five-year review report for two groundwater sites in FY03, and another report for Site 1 in FY07.

The installation divided sites into seven operable units (OUs). To date, the installation has completed Records of Decision (RODs), which determined that no further cleanup activities were necessary at environmental restoration sites. The installation has also completed RODs selecting cleanup actions for OU 1, Sites 22, 26, 27, and 28. The installation has closed 35 petroleum sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program

(MMRP); no MMRP sites were identified. Cleanup progress at Moffett Field NAS for FY05 through FY08 is summarized below.

In FY05, the installation finalized the remedial investigation report addendum and submitted the draft feasibility study (FS) report addendum, which evaluated cleanup alternatives for Site 25, for agency review and comment. The installation also finalized the ROD and began cleanup at Site 27. The installation continued the site management plan for delisting Moffett Field NAS from the NPL.

In FY06, Moffett Field NAS developed and submitted an FS for Site 25. The installation also completed and implemented the Site 27 design for cleanup, and implemented optimization of the Site 26 pump-and-treat system. The installation continued resolution of groundwater contaminant responsibility.

In FY07, Moffett Field NAS completed the second five-year review report at Site 1. The installation also identified a potential source of PCB contamination at Site 25; completed an FS at Site 25; completed cleanup and began preparations for a cleanup completion report at Site 27.

In FY08, Moffett Field NAS completed the revised engineering evaluation and cost analysis, a structural analysis, and an evaluation of adverse effects for the Hangar 1 project (Site 29). The installation also completed the memorandum of agreement for the Site 22 LF, and received determinations for no further action for five aboveground storage tanks, two USTs, and two former Navy petroleum pipelines.

**FY09 IRP Progress**

Moffett Field NAS completed the proposed plan and draft ROD for Site 25. The installation also continued long-term management in accordance with the ROD at Sites 1 and Site 22.

Moffett Field NAS started a five-year review report for the base. Regulatory and community issues also delayed the cleanup completion report for Site 27.

**FY09 MMRP Progress**

Moffett Field NAS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Moffett Field Naval Air Station are grouped below according to program category.

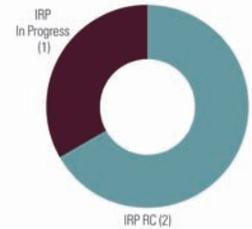
**IRP**

- Finalize design for cleanup for the removal action at Site 29 (Hangar 1) in FY10.
- Finalize five-year review report for the base in FY10.
- Finalize the cleanup completion report and obtain concurrence for closeout at Site 27 in FY10.
- Prepare design for cleanup at Site 25 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	WA09799F331700	<b>Funding to Date:</b>	\$ 19.5 million
<b>Location (Size):</b>	Moses Lake, Washington (9,607 acres)	<b>Est. CTC (Comp Year):</b>	\$ 0.3 million (FY 2012)
<b>Mission:</b>	Served as tactical air command, air transport, and strategic air command base; provided pilot training	<b>IRP Sites (Final RIP/RC):</b>	3 (FY2012)
<b>HRS Score:</b>	50.00; placed on NPL in October 1992	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	IAG signed in March 1999	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	VOCs (specifically TCE)	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-58
<b>Media Affected:</b>	Groundwater		



**Progress To Date**

Larson Air Force Base (AFB) first served as a Tactical Air Command base, then as a military air transport facility, and later as a Strategic Air Command base. DoD sold the Port of Moses Lake property in 1966; the property is now operated by the Grant County Airport. The former Larson AFB property primarily served as a regional aviation, industrial, and educational facility. The U.S. Army Corps of Engineers (USACE) conducted environmental assessments, which began in FY87, and identified four sites that required further investigation: 11 underground storage tanks and the associated potentially contaminated soil, groundwater contaminated with trichloroethylene (TCE), an area potentially containing low-level radioactive waste, and two disposal areas potentially containing tetraethyl lead. The potential risk to human health and the environment was significant enough for EPA to place the property (Moses Lake) on the NPL in October 1992. DoD and EPA signed an interagency agreement (IAG) in March 1999 to outline how they were going to proceed with cleanup. In 1999, USACE established a Restoration Advisory Board (RAB) to discuss the installations cleanup progress with the community. The RAB was dissolved in September 2003.

Cleanup progress for Moses Lake for FY05 through FY08 is summarized below.

In FY05, USACE completed the TCE investigation of groundwater at Moses Lake. USACE conducted long-term management (LTM), including annual water sampling and analysis, for domestic wells and filters for residents. USACE completed the draft feasibility study (FS) to evaluate cleanup alternatives at the groundwater and shallow soils operable units.

In FY06, USACE provided ongoing litigation support to the Department of Justice, and revised the groundwater and shallow soils FSs. USACE also completed a draft report on a search of historical archives.

In FY07, EPA approved the final remedial investigation, FS, and shallow soils FS documents.

In FY08, USACE continued LTM of residential wells and filters.

**FY09 IRP Progress**

USACE continued LTM of residential wells and filters. EPA signed the interim Record of Decision, which selected cleanup actions at 14 sites. The cost of completing environmental restoration has changed significantly due to technical issues and changes in estimating criteria.

**FY09 MMRP Progress**

USACE has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Moses Lake Wellfield Contamination Site are grouped below according to program category.

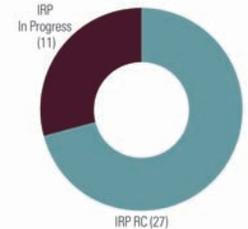
**IRP**

- Coordinate with EPA and Department of Justice regarding settlement actions in FY10.
- Continue LTM of residential wells and filters in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	ID057212455700	<b>Est. CTC (Comp Year):</b>	\$ 0.4 million (FY 2011)
<b>Location (Size):</b>	Mountain Home, Idaho (6,000 acres)	<b>IRP Sites (Final RIP/RC):</b>	38 (FY2011)
<b>Mission:</b>	Provide composite combat air power worldwide	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	NA; placed on NPL in August 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in January 1992	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-23
<b>Contaminants:</b>	VOCs, POLs, heavy metals		
<b>Media Affected:</b>	Surface Water, Soil, Groundwater		
<b>Funding to Date:</b>	\$ 19.7 million		



**Progress To Date**

The mission of Mountain Home Air Force Base (AFB) is to provide composite combat air power worldwide. Sites identified at the installation include landfills (LFs), fire training (FT) areas, a fuel hydrant system spill area, disposal pits, surface runoff areas, wash racks, ditches, underground storage tanks, petroleum/oil/lubricant (POL) lines, and a low-level radioactive material disposal site. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in January 1992 to outline how they were going to proceed with cleanup. The 2005 BRAC Commission recommended Mountain Home AFB for realignment. In FY94, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board. In FY00, the installation updated the community relations plan. To ensure continuous monitoring and improvement, Mountain Home AFB completed five-year review reports in FY01 and FY06.

To improve and accelerate site characterization, the installation grouped sites into operable units (OUs). The installation has signed one Record of Decision (ROD), which selected cleanup actions for OUs 1, 3, 5, and 6; the lagoon LF; and FT Area 8. The installation also signed RODs requiring no further cleanup actions at OUs 2 and 4. In FY05, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Mountain Home AFB for FY05 through FY08 is summarized below.

In FY05, Mountain Home AFB monitored wells for fuel and trichloroethylene (TCE) vapors at eight sites and conducted groundwater monitoring. The installation also awarded a performance-based contract.

In FY06, Mountain Home AFB completed a five-year review report and drafted an explanation of significant differences for LFs 01 and 02. The installation continued to monitor wells for fuel and TCE in groundwater and completed vapor intrusion sampling. Mountain Home AFB drafted an engineering evaluation and cost analysis for removal actions at LF 23, Other (OT) site 16, Storm Drain (SD) 27, and Spill Site (SS) 29; and

began pilot studies at FT 08, SS 11, SD 24 and Storage Tank (ST) 13.

In FY07, Mountain Home AFB completed the explanation of significant differences for LFs 01 and 02, and removal actions at SD 27 and SS 29. The installation also started a one-year pilot study for FT 08, SS 11, SD 24, and ST 13. The installation completed an indoor air vapor intrusion evaluation for the whole base with regulatory concurrence. Under the MMRP, Mountain Home AFB began a preliminary assessment (PA) at potential sites.

In FY08, Mountain Home AFB completed cleanup system enhancements at FT 08, SS 11, SD 24, and ST 13. The installation completed removal actions at OT 16 and LF 23 with regulatory concurrence. Mountain Home AFB also completed a risk assessment for soils, a remedial investigation, and a feasibility study (FS) amendment to evaluate cleanup alternatives for groundwater for the entire installation. Under the MMRP, the installation awarded a contract to perform response actions, and continued the PA at potential sites.

**FY09 IRP Progress**

Mountain Home AFB signed a ROD amendment for soils at FT 08. The installation also finalized an FS to evaluate cleanup alternatives at ST 11. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed the ROD amendment for groundwater at FT 08, and the completion of sampling and removal at LF 23.

**FY09 MMRP Progress**

Administrative issues delayed the PA for all potential sites. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

**Plan of Action**

Plan of action items for Mountain Home Air Force Base are grouped below according to program category.

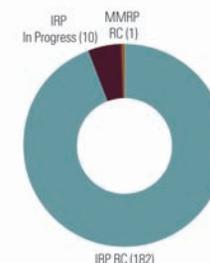
**IRP**

- Complete field activities and pilot tests at LF 23 and SD 24 in FY10.
- Complete ROD ammendment for groundwater at OU 3 in FY10.
- Complete construction of a soil vapor extraction system at ST 11 in FY10.
- Complete sampling and removal actions at LF 23 in FY10.

**MMRP**

- Complete PA in FY10.

<b>FFID:</b>	SC457002482100	<b>Funding to Date:</b>	\$ 60.1 million
<b>Location (Size):</b>	Myrtle Beach, South Carolina (3,937 acres)	<b>Est. CTC (Comp Year):</b>	\$ 10.3 million (FY 2034)
<b>Mission:</b>	Served as host to a tactical fighter wing	<b>IRP Sites (Final RIP/RC):</b>	192 (FY2010)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2003)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Paints, POLs, thinners, waste oils, SVOCs, explosives, propellants, spent solvents, fuels, VOCs, metals, asbestos	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-151
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Myrtle Beach Air Force Base (AFB) formerly housed a tactical fighter wing. Sites identified at the installation include landfills (LFs), weathering pits, fire training areas, drainage ditches, hazardous waste storage areas, maintenance areas, underground storage tanks, explosive ordnance areas, fuel storage areas, a small arms firing range, and a lead-contaminated skeet range. Contaminants include petroleum/oil/lubricants, heavy metals, and volatile organic compounds (VOCs). The 1991 BRAC Commission recommended closure of Myrtle Beach AFB and the installation closed in 1993. In FY93, a joint management team assumed the role of the BRAC cleanup team to develop a process for cleanup of sites at Myrtle Beach AFB. In FY96 and FY04, the BRAC cleanup team updated the BRAC cleanup plan, which incorporates community input to prioritize sites requiring environmental restoration. In FY94, the installation formed a Restoration Advisory Board (RAB) to discuss the installation's cleanup progress with the community.

Myrtle Beach AFB has transferred 3,934 acres. In FY04, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. In FY08, Myrtle Beach AFB completed closure documentation for its only MMRP site, the former explosive ordnance disposal (EOD). Cleanup progress at Myrtle Beach AFB for FY05 through FY08 is summarized below.

In FY05, Myrtle Beach AFB began final cleanup of three sites. The installation closed an active cleanup system and began monitoring natural cleanup processes; discontinued monitoring at two LFs; and documented that no further cleanup action was necessary at one site. Myrtle Beach AFB evaluated and implemented improvements to all sites operating cleanup or continuing long-term management (LTM). The installation performed annual inspections of land use controls (LUCs), which restrict the use of or access to a site. Myrtle Beach AFB began evaluating requirements at the MMRP site. The RAB held three meetings and the installation conducted a site tour; the BRAC cleanup team held monthly meetings.

In FY06, Myrtle Beach AFB shut down one active treatment system. Regulators approved two documents demonstrating

that cleanup systems were operating properly and successfully. The installation continued annual inspections of LUCs. Myrtle Beach AFB began additional investigations at the former EOD proficiency range site after it discovered munitions debris. The RAB held two meetings, and the BRAC cleanup team continued to hold monthly meetings.

In FY07, Myrtle Beach AFB continued to operate treatment systems, monitor groundwater, and perform LTM. The installation evaluated and implemented improvements, and also continued annual LUC inspections. Myrtle Beach AFB finalized one study of corrective measures, one statement of basis describing the process by which EPA and the installation will select cleanup, and one decision document (DD) selecting cleanup actions for environmental restoration sites. Regulators approved three operating properly and successfully documents and a document demonstrating no further cleanup action was required. Under the MMRP, Myrtle Beach AFB issued final work plans for three sites. The installation also completed investigations and all required cleanup of the former EOD proficiency range site. The RAB held two meetings, and the BRAC cleanup team continued to hold monthly meetings.

In FY08, Myrtle Beach AFB continued to operate treatment systems, monitor groundwater, and perform LTM. The installation evaluated and implemented improvements, and also performed annual LUC inspections. The installation finalized two studies of corrective measures, two statements of basis, one revised statement of basis, and three DDs. Regulators approved two operating properly and successfully documents. The installation awarded a new 10-year performance-based contract, and began cleanup of three sites. Under the MMRP, Myrtle Beach AFB completed closure documentation for the investigation and cleanup of the former EOD proficiency range site. The RAB held two meetings, and the installation held two public meetings; the BRAC cleanup team continued to hold monthly meetings.

**FY09 IRP Progress**

Myrtle Beach AFB continued to operate treatment systems, monitor groundwater, and perform LTM and LUC maintenance. Regulators concurred that no further monitoring of groundwater at two LF sites would be necessary. The installation completed one DD and one operating properly and successfully document.

Myrtle Beach AFB implemented cleanup optimization at two sites, and completed an interim cleanup measure, during which additional contamination was discovered.

Technical issues delayed the completion of two DDs and one operating properly and successfully document.

The RAB held one meeting, and the BRAC cleanup team held monthly meetings.

**FY09 MMRP Progress**

Myrtle Beach AFB addressed all regulatory comments regarding the completed cleanup at the former EOD proficiency range site.

**Plan of Action**

Plan of action items for Myrtle Beach Air Force Base are grouped below according to program category.

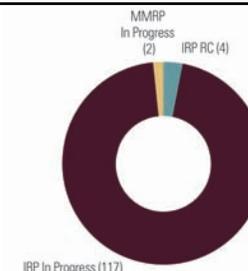
**IRP**

- Complete two DDs and one operating properly and successfully document in FY10.
- Complete one interim cleanup measure in FY10.
- Implement cleanup optimization at two sites in FY10.
- Complete transfer of all property in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	PR217004000300, PR217002758200	<b>Funding to Date:</b>	\$ 56.6 million
<b>Location (Size):</b>	Ceiba, Puerto Rico (8,432 acres)	<b>Est. CTC (Comp Year):</b>	\$ 61.5 million (FY 2041)
<b>Mission:</b>	Provided training and support to Atlantic Fleet operations in the Caribbean	<b>IRP Sites (Final RIP/RC):</b>	121 (FY2016)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2014)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	Petroleum hydrocarbons, VOCs, SVOCs, PCBs, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-145 and C-7-47
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Naval Station (NS) Roosevelt Roads began operations in 1943 as a Naval Operations Base to provide training and support to Atlantic Fleet operations in the Caribbean. Since the early 1960s, NS Roosevelt Roads' major mission had been to support the Atlantic Fleet Weapons Training Facility's training missions on Vieques Island, located approximately 7.5 miles east of NS Roosevelt Roads. The Naval Training Range on Vieques transferred to the Department of the Interior in May 2003, and all of the training activities have since ceased. In response to this action, NS Roosevelt Roads closed in March 2004. The real estate disposal/transfer was carried out in accordance with procedures outlined in BRAC 1990. In FY04, the Navy established Naval Activity (NA) Puerto Rico to serve as the caretaker of the real property associated with the former NS Roosevelt Roads and to assist in the transfer of the property. The installation established a Restoration Advisory Board (RAB) in FY07 to communicate cleanup progress with the community.

To date, NA Puerto Rico has transferred 4,856 acres; 4,634 acres transferred to the Commonwealth of Puerto Rico, 28 acres to the Episcopal Services Hospital, 141 acres to the Town of Ceiba, and 53 acres to the Army. The installation conducted an inventory of sites suspected to contain munitions contamination under the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at NA Puerto Rico for FY05 through FY08 is summarized below.

In FY05, NA Puerto Rico completed a corrective measures study final report for Solid Waste Management Units (SWMUs) 7/8, 54, and 55.

In FY06, NA Puerto Rico performed assessments for potential risks to the environment for SWMUs 1, 2, 9, and 45. The installation also completed an RFI study for SWMU 14. Additionally, the installation completed corrective measures implementation plans at Area of Concern (AOC) C and SWMUs 46 and 53. Under the MMRP, NA Puerto Rico performed a Phase I RFI anomaly identification at Piñeros and Cabeza de Perro Islands. Additionally, the installation destroyed munitions and explosives of concern (MEC) discovered during the Phase I RFI.

In FY07, NA Puerto Rico signed a RCRA 7003 Order and ended the RCRA Part B permit. NA Puerto Rico closed and capped the RCRA-permitted landfill and began post-closure groundwater monitoring. NA Puerto Rico also closed the RCRA-permitted Hazardous Waste Storage Facility. The installation signed the Covenant Deferral Request and sent it to the Governor of Puerto Rico. NA Puerto Rico transferred two parcels totaling 3,127 acres; 2,986 acres transferred to the Commonwealth of Puerto Rico for conservation and 141 acres transferred to the town of Ceiba for recreation purposes. Under the MMRP, NA Puerto Rico identified a new SWMU 78 and developed land use controls, which restrict the use of and access to 10 SWMUs. NA Puerto Rico completed the detonation of various MEC items discovered on the main base. The installation completed a Phase I RFI geophysical investigation at Piñeros Island. NA Puerto Rico established the NA Puerto Rico RAB.

In FY08, NA Puerto Rico completed RFI reports for SWMUs 27, 28, 29, 42, and 68, and started work plans for SWMUs 9, 57, 60, 67, 70, and 75. The Governor of Puerto Rico signed the Covenant Deferral Request, which transferred the airport parcel of 1,648 acres to the Commonwealth of Puerto Rico and 28 acres to the Episcopal Services Hospital. Additionally, the installation completed the Los Machos Mangroves Restoration Project. NA Puerto Rico awarded a contract to complete corrective measures implementation plans at SWMUs 9 and 13. Under the MMRP, NA Puerto Rico awarded a contract to complete Phase I RFI anomaly identification at Piñeros Island. The installation held four RAB meetings.

**FY09 IRP Progress**

NA Puerto Rico began cleanup at SWMUs 7/8, 54, and 55. The installation also completed corrective measures implementation plans at SWMUs 9 and 13, work work plans at Sites 62, 71, 74, and 78. The cost of completing environmental restoration has changed significantly due to technical issues.

Administrative issues delayed the sale of the economic development conveyance parcels and Parcels I, II, and III. Technical issues delayed cleanup at SWMUs 14, 56, 68, and 69 at the airport parcel.

**FY09 MMRP Progress**

Administrative issues delayed the Phase I RFI anomaly identification at Piñeros Island.

**Plan of Action**

Plan of action items for Naval Activity Puerto Rico are grouped below according to program category.

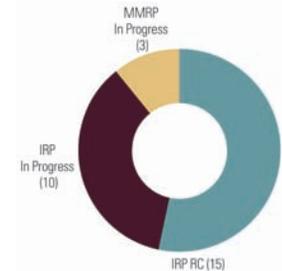
**IRP**

- Submit corrective measures completion report requesting no further action for AOC C and SWMUs 13, 46, and 53 in FY10.
- Complete interim corrective measures at SWMUs 1 and 2, and corrective measures at SWMU 68 in FY10.
- Begin cleanup at SWMUs 14, 56, 68, and 69 at the airport parcel in FY10.
- Begin corrective measures study investigation at SWMUs 27, 28, 29, and 61 in FY10.
- Complete sale of economic development conveyance parcels and Parcels I, II and III in FY11.

**MMRP**

- Complete Phase I RFI anomaly identification fieldwork at Piñeros Island in FY10.
- Complete Phase I RFI fieldwork and work plan at Unexploded Ordance 1 in FY10.

<b>FFID:</b>	ME117002201800	<b>Funding to Date:</b>	\$ 87.7 million
<b>Location (Size):</b>	Brunswick, Maine (7,259 acres)	<b>Est. CTC (Comp Year):</b>	\$ 38.2 million (FY 2040)
<b>Mission:</b>	Provides facilities, services, materials, and aircraft for submarine warfare	<b>IRP Sites (Final RIP/RC):</b>	25 (FY2010)
<b>HRS Score:</b>	43.38; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2019)
<b>IAG Status:</b>	FFA signed in 1989; revised in 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	DDT, PCBs, PAHs, VOCs, SVOCs, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-93
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Naval Air Station (NAS) Brunswick supports activities for submarine warfare. Activities that contributed to contamination include intermediate aircraft maintenance, material support for maintenance, aircraft fueling services, storage and disposal of ordnance, and all-weather air station operations. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in 1989, revised in 1990 to include the State of Maine, to outline how they were going to proceed with cleanup. The installation established an administrative record and information repository in FY87; the administrative record was updated in FY07 and FY09. The community relations plan was completed in FY88, and updated in FY08. A technical review committee was formed in FY88, responsible for communicating cleanup progress with the community, and converted to a Restoration Advisory Board (RAB) in FY95. To ensure continuous monitoring and improvement, the installation conducted five-year review reports in FY01 and FY05.

To date, the installation has completed a Record of Decision (ROD), which selected cleanup actions for the eastern groundwater contaminated area, three underground storage tanks, and a waste pit. The installation also has signed a ROD for Sites 2, 4, 7, 9, 11, and 13, and the eastern groundwater contaminated area treatment plants. The installation also completed documentation that declared no further cleanup action was necessary for Sites 14, 15, 16, and 18. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at NAS Brunswick for FY05 through FY08 is summarized below.

In FY05, NAS Brunswick completed a five-year review report and continued to monitor sampling results at all sites. The installation demolished barracks at Site 9 and prepared an engineering evaluation and cost analysis (EE/CA) to address underlying contaminated soil. The installation found that extraction wells in the eastern contaminated area were unnecessary.

In FY06, NAS Brunswick contracted work to investigate the area north of Sites 2 and 17 (Building 95), and to begin fieldwork at the former explosive ordnance disposal site (Site 12). NAS Brunswick also began to develop and implement a work plan to delineate the extent of 1,4-dioxane, with planned modifications to the groundwater extraction and treatment system, if necessary. Under the MMRP, NAS Brunswick completed the preliminary assessment (PA) for existing areas of concern (AOCs). The installation identified additional AOCs, requiring a PA and site inspection (SI). NAS Brunswick held technical subcommittee and RAB meetings.

In FY07, NAS Brunswick installed a new extraction well to supplement the ongoing groundwater treatment of the eastern contaminated area. The installation conducted field investigations at Mere Brook, updated the long-term management plans to incorporate the number and sampling periodicity of the monitoring wells, and updated the administrative record. NAS Brunswick completed the PAs and SI work plans for MMRP sites. The installation conducted technical subcommittee and RAB meetings, developed a public Web site, and published a newsletter.

In FY08, NAS Brunswick completed a revised base instruction and developed institutional controls, which are tools that minimize the potential for human exposure. The installation completed work plans for the expanded Site 2 Area and Site 17, and began fieldwork. NAS Brunswick also started fieldwork in support of the 1,4-dioxane remedial investigation (RI), installed one extraction well, and began the background study work plan. Under the MMRP, NAS Brunswick started geophysical surveys to determine if surface and subsurface munitions were potentially present at MMRP AOCs and Site 12. NAS Brunswick updated the community relations plan.

**FY09 IRP Progress**

NAS Brunswick began fieldwork for the background study work plan and issued a draft 1,4-dioxane RI report. The installation also activated a new extraction well and completed RI fieldwork sampling at Site 17. The NAS completed fieldwork and developed a draft report for the area north of Site 2. The installation began cleanup of petroleum at the Naval Exchange and designs for groundwater treatment plant improvements. The installation updated the administrative record. The cost of

completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed fieldwork on the background study work plan, and removal actions for contaminants at Site 9. Regulatory issues delayed the ROD and removal of contaminated soil at Site 17. Technical issues delayed the 1,4-dioxane RI report.

**FY09 MMRP Progress**

NAS Brunswick initiated sampling at MMRP ranges and completed a work plan for munitions surface removal at Site 12B.

**Plan of Action**

Plan of action items for Naval Air Station Brunswick are grouped below according to program category.

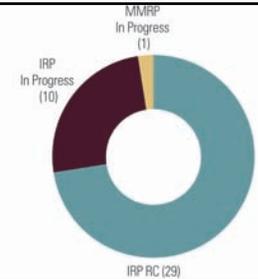
**IRP**

- Complete five-year review report in FY10.
- Complete fieldwork on background study work plan and replace two extraction wells in FY10.
- Complete RI report and begin operating the 1,4-dioxane treatment system for the eastern contaminated area in FY10.
- Complete RI/FS, proposed cleanup plan, and ROD for Site 17 in FY10-FY11.
- Complete cleanup of petroleum at Naval Exchange in FY10-FY11.
- Complete background fieldwork sampling, issue background report, and complete historical radiological assessment in FY10-FY11.

**MMRP**

- Complete action memorandum, EE/CA, and munitions surface removal for Site 12B in FY10.

<b>FFID:</b>	VA317002248200	<b>Funding to Date:</b>	\$ 32.9 million
<b>Location (Size):</b>	Virginia Beach, Virginia (2,147 acres)	<b>Est. CTC (Comp Year):</b>	\$ 23.1 million (FY 2051)
<b>Mission:</b>	Provide logistics facilities and support services to meet the amphibious warfare training requirements of the Armed Forces	<b>IRP Sites (Final RIP/RC):</b>	39 (FY2013)
<b>HRS Score:</b>	50; placed on NPL in May 1999	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2010)
<b>IAG Status:</b>	FFA signed November 2003	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Heavy metals, mixed municipal wastes, VOCs, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-173
<b>Media Affected:</b>	Sediment, Soil, Groundwater, Surface Water		



**Progress To Date**

Naval Amphibious Base (NAB) Little Creek provides logistics facilities and support services to meet the amphibious warfare requirements of the Armed Forces. Site types at this installation include landfills, a music equipment plating shop, a laundry waste disposal area, a pentachlorophenol dip tank, sandblast yards, battery storage areas, and underground storage tanks. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1999. DoD and EPA signed a federal facility agreement (FFA) in 2003 to outline how they were going to proceed with cleanup. The installation established a Restoration Advisory Board (RAB) in 1994, which is responsible for communicating cleanup progress with the community. The RAB completed a community relations plan in FY02. The Navy, EPA, and the Commonwealth of Virginia formed a partnership to address environmental cleanup at the facility and meet frequently to track progress. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY09.

To date, NAB Little Creek has signed seven Records of Decision (RODs), which selected cleanup actions for 5 environmental restoration sites. The installation has also closed over 100 CERCLA and RCRA sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at NAB Little Creek for FY05 through FY08 is summarized below.

In FY05, NAB Little Creek completed RODs, which determined no further cleanup activities were necessary for Solid Waste Management Units (SWMUs) 7a and 8. The installation completed an environmental evaluation and cost analysis for Sites 7 and 8, and began interim cleanup construction. The installation completed a feasibility study (FS) to evaluate cleanup alternatives, and completed a ROD for Site 12. In addition, the installation closed SWMUs 18, 116, and Area of Concern (AOC) D with no further action. The installation began a preliminary assessment (PA) at the MMRP site identified in the FY02 inventory.

In FY06, NAB Little Creek completed interim cleanup for Site 8, and a treatability study report instead of a proposed plan and ROD for Sites 11a and 13. The installation also completed a vapor intrusion assessment, an FS, and a proposed cleanup plan for Site 11. The installation also completed an explanation of significant differences for Site 12. Under the MMRP, the installation identified six potential AOCs during the PA of the Morale Welfare and Recreation Skeet Range.

In FY07, NAB Little Creek completed RODs for Sites 11 and 13. The installation also completed the design for cleanup and cleanup actions for Site 12, the Phase II remedial investigation (RI) for SWMU 3, and the interim cleanup for Site 7. Under the MMRP NAB Little Creek completed two PAs addressing seven AOCs; three of these AOCs were recommended for no further action.

In FY08, NAB Little Creek completed the ROD for Site 8, and funded cleanup for Sites 11 and 13. The installation also began site inspections (SIs) at four MMRP sites.

**FY09 IRP Progress**

NAB Little Creek completed a five-year review report for five sites. The installation completed the ROD for Site 7, an interim cleanup completion report for Site 12, and cleanup at Site 11.

Technical and regulatory issues delayed cleanup at Site 13.

**FY09 MMRP Progress**

NAB Little Creek continued the SI for four sites at Unexploded Ordnance (UXO) 0001.

**Plan of Action**

Plan of action items for Naval Amphibious Base Little Creek are grouped below according to program category.

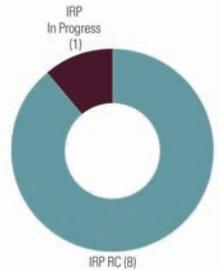
**IRP**

- Complete cleanup at Site 13 in FY10.
- Assume environmental restoration responsibilities from Fort Story in FY10.
- Complete assessment of potential risks to the environment at SWMU 7b in FY10-FY11.
- Complete cleanup completion report for Site 7 in FY10-FY11.
- Complete RI/FS for Site 11a in FY10-FY11.

**MMRP**

- Complete SI for four sites at UXO 0001 in FY10.

<b>FFID:</b>	CA917002757500	<b>Media Affected:</b>	Soil and Groundwater
<b>Location (Size):</b>	Crows Landing, California (1,527 acres)	<b>Funding to Date:</b>	\$ 30.3 million
<b>Mission:</b>	Served as auxiliary airfield for Moffett Field operations; used for practice operations by other Components during the 1970s and 1980s and as a research and development site by NASA	<b>Est. CTC (Comp Year):</b>	\$ 1.4 million (FY 2014)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	9 (FY2009)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Petroleum products, solvents, refuse, ordnance, incinerator wastes, VOCs, SVOCs, metals	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-7



## Progress To Date

The Naval Auxiliary Landing Field (NALF) Crows Landing was commissioned in May 1943, and served primarily as an auxiliary airfield for Moffett Field operations. In July 1991, the BRAC Commission recommended closure of NALF Crows Landing. The installation closed on July 1, 1994, and transferred to NASA in FY94. Congress authorized NASA to transfer the facility to Stanislaus County in FY99. In FY94, the installation formed a BRAC cleanup team to develop a process for the cleanup of sites. The team completed a BRAC cleanup plan with community input, which was updated in FY97, to prioritize sites requiring environmental cleanup. The installation established an information repository in FY89. In addition, the installation developed an environmental business plan and a community relations plan, both of which were updated in FY01. The installation updated the community relations plan again in FY02.

To date, NALF Crows Landing has transferred approximately 85 percent of the original acreage to the county. Regulatory oversight agencies have concurred on no further cleanup action for eight Installation Restoration Program (IRP) sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. The cleanup progress at NALF Crows Landing for FY05 through FY08 is summarized below.

In FY05, NALF Crows Landing extracted groundwater near the former dry well at the Administration Plume (IRP Site 17). In addition, the installation completed the investigation of groundwater beneath an adjacent property at IRP Site 17. The installation received regulatory closure on Underground Storage Tanks (USTs) 109 and 117, as well as the UST Cluster (CL) 2 area. NALF Crows Landing completed a demonstration project at IRP Site 17 and removal action at IRP Site 11 (disposal pits). The installation also began munitions and explosives of concern evaluations in four areas at the installation. The BRAC cleanup team continued to establish partnerships, evaluate the environmental programs, and approve the environmental master schedules for the installation. The installation issued two fact sheets and two public notices, updated the community relations plan, and held a public meeting.

In FY06, NALF Crows Landing continued groundwater monitoring for the base. The installation prepared a work plan for additional groundwater investigations at the off-site property adjacent to IRP Site 17.

In FY07, NALF Crows Landing conducted a removal action for excavation and sampling at IRP Sites 11 and 11B. The installation completed an interim cleanup alternative evaluation and work plan for the removal action pilot study at IRP Site 17. The installation also continued groundwater monitoring, including additional investigation at the off-site property adjacent to IRP Site 17. NALF Crows Landing closed groundwater monitoring wells except at IRP Site 17 and UST CL 2 area. The installation completed a memorandum requiring no further cleanup action at IRP Site 11A.

In FY08, NALF Crows Landing completed a removal action after-action report and received concurrence with no further cleanup action for IRP Sites 11 and 11B. The installation also implemented a Phase I bioremediation pilot study, which uses natural processes to cleanup contaminated areas, for IRP Site 17. NALF Crows Landing continued groundwater monitoring at the installation and an adjacent off-site area.

## FY09 IRP Progress

NALF Crows Landing began a feasibility study and implemented Phase II and Phase III of the bioremediation pilot study for IRP Site 17. The installation also continued groundwater monitoring at the site and an adjacent off-site area. The cost of completing environmental restoration has changed significantly due to technical issues.

## FY09 MMRP Progress

NALF Crows Landing has identified no MMRP sites.

## Plan of Action

Plan of action items for Naval Auxiliary Landing Field Crows Landing are grouped below according to program category.

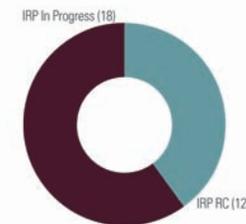
### IRP

- Continue groundwater monitoring at IRP Site 17 and adjacent off-site area in FY10-FY11.
- Complete bioremediation pilot study for IRP Site 17 in FY10-FY11.
- Complete FS for IRP Site 17 in FY10-FY11.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	HI917002438800	<b>Funding to Date:</b>	\$ 27.7 million
<b>Location (Size):</b>	Wahiawa and Lualualei, Hawaii (2,400 acres)	<b>Est. CTC (Comp Year):</b>	\$ 25.9 million (FY 2017)
<b>Mission:</b>	Operate and maintain communications facilities and equipment for naval shore installations and fleet units in the eastern Pacific	<b>IRP Sites (Final RIP/RC):</b>	30 (FY2016)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed March 2009	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	PCBs, metals, petroleum hydrocarbons, VOCs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-72
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



## Progress To Date

The Naval Computer and Telecommunications Area Master Station (NCTAMS), Pacific installation operates and maintains two communications facilities on the island of Oahu, but conducts industrial operations primarily at the main station and receiver site in Wahiawa and the Naval Radio Transmitting Facility in Lualualei. The restoration program has focused on those two facilities, where operation and maintenance of electrical transformers and switches have been the primary sources of contamination. Contamination with metals and petroleum hydrocarbons also resulted from the station's operating and maintenance activities. The potential risk to human health and the environment from detected polychlorinated biphenyl (PCB)-contaminated soil in work and residential areas was significant enough for EPA to place the installation on the NPL in May 1994. DoD and EPA signed a Federal Facilities Agreement (FFA) in FY09 to outline how they were going to proceed with cleanup. Since the installation consisted of two primary facilities, it established two Restoration Advisory Boards to discuss cleanup progress with the community. The installation completed the final community relations plan in FY95.

The installation determined that no further cleanup action was necessary for Site 14 and underground storage tank Sites 6 and 22. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at NCTAMS, Pacific for FY05 through FY08 is summarized below.

In FY05, NCTAMS, Pacific completed final sampling verification reports for Sites 14 and 15. The installation also completed a draft Step 3A assessment of potential risks to the environment at Sites 6 and 24.

In FY06, NCTAMS, Pacific completed remedial investigation (RI) reports for Sites 1, 2, 5, and 22. The installation also completed a no further action Record of Decision (ROD), which determined that no further cleanup activities were necessary for Site 22.

In FY07, NCTAMS, Pacific completed a feasibility study (FS) to evaluate cleanup alternatives, and installed and operated cleanup systems at Sites 1 and 2.

In FY08, NCTAMS, Pacific completed an interim removal action for Site 5.

## FY09 IRP Progress

The installation completed the lower base site actions. DoD and EPA signed an FFA for the installation.

Regulatory issues delayed the completion of RODs for Sites 1, 2, 5, 6, and 24.

## FY09 MMRP Progress

NCTAMS, Pacific has identified no MMRP sites.

## Plan of Action

Plan of action items for Naval Computer and Telecommunications Area Master Station, Pacific are grouped below according to program category.

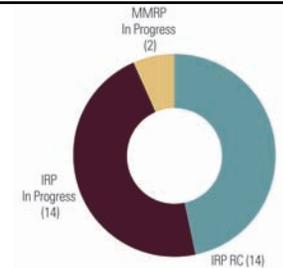
### IRP

- Complete RI/FS reports for Sites 6 and 24 in FY10.
- Complete RI work plans and for Sites 4, 10, and 18 in FY10.
- Complete site investigation work plan for Site 3 in FY10.
- Complete RODs for Sites 1, 2, 5, 6, and 24 in FY10.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	PR21730007400, PR217003172000, PR217006932100	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Vieques, PR (22,687 acres)	<b>Funding to Date:</b>	\$ 120.4 million
<b>Mission:</b>	Provided ground warfare and amphibious training for marines, naval gunfire support training, and air to ground training. Provided munitions storage for Atlantic Fleet training	<b>Est. CTC (Comp Year):</b>	\$ 269.9 million (FY 2045)
<b>HRS Score:</b>	NA; placed on NPL in February 2005	<b>IRP Sites (Final RIP/RC):</b>	28 (FY2015)
<b>IAG Status:</b>	FAA signed in September 2007	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2020)
<b>Contaminants:</b>	Pesticides, PCBs, gasoline, explosives, land waste oil, metals, VOCs, SVOCs, propellants	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to pages C-6-145 and C-6-146



### Progress To Date

Naval Facilities on Vieques consists of the former Naval Ammunition Support Detachment (NASD) on the western end of the island and the former Vieques Naval Training Range (VNTR) on the eastern half. The installation provides training, and munitions storage for the Atlantic Fleet. Contaminated site types include underground storage tanks, open burning/open detonation areas, and munitions areas. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 2005. In FY07, DoD and EPA signed a federal facility agreement (FFA) to outline how they are going to proceed with cleanup. In FY04, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB).

To date, Navy has transferred 8,114 acres of the former NASD to the Department of the Interior (DOI), the Municipality of Vieques, and the Conservation Trust of Puerto Rico. The U.S. Fish and Wildlife Service manages 4,000 of these acres as a National Wildlife Refuge, and DOI manages 14,573 acres transferred from the former VNTR as a National Wildlife Refuge and Wilderness Area. In FY08, the installation completed a Record of Decision (ROD) determining that no further cleanup actions were necessary at the former NASD Area of Concern (AOC) H. Cleanup progress at Naval Facilities on Vieques for FY05 through FY08 is summarized below.

In FY05, the installation submitted engineering evaluations and cost analyses for four former NASD sites (AOCs J and R, and Solid Waste Management Units [SWMUs] 6 and 7), and a data summary report for the original RCRA sites. The Naval Facilities on Vieques began interim removal actions at the former NASD's sites suspected to contain munitions contamination under the Military Munitions Response Program (MMRP), including SWMU 4. For the former VNTR, the Naval Facilities on Vieques completed a preliminary assessment (PA) and site inspection (SI) work plan for eight photo-identified/potential (PI/P) AOC sites, and a background soil investigation work plan; the installation received regulatory approval for both. Under the MMRP, the installation conducted an SI, expanded range assessment, and a surface removal action at discrete sites in the former live impact area (LIA),

and specific beaches and roads, at the former VNTR. The installation also completed a RAB charter.

In FY06, the Naval Facilities on Vieques conducted a remedial investigation (RI) and supplemental RIs at three former NASD sites (AOCs E, I, and R). The installation began PA/SIs at eight PI/P AOC sites at the former VNTR, and completed a surface removal action of munitions and explosives of concern (MEC) from 200 of the approximately 900 acres on the LIA under the MMRP. The installation also completed a Phase II SI work plan and expanded range assessment.

In FY07, the Naval Facilities on Vieques completed the RI report at the former NASD AOCs H, J, 6, and 7, and started the RI at former NASD SWMU 4. The installation also completed the background soil investigation report at the former VNTR, prepared proposed cleanup plans requiring no further action for nine sites. Under the MMRP, the installation completed a surface removal of MEC on 290 acres on LIA and Eastern Conservation Area (ECA), and conducted a geophysical survey for 90 of 305 total acres to support the removal of MEC beneath the surface at selected beaches and roads. In addition, the installation conducted archaeological and biological assessments of ECA and Yellow Beach on the former VNTR and SWMU 4 on the former NASD, and began a burn plan in LIA and ECA on the former VNTR.

In FY08, the Naval Facilities on Vieques completed an ROD requiring no further action for the former NASD AOC H, RI reports for former NASD AOCs E and I, and a PA/SI at 12 former RCRA sites and 8 PI/P AOC sites on the former VNTR. The installation started an SI and expanded SI work plans at 25 of the 36 former RCRA and PI/P AOC sites, and an Decision Document (DD) requiring no further action to address the remaining 11 former RCRA and PI/P AOC sites. Under the MMRP, the Naval Facilities on Vieques completed archaeological and biological assessments at LIA and the surface removal action of MEC on 790 acres on the LIA and ECA. The installation completed work plans for subsurface MEC removal at selected beaches and roads.

### FY09 IRP Progress

Naval Facilities on Vieques completed removal action at AOCs J and R, and SWMUs 6 and 7. The installation started an RI

report for AOC R, and also began a pilot study for AOCs E and I. Naval Facilities on Vieques completed SI fieldwork and began the SI report for 25 former RCRA and PI/P AOC sites on the former VNTR. D.C. The cost of completing environmental restoration has changed significantly due to technical issues.

Technical issues delayed completion of a DD requiring no further action for 11 former RCRA and PI/P AOC sites on the former VNTR.

### FY09 MMRP Progress

The Naval Facilities on Vieques completed fieldwork for the Phase II SI, and began the SI report for the entire installation. The installation also started MEC removal associated with the removal action in the surface impact area (SIA).

Administrative issues delayed the archaeological and biological assessments at the former VNTR.

### Plan of Action

Plan of action items for Naval Facilities on Vieques are grouped below according to program category.

#### IRP

- Complete draft RI report for AOC R, and continue pilot study for former NASD AOCs E and I in FY10-FY11.
- Complete SI report for 25 former RCRA and PI/P AOC sites and DD requiring no further action for 11 former RCRA and PI/P AOC sites on the former VNTR in FY10-FY11.
- Begin environmental assessments at AOC J, and SWMUs 6 and 7 in FY10-FY11.
- Hold four RAB meetings in FY10-FY11.

#### MMRP

- Complete archaeological and biological assessments at the former VNTR in FY10.
- Continue MEC removal associated with removal actions in the SIA in FY10-FY11.
- Complete RI and begin FS report for SWMU 4, and complete the Phase II SI report in FY10-FY11.

<b>FFID:</b>	CA917002756300	<b>Funding to Date:</b>	\$ 60.9 million
<b>Location (Size):</b>	Richmond, California (416 acres)	<b>Est. CTC (Comp Year):</b>	\$ 0.0 million (FY 2042)
<b>Mission:</b>	Supply and provide bulk storage of various grades of petroleum fuel product for fleet	<b>IRP Sites (Final RIP/RC):</b>	4 (FY2012)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Petroleum products, VOCs, SVOCs, heavy metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-8
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



**Progress To Date**

The Naval Fuel Depot (NFD), Point Molate supplies and provides bulk storage of fuel for fleets. Operations at the installation included bulk storage and supply of fuel products, including JP5, JP7, diesel, and Bunker C. Contaminants of concern include petroleum hydrocarbons, polycyclic aromatic hydrocarbons, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs) in the soil and groundwater. In July 1995, the BRAC Commission recommended closure of NFD, Point Molate. The installation formed a BRAC cleanup team in 1996 to develop a process for cleaning up sites at NFD, Point Molate. The installation also formed a Restoration Advisory Board (RAB) in 1996 to discuss the installation's cleanup progress with the community.

There are 13 disposal areas at NFD, Point Molate. The installation transferred nine disposal areas (1, 2, 4, 6-9, 11, and 12), consisting of 364 acres, to the City of Richmond in 2003. Two cleanup actions have been selected to date. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at NFD, Point Molate for FY05 through FY08 is summarized below.

In FY05, NFD, Point Molate completed the environmental and structural closure of the 22 underground storage tanks (USTs), pipelines, and valve boxes. The installation received concurrence on the structural closure from the regulatory agencies. The installation also completed a groundwater evaluation with concurrence from regulatory agencies. NFD, Point Molate selected and completed cleanup actions for Site 1. In concurrence with regulatory agencies, the installation changed the strategy for Site 4 and completed a risk assessment, instead of a feasibility study (FS) to evaluate cleanup alternatives. Groundwater and landfill (LF) monitoring continued for the base.

In FY06, the installation continued to monitor the Site 1 LF. The installation also completed the Site 1 design for cleanup, and construction and operation of a filtration system. The installation began early transfer and environmental strategy discussions with the local reuse authority regarding the remaining 52 acres on NFD, Point Molate.

In FY07, NFD, Point Molate completed the removal and closure of four Navy USTs on adjacent land formerly leased from a private landowner. NFD, Point Molate continued to monitor the Site 1 LF and groundwater. In collaboration with the regulatory agencies, the installation completed a product mobility and recovery study, and fuel fingerprinting at Site 3 to help complete the FS and corrective action plan. The installation conducted structural integrity inspections of the 20 remaining large USTs, and closed two of them. The NFD, Point Molate RAB conducted a community site tour.

In FY08, NFD, Point Molate continued to monitor the Site 1 LF and groundwater. In collaboration with regulatory agencies, NFD, Point Molate received environmental closure for seven additional USTs. The installation completed early transfer negotiations with the local reuse authority, and found the remaining four disposal areas suitable for early transfer. The installation also led Site 3 technical discussions, which provided critical input for the early transfer negotiations. Under the Early Transfer Cooperative Agreement, NFD, Point Molate will transfer the remaining cleanup responsibility to the City of Richmond.

**FY09 IRP Progress**

NFD, Point Molate continued to monitor the Site 1 LF and groundwater. NFD, Point Molate also continued to perform UST inspections and minor repairs. The Site 3 treatment system continued to operate. The BRAC cleanup team and RAB continued to meet. Upon deed transfer, all remaining cleanup responsibilities will be transferred to the City of Richmond. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

NFD, Point Molate has identified no MMRP sites.

**Plan of Action**

Plan of action items for Naval Fuel Depot, Point Molate are grouped below according to program category.

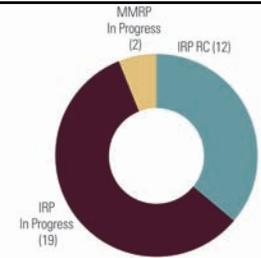
**IRP**

- Transfer the remaining property in FY10
- Continue UST inspections and minor repairs, and Site 1 LF monitoring, until the deed transfer in FY10.
- Transfer responsibility for the completion of the Site 3 FS, proposed plan, corrective action plan, and the Site 4 risk assessment to the City of Richmond in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	RI117002424300	<b>Est. CTC (Comp Year):</b>	\$ 39.1 million (FY 2041)
<b>Location (Size):</b>	Newport, Rhode Island (1,400 acres)	<b>IRP Sites (Final RIP/RC):</b>	31 (FY2020)
<b>Mission:</b>	Provide logistical support and serve as a training center	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2015)
<b>HRS Score:</b>	32.25; placed on NPL in November 1989	<b>Five-Year Review Status:</b>	Completed and Planned
<b>IAG Status:</b>	FFA signed in March 1992	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-148
<b>Contaminants:</b>	PCBs, POLs, VOCs, SVOCs, metals		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 106.0 million		



**Progress To Date**

Naval Station Newport (formerly known as the Newport Naval Education and Training Center) served as a refueling depot from the early 1900s until after World War II, when it restructured to support research and development, and to provide specialized training. Currently, the installation provides logistical support and serves as a training center. Contaminants at the installation include petroleum/oil/lubricant (POL) sludge associated with tank farm sites, waste acids, solvents, and polychlorinated biphenyls (PCBs) in landfills used to dispose of general refuse and shop wastes. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in March 1992 to outline how they were going to proceed with cleanup. Formed in FY88, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY95. In FY90, the installation completed a community relations plan, and established an ecological advisory board. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY99 and FY04.

In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Naval Station Newport for FY05 through FY08 is summarized below.

In FY05, the installation began site inspections (SIs) at Sites 12 and 13. The installation also completed the Site 8 removal action, Site 17 remedial investigation (RI) fieldwork, and Site 20 screening assessment. Under the MMRP, Naval Station Newport finalized the preliminary assessment for the unexploded ordnance (UXO) site 1 Carr Point Shooting Range, which recommended proceeding to the SI phase.

In FY06, Naval Station Newport completed the review of the cleanup system's effectiveness at Site 9. BRAC 2005 legislation transitioned responsibility for the Installation Restoration Program (IRP) program to the Naval Facilities Engineering Command Mid-Atlantic.

In FY07, the installation completed annual long-term operation activities at Site 1 and finalized an interim cleanup work plan for removal of petroleum-contaminated soils at Site 9. The installation also completed RI field activities, submitted a final RI report, and started to develop the Phase II RI work plan for Site 17. Naval Station Newport completed an interim cleanup action at Site 19 to remove sandblast grit, an interim cleanup action at Site 21 to remove lead-contaminated soils, and an interim cleanup action at Site 8 to remove paint cans and drums. Under the MMRP, the installation completed the contract award for an SI at UXO 1 Carr Point Shooting Range, and submitted the draft SI work plan to regulators. The installation conducted six cleanup program manager meetings with EPA and the State of Rhode Island, and held six RAB meetings.

In FY08, Naval Station Newport completed annual long-term operation activities at Site 1 and RI fieldwork at Site 8. Naval Station Newport also completed a soil removal action and interim cleanup fieldwork at Site 9. The installation finalized the soil background study for the base and construction completion reports for Site 21. The installation also conducted six cleanup program manager meetings with EPA and the State of Rhode Island, and held six RAB meetings.

**FY09 IRP Progress**

Naval Station Newport completed annual long-term operation activities at Site 1. The installation also completed a removal of the pump-and-treat system at Site 13 (Tank Farm 5), and began interim removal action at Site 9, which consisted of the construction of a revetment. Naval Station Newport began the first round of Phase II RI fieldwork at Site 17. Additionally, Naval Station Newport finalized a screening assessment for Site 21, and concluded no further action was required. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Naval Station Newport finalized an SI work plan, implemented SI fieldwork, and submitted a draft SI report to regulators for UXO 1 Carr Point Shooting Range.

**Plan of Action**

Plan of action items for Naval Station Newport are grouped below according to program category.

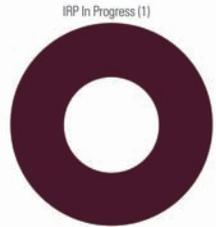
**IRP**

- Continue annual long-term operation activities at Site 1 in FY10.
- Complete Phase II RI fieldwork at Site 17 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	WA09799F345500	<b>Est. CTC (Comp Year):</b>	\$ 0.1 million (FY 2012)
<b>Location (Size):</b>	Tacoma, Washington (191 acres)	<b>IRP Sites (Final RIP/RC):</b>	1 (FY2012)
<b>Mission:</b>	Served as shipbuilding facility and reserve shipyard	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	Unknown	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>IAG Status:</b>	None	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-58
<b>Contaminants:</b>	Mercury, VOCs, PNAs, PCBs, heavy metals, arsenic, lead		
<b>Media Affected:</b>	Groundwater, Sediment, Soil		
<b>Funding to Date:</b>	\$ 0.3 million		



**Progress To Date**

The Naval Station Todd-Tacoma shipyard is located on Commencement Bay between Hylebos and Blair Waterways in Tacoma, Washington. The Navy acquired the 191-acre facility between 1942 and 1948. Beginning in 1940, Seattle-Tacoma Shipbuilding Corporation (later renamed Todd Pacific Shipyards, Inc., Tacoma Division) rapidly developed 74.2 acres to support the war efforts; this land later became the western portion of the Naval Station Todd-Tacoma. The Navy and the Maritime Commission acquired land adjacent to the private property to expand the plant. By October 1942, the Maritime Commission had transferred all of its contractual and facility interests to the Navy. The Navy continued land acquisitions until the end of the war when the installation had grown to 191 acres. After the war, DoD designated the property a Naval Industrial Reserve Shipyard, and shipbuilding ceased. In September 1948, the Navy acquired the Todd-owned property. In October 1958, DoD declared the property excess. The Navy and Marine Reserve Training Center retained eight acres, and transferred the remaining property to the Port of Tacoma in January 1960.

Cleanup progress for Naval Station Todd-Tacoma for FY05 through FY08 is summarized below.

In FY05 through FY07, the United States Army Corp of Engineers (USACE) assisted the Office of Counsel and the Department of Justice with ongoing settlement negotiations, with potentially responsible parties (PRPs) who may share responsibility for environmental cleanup at Naval Station Todd-Tacoma.

In FY08, USACE monitored cleanup activities within the Commencement Bay area by PRPs.

**FY09 IRP Progress**

USACE continued to monitor cleanup actions by PRPs. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

USACE has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Naval Station Todd-Tacoma are grouped below according to program category.

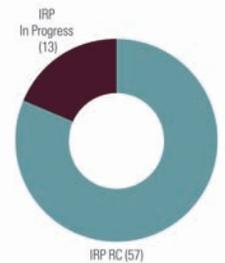
**IRP**

- Continue to monitor cleanup actions by PRPs in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	VA317002468500	<b>Funding to Date:</b>	\$ 69.3 million
<b>Location (Size):</b>	Dahlgren, Virginia (2,677 acres)	<b>Est. CTC (Comp Year):</b>	\$ 14.0 million (FY 2020)
<b>Mission:</b>	Proof and test ordnance	<b>IRP Sites (Final RIP/RC):</b>	70 (FY2019)
<b>HRS Score:</b>	50.26; placed on NPL in October 1992	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in September 1994	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Heavy metals, explosives residues, low-level radioactive materials, mercury, cleaning solvents, PCBs, pesticides, VOCs, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-172
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



## Progress To Date

The Dahlgren Naval Surface Warfare Center changed its name in FY05 to the Naval Support Facility, Dahlgren (Dahlgren) to reflect integration into the Naval District Washington Region. Dahlgren conducts ordnance testing for the Navy. Ordnance testing operations contributed to the contamination. Contaminated site types include former landfills, former ordnance burning and disposal areas, underground storage tanks, former ordnance ranges, and former ordnance research and development areas. Migration of these releases could affect the Potomac River, Gambo Creek, associated wetlands, and local groundwater aquifers used for drinking water. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1992. DoD and EPA signed a federal facility agreement (FFA) in September 1994 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Dahlgren for realignment. The installation established an information repository and an administrative record in FY91. In FY92, the installation completed a community relations plan, and formed a technical review committee responsible for communicating cleanup progress with the community. In FY95, the technical review committee was converted to a Restoration Advisory Board (RAB). To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY03, FY04, and FY05.

To date, Dahlgren has completed Records of Decision (RODs) selecting cleanup actions for 20 sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Dahlgren for FY05 through FY08 is summarized below.

In FY05, the installation completed a comprehensive five-year review report for annual wetland monitoring sites, a design for cleanup of Site 37, and annual wetland monitoring reports for Sites 6, 9, 17, 25, 46, 50, and 58. Dahlgren completed an RI (remedial investigation) and FS (feasibility study) to evaluate cleanup alternatives, a proposed plan (PP), and a cleanup action for Site 62. The installation completed interim cleanup actions for Sites 47b and 61b, and RIs for Sites 20 and 61a. Dahlgren also finalized two closeout documents for no further

cleanup action at Sites 38 and 40. The installation conducted removal actions at Sites 4 and 15, and held two RAB meetings.

In FY06, Dahlgren completed annual wetland monitoring reports for Sites 6, 9, 17, 25, 46, 50, and 58, a closeout report for Solid Waste Management Unit (SWMU) 128, and the Site 9 marsh cap repair. The installation also completed the revised design for cleanup at Site 37, and began cleanup. Dahlgren completed an engineering evaluation and cost analysis for Site 14. The installation held a public meeting to present the amended PP for Site 37, and held a RAB meeting.

In FY07, Dahlgren completed an FS and a PP for Sites 20 and 23, and a closeout document for Sites 47a and 47b. The installation awarded a contract for interim cleanup actions at Site 14, and began cleanup. The installation completed and signed an explanation of significant differences for Site 12, and completed annual wetland monitoring reports for Sites 2, 9, 17, 25, and 50. Dahlgren held a public meeting to present the Site 12 explanation of significant differences, and Sites 20 and 23 PP. The installation also held a RAB meeting.

In FY08, Dahlgren completed interim cleanup actions for Sites 20 and 23; a soil interim cleanup action for Site 14; and periodic groundwater monitoring reports for Sites 2, 9, and 17. The installation also awarded a contract for the groundwater cleanup for Sites 20 and 23, and started cleanup. Dahlgren finalized wetland monitoring reports for Sites 6, 9, 17, 25, 46, 50, and 58. The installation submitted a five-year review report for Site 2 for regulatory review, and held a RAB meeting.

## FY09 IRP Progress

Dahlgren began interim cleanup actions at Sites 4 and 15, and groundwater monitoring at Sites 20 and 23. The installation completed wetland monitoring reports for various sites, and a cleanup completion report for Site 37. Dahlgren completed pipe removal at Site 14. The cost of completing environmental restoration has changed significantly due to technical issues.

Administrative issues delayed completion of five-year review reports for various sites.

The installation held a RAB meeting.

## FY09 MMRP Progress

Dahlgren has identified no MMRP sites at this installation.

## Plan of Action

Plan of action items for Naval Support Facility, Dahlgren are grouped below according to program category.

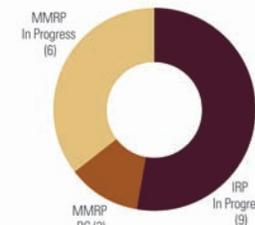
### IRP

- Continue groundwater monitoring at Sites 20 and 23 in FY10.
- Continue interim cleanup actions at Sites 4 and 15 in FY10.
- Complete and submit an explosive safety submission for Site 61a, and issue a pilot work plan in FY10.
- Complete five-year review reports for various sites in FY10.
- Complete interim cleanup actions at Site 63 in FY10-FY11.
- Complete and submit chemical safety submission plans for Site 12 in FY10-FY11.
- Complete wetland monitoring reports for Sites 6, 9, 17, 25, 46, and 58 in FY10-FY11.

### MMRP

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA917002452800	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Concord, California (13,023 acres)	<b>Funding to Date:</b>	\$ 93.1 million
<b>Mission:</b>	Shipped, received, inspected, and classified munitions (tidal area); served as munitions storage and weapons maintenance, inspection, and testing facility (inland area)	<b>Est. CTC (Comp Year):</b>	\$ 26.1 million (FY 2019)
<b>HRS Score:</b>	50.00; placed on NPL in December 1994	<b>IRP Sites (Final RIP/RC):</b>	9 (FY2014)
<b>IAG Status:</b>	FFA signed in June 2001	<b>MMRP Sites (Final RIP/RC):</b>	8 (FY2015)
<b>Contaminants:</b>	Heavy metals, petroleum hydrocarbons, VOCs, SVOCs, explosives, propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-22



## Progress To Date

Naval Weapons Station (NWS) Seal Beach, Detachment Concord ships, receives, inspects, and classifies munitions. It also serves as a munitions storage and weapons maintenance, inspection, and testing facility. These activities have resulted in the contamination of surface water and sediment at tidal and litigation-area sites. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in December 1994. DoD and EPA signed a federal facility agreement (FFA) in June 2001 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended closure of the inland area, and realignment of the tidal area. Formed in FY90, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY95. Concord also received funding for technical assistance for public participation, updated the community relations plan, and completed the five-year review report for the seven litigation-area sites in FY03.

Concord has completed Records of Decision (RODs) selecting cleanup actions for 15 environmental restoration sites, including no further cleanup activities for 20 sites. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Concord for FY05 through FY08 is summarized below.

In FY05, Concord completed the design and began cleanup of the Site 1 landfill cap. The installation also completed a treatability study in the litigation areas; performed data gap sampling at Sites 2, 9, and 11; and completed an engineering evaluation and cost analysis for Site 30. The installation began the MMRP preliminary assessment (PA) and issued a draft report for review.

In FY06, Concord transitioned management of Sites 13, 17, 22, 27, 29, and Solid Waste Management Units (SWMUs) 2, 5, 7, and 18 under BRAC 2005. The installation also signed a ROD for no further cleanup action at Site 17. Under the MMRP, the installation finalized the PA and awarded the contract to

begin the site inspection (SI) work plan. The RAB reviewed site characterization documents and coordinated cleanup.

In FY07, Concord prepared a revised feasibility study (FS) to evaluate cleanup alternatives and conducted a groundwater treatment pilot study to evaluate solvent cleanup technology for SWMUs 2, 5, 7, and 18. The installation also completed a remedial investigation (RI) and FS report for Site 22. Under the MMRP, the installation finalized PAs for the former Inland Burn Area, the Eagles Nest Explosive Ordnance Disposal (EOD) Site, the Black Pit at Red Rock Site, and the Site HE 5 Burn Area.

In FY08, Concord completed FSs for SWMUs 2, 5, 7, 18; a draft final FS report for Site 22; draft proposed plans (PPs) for SWMU sites; RI fieldwork at Site 22A; and a soil investigation at Site 27. Concord also began the historical radiological assessment program for the base. Under the MMRP, Concord finalized the PA for the Inland and Tidal Area sites; finalized SI work plans for the Inland Area sites; and conducted an SI for Site 24A, former Inland Burn Area, Eagles Nest EOD, Black Pit at Red Rock, and Site HE 5 Burn Area.

## FY09 IRP Progress

Concord completed a PP and draft ROD for SWMUs 2, 5, 7, and 18; a draft PA/SI work plan for areas of potential interest; and a draft final work plan for a groundwater monitoring program at Sites 13, 22, 29, and SWMUs 2, 5, 7, and 18. The installation completed a historical radiological assessment for the base.

## FY09 MMRP Progress

Concord completed a supplemental PA and determined that no further cleanup action was necessary for 40 acres at site 23A, Inland Area EOD. The installation completed fieldwork and a draft SI report for former Inland Burn Area, Eagles Nest EOD, Black Pit at Red Rock, and HE 5 Burn Area; a draft final work plan for SI fieldwork at site 24A; a draft risk assessment for Eagles Nest EOD and the former Inland Burn Area.

## Plan of Action

Plan of action items for Naval Weapons Station Seal Beach, Detachment Concord are grouped below according to program category.

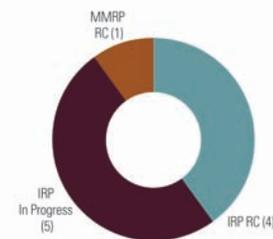
### IRP

- Complete ROD and prepare design for cleanup for SWMUs 2, 5, 7, and 18 in FY10-FY11.
- Complete PP and ROD for Site 22 in FY10-FY11.
- Complete time-critical removal action at Site 27 in FY10-FY11.
- Complete radiological scoping surveys to determine the presence of radioactivity throughout the base in FY10-FY11.
- Complete FS and prepare PP for Site 22A in FY10-FY11.

### MMRP

- Complete SI fieldwork Site 24A in FY10-FY11.
- Complete RI work plan and fieldwork for former Inland Burn Area and Eagles Nest EOD in FY10-FY11.

<b>FFID:</b>	NE79799F041800	<b>Est. CTC (Comp Year):</b>	\$ 242.3 million (FY 2075)
<b>Location (Size):</b>	Mead, Nebraska (17,214 acres)	<b>IRP Sites (Final RIP/RC):</b>	9 (FY2014)
<b>Mission:</b>	Performed ordnance storage and manufacturing activities	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2001)
<b>HRS Score:</b>	31.94; placed on NPL in August 1990	<b>Five-Year Review Status:</b>	Completed
<b>IAG Status:</b>	IAG signed in September 1991	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-111
<b>Contaminants:</b>	Explosives, VOCs, TCE, PCBs, SVOCs, metals, propellants		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 115.9 million		



**Progress To Date**

From 1942 to 1956, Nebraska Ordnance Plant produced munitions at four bomb-loading lines, stored munitions, and produced ammonium nitrates. The property also contained burn areas, an Atlas missile facility, and a sewage treatment plant. The University of Nebraska now owns the majority of the property. The Nebraska National Guard, U.S. Army Reserves, and private entities own the remainder of the property. The U.S. Army Corps of Engineers (USACE) identified soil contaminated with polychlorinated biphenyls (PCBs) and munitions, and groundwater contaminated with explosives and volatile organic compounds (VOCs) on and off the site. The potential risk to human health and the environment was significant enough for EPA to place the property on the NPL in August 1990. DoD and EPA signed an interagency agreement (IAG) in September 1991 to outline how they were going to proceed with cleanup. USACE converted the technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board in FY97. In FY99, USACE completed a memorandum of understanding with the Lower Platte National Resource District in which they agreed on the reuse of treated groundwater. USACE completed a community relations plan in FY08. To ensure continuous monitoring and improvement, USACE completed a five-year in FY04 and FY09.

To date, USACE has signed Records of Decision (RODs) for Operable Units (OUs) 1 and 2, which selected cleanup actions for these sites. USACE has incinerated over 16,000 tons of contaminated soil at Nebraska Ordnance Plant. Cleanup progress at Nebraska Ordnance Plant for FY05 through FY08 is summarized below.

In FY05, USACE provided technical and legal support to the Department of Justice (DOJ) for negotiations with parties potentially responsible for cleanup. USACE also began a supplemental groundwater investigation to better define the boundaries of the contaminated area.

In FY06, USACE continued operations and maintenance (O&M) of the air stripper treatment system and quarterly groundwater monitoring. The supplemental groundwater investigation clearly defined the southern and eastern perimeter of the contaminated area, supporting the design for additional groundwater monitoring wells. USACE also developed and submitted a

containment evaluation work plan describing how groundwater contaminants will be measured and reported. Additionally, USACE completed construction and started operation of the extraction well and air stripper treatment for Load Line 1. USACE implemented cleanup actions required by the OU 2 ROD. USACE continued to provide legal and technical support to DOJ.

In FY07, USACE continued O&M of the containment system and quarterly groundwater monitoring, and completed an evaluation of site groundwater contamination. USACE installed the additional groundwater monitoring wells on the southern and eastern edges of the contaminated area. USACE completed the first annual cleanup performance report, a comprehensive assessment of system performance using monitoring, modeling, and operations and maintenance data. USACE continued to provide legal and technical support to the DOJ.

In FY08, USACE completed construction of the advanced pre-treatment system and began full-scale operation. USACE submitted the five-year review report for OU 2 for regulatory concurrence and received additional regulatory comments. USACE also completed the OU 3 interim cleanup and community relations plan, continued O&M of the containment system and groundwater monitoring, and continued to provide legal and technical support to the DOJ. USACE also began the second Ordnance and Explosives Recurring Review.

**FY09 IRP Progress**

USACE completed the five-year review report with regulatory concurrence for OU 2. USACE continued O&M of the containment system and groundwater monitoring. USACE also completed annual reporting requirements and installed one new containment well and two focused extraction wells. Additionally, USACE began construction of a new treatment plant, conducted an additional site-wide investigation, began a sampling study, and continued to provide legal and technical support to the DOJ.

**FY09 MMRP Progress**

USACE received EPA comments on the Ordnance and Explosive Recurring Review and conducted one site visit.

**Plan of Action**

Plan of action items for Nebraska Ordnance Plant are grouped below according to program category.

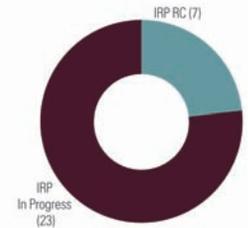
**IRP**

- Investigate possible alternative energy options in FY10.
- Begin pilot study for explosives contamination in Load Line 2 in FY10.
- Begin remedial investigation addendum for OU 3 in FY10.
- Complete removal action for underground storage tanks in FY10.
- Complete construction of Load Line 4 Treatment Plant in FY10.

**MMRP**

- Complete Ordnance and Explosive Recurring Review in FY10.

<b>FFID:</b>	CT117002202000	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Groton, Connecticut (547 acres)	<b>Funding to Date:</b>	\$ 67.7 million
<b>Mission:</b>	Maintain and repair submarines; conduct submarine training and submarine research; provide a home port for submarines	<b>Est. CTC (Comp Year):</b>	\$ 38.0 million (FY 2042)
<b>HRS Score:</b>	36.53; placed on NPL in August 1990	<b>IRP Sites (Final RIP/RC):</b>	30 (FY2022)
<b>IAG Status:</b>	FFA signed in January 1995	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Dredge spoils, incinerator ash, POLs, PCBs, spent acids, pesticides, solvents, construction debris, metals, VOCs, SVOCs	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-50



**Progress To Date**

New London Naval Submarine Base maintains and repairs submarines. Contaminated sites at the installation include the Area A Landfill (Site 2), smaller disposal areas, underground storage tanks (USTs), and fuel and chemical storage areas. The potential risk to human health and the environment from polychlorinated biphenyl (PCB) contamination at Site 2 was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in January 1995 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended New London Submarine Base for realignment. Formed in FY89, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY94. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY07.

To date, the installation has completed Records of Decision (RODs) that selected cleanup actions for Sites 2, 3, 6, 7, 8, 20, and an interim ROD for the base groundwater operable unit (OU). In addition, New London Naval Submarine Base signed no further action RODs, which determined that no further cleanup actions were necessary at Sites 4, 14, 15, 16 and 18. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP) sites; no MMRP sites were identified. Cleanup progress at New London Naval Submarine Base for FY05 through FY08 is summarized below.

In FY05, New London Naval Submarine Base completed a design for cleanup for the base's groundwater OU and for the Site 7 Soil OU.

In FY06, the installation completed cleanup for the base's groundwater OU and Site 7 Soil OU. Additionally, New London Naval Submarine Base drafted a cleanup plan proposing no further action for the Defense Reutilization and Marketing Office (DRMO) site 6.

In FY07, New London Submarine Base completed the second five-year review report and ROD for the DRMO 6. The

installation completed an explanation of significant differences for Site 3 and completed fieldwork for the Thames River Study.

In FY08, New London Naval Submarine Base completed the Thames River Study and an engineering evaluation and cost analysis for a sediment removal action at Inner Pier 1. New London Naval Submarine Base completed the proposed plan (PP) and final ROD for the base's groundwater OU, and cleanup at Site 3 New Source Area. The installation submitted a draft feasibility study (FS) to evaluate cleanup alternatives for lower base sites, and achieved cleanup goals at Site 7. New London Naval Submarine Base started a draft remedial investigation (RI) and FS at Area A Wetlands.

**FY09 IRP Progress**

New London Naval Submarine Base began OU 9 groundwater land use controls (LUCs), which restrict use of and access to the site, and a cleanup completion report. The installation completed on-going long-term management at Sites 2, 3, 6, and 8. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory and technical issues delayed the completion of the FS, PP, and draft ROD for lower base sites and the RI/FS for Area A Wetlands. Regulatory and technical issues also delayed completion of sediment removal at Inner and Outer Pier 1.

The installation held a RAB meeting.

**FY09 MMRP Progress**

New London Naval Submarine Base has identified no MMRP sites.

**Plan of Action**

Plan of action items for New London Naval Submarine Base are grouped below according to program category.

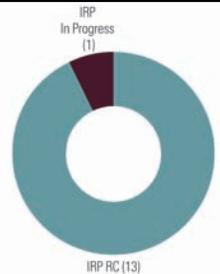
**IRP**

- Complete sediment removal at Inner and Outer Pier 1 in FY10.
- Complete RI/FS, PP, and ROD for Area A Wetlands in FY10.
- Complete OU 9 groundwater LUC design and cleanup completion report in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	OH557002465000	<b>Funding to Date:</b>	\$ 6.5 million
<b>Location (Size):</b>	Heath, Ohio (70 acres)	<b>Est. CTC (Comp Year):</b>	\$ 1.1 million (FY 2012)
<b>Mission:</b>	Provided depot-level maintenance for Air Force and DoD missile, navigation, and guidance systems.	<b>IRP Sites (Final RIP/RC):</b>	14 (FY2002)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, SVOCs, BCEE, TCE	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-44
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Newark Air Force Base (AFB) has provided depot-level maintenance for missile guidance and the navigational systems used by most aircraft and missiles since 1992. Past waste management activities related to solvents, such as freon 113 and trichloroethylene (TCE), have affected groundwater at the installation. In 1993, the BRAC Commission recommended Newark AFB for closure. In FY94, the installation formed a BRAC cleanup team to determine a process for cleanup of sites at Newark AFB, and a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. The RAB adjourned in FY05. To ensure continuous monitoring and improvement, Newark AFB completed a five-year review report in FY05.

Newark AFB has prepared decision documents, which determined that no further cleanup activities were necessary for five sites. The installation transferred 56 of the 70 acres comprising Newark AFB to the Heath-Newark-Licking County Port Authority, and 13 acres to the Licking County Regional Airport. In FY04, Newark AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Newark AFB from FY05 through FY08 is summarized below.

In FY05, Newark AFB completed a five-year review report. The installation conducted enhanced bioremediation at Federal Facility (FF) 87 at the two remaining wells (Monitoring Wells 87 1 and 87 1A). The installation awarded a performance-based contract for groundwater monitoring at FF 87. The BRAC cleanup team held one meeting, at which the installation presented proposed amendments to the post-closure plan for the detection monitoring program and bioremediation effectiveness monitoring program. The RAB formally adjourned in accordance with DoD policy because all environmental cleanup sites were closed, with the exception of FF 87.

In FY06, the installation continued cleanup operations by monitoring groundwater at FF 87 and submitted a proposal to amend the post-closure plan for this site. Newark AFB submitted an operating properly and successfully demonstration for FF 87 to EPA Region 5. The installation closed groundwater monitoring wells no longer in use at

previously transferred parcels. The BRAC cleanup team met twice and signed a consensus statement in which they agreed to stop groundwater monitoring at Landfill (LF) 002.

In FY07, the installation continued groundwater cleanup operations at FF 87, including the collection of two rounds of source area delineation samples, used to determine the potential for well water to come from the contaminated area. Sampling results indicated the source area was larger and more complex than originally estimated, changing the conceptual site model, which is a schematic diagram of the contaminated area. Ohio EPA provided conditional approval of post-closure plan amendments for FF 87. The installation finalized an updated map of land use controls (LUCs), which restrict use of or access to the site, and institutional controls, which are tools that minimize the potential for human exposure. The BRAC cleanup team met twice.

In FY08, Newark AFB planned and coordinated the final cleanup to reduce contaminant source at FF 87 by characterizing the source area and demolishing Buildings 90, 102, and 114. The installation continued cleanup operations by monitoring groundwater at FF 87. The installation also continued ongoing discussions with the BRAC cleanup team concerning the FF 87 work plan and the final excavation and soil disposal approach. The BRAC cleanup team met twice.

**FY09 IRP Progress**

Newark AFB completed the source area reduction cleanup at FF 87 and prepared the operating properly and successfully documents, which EPA approved. Newark AFB revised the FF 87 post-closure plan to accommodate the requirements related to monitoring groundwater after excavations, and resumed monitoring groundwater. The installation completed a five-year review report. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

The BRAC cleanup team met three times.

**FY09 MMRP Progress**

Newark AFB has identified no MMRP sites.

**Plan of Action**

Plan of action items for Newark Air Force Base are grouped below according to program category.

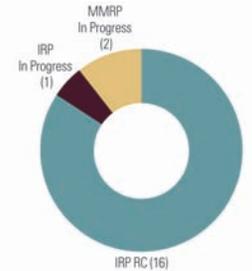
**IRP**

- Complete the second five-year review report in FY10.
- Continue cleanup operations through groundwater sampling at FF 87 in FY10-FY11.
- Transfer the final parcel to the Heath-Newark-Licking County Port Authority in FY10-FY11.
- Update the LUC management plan in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	IN521382227200	<b>Funding to Date:</b>	\$ 21.4 million
<b>Location (Size):</b>	Newport, Indiana (6,996 acres)	<b>Est. CTC (Comp Year):</b>	\$ 9.3 million (FY 2017)
<b>Mission:</b>	Store and eliminate VX stockpile and related materials, while protecting the workforce, public, and environment	<b>IRP Sites (Final RIP/RC):</b>	17 (FY2011)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2017)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Explosives, heavy metals, VOCs, SVOCs, breakdown products	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-24
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Newport Chemical Depot (CD) stores and eliminates the VX nerve agent and other related materials. The Wabash River Ordnance Works (Site 001) originally manufactured the explosive RDX during World War II and the Korean conflict. In addition, Newport CD produced heavy water, which is used in nuclear reactors, in support of the Manhattan Project and Atomic Energy Commission. From 1961 to 1969, the facility produced chemical agent VX. The installation also buried building debris, including asbestos-contaminated and decontaminated debris from the chemical plant. From 1973 to 1974, Newport CD constructed a TNT production plant, and burned and buried TNT removed from the production lines. In FY02, the installation composted approximately 7,000 cubic yards of TNT- and DNT-contaminated soils, and in FY03 composted and backfilled about 6,700 cubic yards of RDX-contaminated soils. In May 2005, the BRAC Commission recommended closure of the Newport CD after completion of the chemical demilitarization mission, including neutralizing the VX agent. Newport CD formed a Restoration Advisory Board (RAB) in 2000 to discuss the installation’s cleanup progress with the community.

The installation conducted an inventory of sites suspected to contain munitions contamination under the Military Munitions Response Program (MMRP) in FY02; MMRP sites were identified. Cleanup progress at Newport CD for FY05 through FY08 is summarized below.

In FY05, Newport CD conducted long-term management (LTM) for groundwater at Sites 001, 022, 024, and 025. The installation completed a plan to implement land use controls, which restrict the use of and access to sites.

In FY06, Newport CD continued LTM for groundwater at Sites 001, 022, 024, and 025. The installation began a historical records review to identify potential munitions, including landmines, aerial rockets, secondary explosives, and toxic chemical agents/munitions. Newport CD hosted a RAB meeting.

In FY07, Newport CD continued LTM for groundwater at Sites 001, 022, 024, and 025, and completed the historical records review.

In FY08, Newport CD attempted to locate a buried tank at Site 022, but was unable to locate the tank; the Indiana Department of Environmental Management determined the installation’s actions were sufficient. Newport CD installed 10 groundwater monitoring wells at Site 016, and additional groundwater monitoring wells at Site 014. Newport CD continued monitoring and abandoned unused wells at Sites 001, 022, 024, and 025. The installation completed the neutralization of chemical agent VX.

**FY09 IRP Progress**

Newport CD continued to abandon unused monitoring wells. The installation completed the report summarizing the environmental condition of all transferable property. The installation also completed the site inspection (SI) for Site 016 and began fieldwork in support of BRAC 2005.

The RAB held one meeting.

**FY09 MMRP Progress**

Newport CD conducted no MMRP actions.

**Plan of Action**

Plan of action items for Newport Chemical Depot are grouped below according to program category.

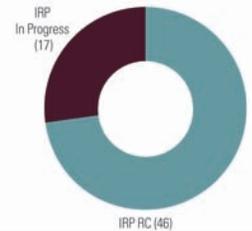
**IRP**

- Continue fieldwork at Site 016 in FY10.
- Conduct treatability study for the well injection project in FY10-FY11.
- Cleanup additional areas identified in the SI in FY10-FY11.
- Identify uncontaminated areas suitable to transfer in FY10-FY11.
- Investigate installation firing range in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	VA317002741400	<b>Funding to Date:</b>	\$ 105.5 million
<b>Location (Size):</b>	Norfolk, Virginia (4,631 acres)	<b>Est. CTC (Comp Year):</b>	\$ 25.5 million (FY 2040)
<b>Mission:</b>	Provide services and materials to support the aviation activities and operating forces of the Navy	<b>IRP Sites (Final RIP/RC):</b>	63 (FY2016)
<b>HRS Score:</b>	50.00; placed on NPL in April 1997	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in February 1999	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Petroleum products, PCBs, solvents, heavy metals, acids, paints, asbestos, pesticides, VOCs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-173
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Norfolk Naval Base provides services and materials to support the aviation activities and operating forces of the Navy. Contamination originates from maintenance of aircraft, equipment, and vehicles, and from operation of support facilities. Contaminated Site types at the installation include landfills, ordnance storage areas, waste disposal areas, fire training areas, fuel spill areas, and underground storage tanks. The potential risk to human health and the environment from the migration of contaminated surface water was significant enough for EPA to place the installation on the NPL in April 1997. DoD and EPA signed a federal facility agreement (FFA) in February 1999 to outline how they were going to proceed with cleanup. Formed in FY89, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board in FY94. Norfolk Naval Base completed a community relations plan in FY93 which was updated in FY03. To ensure continuous monitoring and improvement, the installation completed five-year review reports for Sites 1, 2, 3, 6, and 20 in FY03 and FY09.

To date, the installation has completed Records of Decision (RODs) selecting cleanup actions for solid waste management units (SWMUs) 12 and 16, and Sites 2, 6, 22, and 23. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. The cleanup progress at Norfolk Naval Base for FY05 through FY08 is summarized below.

In FY05, Norfolk Naval Base finalized a no further action proposed cleanup plan and ROD for SWMUs 12 and 16. The installation finalized a site inspection (SI) for Site 23 and completed Phase I of the remedial investigation (RI). The installation finalized a design for cleanup for Sites 2 and 22, and completed the final RI for SWMU 14.

In FY06, Norfolk Naval Base implemented a strategy to close the Site 3 Area of Concern (AOC) 2.

In FY07, Norfolk Naval Base completed an SI for Site 18. The installation also completed an interim cleanup completion report

for Site 22, and an engineering evaluation and cost analysis (EE/CA) at Site 23.

In FY08, Norfolk Naval Base completed removal actions at SWMU 14 and Site 18, and no sites required further construction of cleanup systems. The installation completed an EE/CA for an asphalt cover at SWMU 14 and a groundwater response at Site 18. Norfolk Naval Base also completed a ROD at Site 23, and designs for cleanup at Sites 1, 3, 6, and 20. The installation implemented initiatives to reduce elevated volatile organic compound (VOC) concentrations at Site 1.

**FY09 IRP Progress**

Norfolk Naval Base completed a second five-year review report. The installation also completed cleanup completion reports for SWMU 14 and Site 18.

**FY09 MMRP Progress**

Norfolk Naval Base has identified no MMRP sites.

**Plan of Action**

Plan of action items for Norfolk Naval Base are grouped below according to program category.

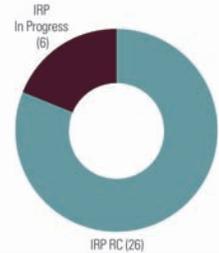
**IRP**

- Complete land use control RODs for SWMU 14 and Site 18 in FY10.
- Complete RODs for all remaining sites in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	VA317002481300	<b>Contaminants:</b>	Heavy metals, PCBs, VOCs, SVOCs, POLs, land solvents
<b>Location (Size):</b>	Portsmouth, Virginia (795 acres)	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Mission:</b>	Provide logistical support for assigned ships and service craft; perform work in connection with conversion, overhaul, repair, alteration, dry-docking, and outfitting of naval vessels; perform manufacturing, research, development, and test work; provide services to other activities and units	<b>Funding to Date:</b>	\$ 39.4 million
<b>HRS Score:</b>	50.0; placed on NPL in July 1999	<b>Est. CTC (Comp Year):</b>	\$ 1.3 million (FY 2037)
<b>IAG Status:</b>	FFA signed in September 2004	<b>IRP Sites (Final RIP/RC):</b>	32 (FY2016)
		<b>MMRP Sites (Final RIP/RC):</b>	None
		<b>Five-Year Review Status:</b>	Planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-56



**Progress To Date**

Norfolk Naval Shipyard (NSY) is located on the western bank of the southern branch of the Elizabeth River. The installation provides logistical support, conversion, overhaul, repair, alteration, dry-docking, and outfitting of naval vessels. The installation also performs manufacturing, research, development, and test work. Site contamination resulted from past landfilling, disposal operations, and a plating shop. The potential risk to human health and the environment from surface water runoff into Paradise Creek was significant enough for EPA to place the installation on the NPL in July 1999. DoD and EPA signed a federal facility agreement (FFA) in September 2004 to outline how they were going to proceed with cleanup. An administrative record was established in FY92, and a community relations plan was completed in FY94; the community relations plan was updated in June 2003. Formed in FY94, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board in FY96.

To date, RCRA facility investigations performed at the installation identified 31 solid waste management units (SWMUs). A supplemental RCRA facility investigation identified an additional 121 SWMUs and areas of concern (AOCs). An additional 47 AOCs were later identified, bringing the total number of potentially contaminated areas at Norfolk NSY to 218. During the development of the FFA, inconsistent numbering and naming of potentially contaminated areas in previous documentation resulted in the reduction of identified sites. Norfolk NSY has completed records of decision (RODs) for Sites 10 and 17, and Operable Unit (OU) 1, which selected cleanup actions for these sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Norfolk NSY for FY05 through FY08 is summarized below.

In FY05, the installation revised a feasibility study (FS) to evaluate cleanup alternatives for Site 17. The installation also completed a removal action at OU 1; removed approximately 30,000 tons of waste; and created or restored 1.46 acres of wetlands. The installation finalized the proposed plan (PP) for OU 1.

In FY06, Norfolk NSY completed the RODs for OU 1 and Site 17. The cleanup for the Site 17 ROD is to restrict residential development with land use controls (LUCs), which restrict use of and access to sites. No further action is required at the site because of the removal action completed at OU 1. The installation also completed the remedial investigation and FS for Site 10.

In FY07, Norfolk NSY completed the cleanup action for Site 10 by implementing LUCs. The installation completed the Phase I removal action at OU 2, removed approximately 36,000 tons of waste, and created or restored 3.5 acres of wetlands. Norfolk NSY completed the preliminary assessment for Site 15 (Past Pier-Side Industrial Operations). The installation performed a review of historical dredge records and waterfront capital improvement projects, and determined no further cleanup actions were required. The installation also acquired the last of three parcels to construct the cleanup system planned for OU 2 Phases II and III.

In FY08, Norfolk NSY drafted a focused FS for OU 2. The installation completed additional sampling and data collection, and began the development of a long-term management (LTM) plan for groundwater.

**FY09 IRP Progress**

Norfolk NSY finalized the FS and PP for soils. The installation also began mobilization and preliminary construction activities at OU 2.

Administrative issues delayed completion of groundwater studies and the subsequent LTM plan at OU 2. Regulatory issues delayed completion of the soils/sediments ROD for OU 2.

**FY09 MMRP Progress**

Norfolk NSY has identified no MMRP sites.

**Plan of Action**

Plan of action items for Norfolk Naval Shipyard are grouped below according to program category.

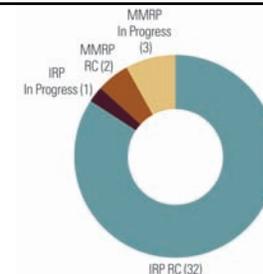
**IRP**

- Develop LTM plan and finalize FS and PP for groundwater at OU 2 in FY10.
- Complete soil cover construction activities at OU 2 in FY10.
- Finalize soils ROD for OU 2 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA957002434500	<b>Funding to Date:</b>	\$ 123.5 million
<b>Location (Size):</b>	San Bernardino, California (2,221 acres)	<b>Est. CTC (Comp Year):</b>	\$ 3.2 million (FY 2024)
<b>Mission:</b>	Supported C-141 airlift operations	<b>IRP Sites (Final RIP/RC):</b>	33 (FY2005)
<b>HRS Score:</b>	39.65; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	5 (FY2011)
<b>IAG Status:</b>	IAG signed in 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Paints, refrigerants, heavy metals, spent solvents, TCE, VOCs, SVOCs, waste oils, fuel, PCBs	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-8
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Norton Air Force Base (AFB) formerly supported C-141 airlift operations. Sites include underground storage tanks, landfills, fire training areas, spill areas, and waste disposal pits. The most significant sources of contamination at the base were a trichloroethylene (TCE)-contaminated groundwater area and contaminated soil areas. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed an interagency agreement (IAG) in 1989 to outline how they were going to proceed with cleanup. In December 1988, the BRAC Commission recommended closure of Norton AFB. The base closed in March 1994. In FY94, Norton AFB formed a BRAC cleanup team to develop a process for cleanup of sites, and a Restoration Advisory Board (RAB) to communicate the installation's cleanup progress with the community. The RAB adjourned in FY98. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY00 and FY05.

Between FY94 and FY95, Norton AFB signed four Records of Decision (RODs), which selected cleanup actions at soil sites, for Central Base Area Operable Unit, and for all sites on the base. The installation transferred all base property in FY07. In FY04, the installation conducted an inventory of sites suspected to contain munitions for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Norton AFB for FY05 through FY08 is summarized below.

In FY05, Norton AFB finalized the ROD for the base and selected cleanup for 21 sites and 73 areas of concern. The installation completed its second five-year review report, and completed and submitted RCRA documentation and certification for the two remaining RCRA sites to regulators. Groundwater pump-and-treat systems and over 50 groundwater monitoring wells were taken out of service. Norton AFB put the last cleanup system in place. The installation submitted addendums to the industrial wastewater treatment plant clean closure certification report to regulators. The BRAC cleanup team met every two months. The RAB, although formally adjourned in FY98, held one public meeting.

In FY06, Norton AFB completed the report on cleanup completion for the groundwater pump-and-treat systems. The installation began the process of becoming delisted from the NPL and EPA completed the preliminary closeout report for the base. Norton AFB completed the MMRP requirement evaluations and either administratively closed or determined that no further cleanup action was necessary for all MMRP sites. The BRAC cleanup team continued to meet every two months.

In FY07, Norton AFB transferred all remaining property and submitted a request to terminate RCRA cleanup authority on non-permitted portions of the installation. The BRAC cleanup team held one meeting.

In FY08, Norton AFB submitted documentation to regulators to terminate RCRA cleanup on non-permitted sites.

**FY09 IRP Progress**

Norton AFB obtained funding to close one of two RCRA sites.

Regulatory issues delayed acquiring the RCRA post-closure permit for the industrial waste line. Regulatory and administrative issues delayed the termination of the RCRA corrective action authority on non-permitted sites and closure of the two RCRA sites.

**FY09 MMRP Progress**

Norton AFB closed three sites (Small Arms Ranges 400 and 401, and Ordnance Area 403). The installation submitted a draft document determining that no further cleanup action is necessary at Firing Range 402.

**Plan of Action**

Plan of action items for Norton Air Force Base are grouped below according to program category.

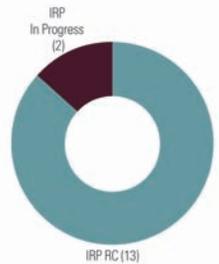
**IRP**

- Obtain regulatory approval for termination of RCRA corrective action authority on non-permitted sites in FY10.
- Complete closure of two RCRA Sites in FY10.
- Obtain RCRA post-closure permit for the industrial waste line in FY10.
- Complete five-year review report in FY10.

**MMRP**

- Close remaining two sites in FY10.

<b>FFID:</b>	CA921352066100	<b>Funding to Date:</b>	\$ 41.0 million
<b>Location (Size):</b>	Oakland, California (425 acres)	<b>Est. CTC (Comp Year):</b>	\$ 9.2 million (FY 2017)
<b>Mission:</b>	Served as host to Military Traffic Management Command, Western Area	<b>IRP Sites (Final RIP/RC):</b>	15 (FY2017)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	POLs, TCE, solvents, lead, PCBs, VOCs, SVOCs, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-7
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Oakland Army Base formerly hosted Military Traffic Management Command, Western Area. Contaminated sites have included underground storage tanks; Berths 6 and 6 1/2, where oil and fuel products contaminated storm drain bedding materials; Building 991, where pesticides and oil contaminated soil and groundwater; the West Grand Avenue overpass roadsides, where lead contaminated soil; Building 807, where chlorinated solvents contaminated soil and groundwater; and Building 648, where polychlorinated biphenyls (PCBs) contaminated soil. The 1995 BRAC Commission recommended closure of Oakland Army Base. The installation closed as scheduled on September 30, 1999. In FY96, the installation formed a BRAC cleanup team to develop a process for cleanup of sites, and a Restoration Advisory Board to discuss the installation's cleanup progress with the community. In FY98, the installation completed an initial BRAC cleanup plan to prioritize sites requiring environmental restoration.

Oakland Army Base has signed one Record of Decision (ROD) and has transferred approximately 387 acres. Parcel 1 and Operable Unit (OU) 2 are the only remaining sites. In FY02, Oakland Army Base completed an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Oakland Army Base for FY05 through FY08 is summarized below.

In FY05, Oakland Army Base completed the Parcel 1 draft feasibility study (FS), which evaluated cleanup alternatives and remedial investigation. The installation began the design for cleanup and contracting actions. Regulators agreed to postpone cleanup at OU 2 until Oakland Army Base investigated and cleaned up the source area of contamination. The installation continued to oversee the local redevelopment authority cleanup.

In FY06, the Oakland Army Base completed the FS and awarded a contract for the design for cleanup at Parcel 1. The installation drafted a decision document (DD), which selected cleanup actions for Parcel 1. The OU 2 property owner began to fill the wetlands site for railroad expansion. Oakland Army Base continued oversight of local redevelopment authority

cleanup, and found the property to be an insignificant source of contamination.

In FY07, Oakland Army Base negotiated with regulators regarding the final cleanup actions for Parcel 1.

In FY08, Oakland Army Base completed cleanup at the local redevelopment authority property.

**FY09 IRP Progress**

Oakland Army Base continued negotiations with regulators regarding the final cleanup actions for Parcel 1.

Regulatory issues delayed implementing cleanup actions, completing the DD, and reviewing the FS at Parcel 1.

**FY09 MMRP Progress**

Oakland Army Base has identified no MMRP sites.

**Plan of Action**

Plan of action items for Oakland Army Base are grouped below according to program category.

**IRP**

- Implement cleanup actions, complete the DD, and review the FS for Parcel 1 in FY10.
- Complete the FS and ROD for OU 2 and marine sediments in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	WA09799F832600	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Kitsap County, Washington (350 acres)	<b>Funding to Date:</b>	\$ 12.4 million
<b>Mission:</b>	Provided harbor defense for Puget Sound; tested torpedoes and stored fuel during World War I; served as a fire training school for the Navy and housed an anti-aircraft artillery battery	<b>Est. CTC (Comp Year):</b>	\$ 3.2 million (FY 2004)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>IRP Sites (Final RIP/RC):</b>	2 (FY2004)
<b>IAG Status:</b>	IAG signed in July 1997	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Asbestos, PCBs, heavy metals, petroleum hydrocarbons, dioxins, furans	<b>Five-Year Review Status:</b>	Completed
		<b>IRP/MMRP Status Table:</b>	Refer to page C-8-62



**Progress To Date**

The Navy owned the Old Navy Dump/Manchester Annex from 1919 to 1960. During that time the Navy established three areas (a net depot, a fire training area, and a landfill) at the property. Preliminary assessments and site inspections conducted at the property since FY87 identified past releases of hazardous substances from the three areas. Activities included maintenance, painting, sandblasting, and storage of steel cable net. The Navy disposed of domestic waste, wood, and metal waste originating from the Annex and the Puget Sound Naval Shipyard in a landfill. Contaminants have been detected in soil at the landfill, at the fire training area, and in surface water and sediment at the property. Contaminants of concern include heavy metals, polychlorinated biphenyls (PCBs), petroleum hydrocarbons, dioxins, furans, and asbestos. Currently, the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, an EPA laboratory, and a portion of Manchester State Park occupy the property. The potential risk to human health and the environment was significant enough for EPA to place the property on the NPL in May 1994. DoD and EPA signed an interagency agreement (IAG) in July 1997 to outline how they were going to proceed with cleanup. To ensure continuous monitoring and improvement, USACE completed five-year review reports in FY04 and FY09.

To date, the U.S. Army Corps of Engineers (USACE) has completed one Record of Decision selecting cleanup actions for Old Navy Dump/Manchester Annex. In FY06, USACE conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at the Old Navy Dump/Manchester Annex for FY05 through FY08 is summarized below.

In FY05, USACE conducted actions required by the five-year review report. USACE also began a shellfish tissue and sediment study to determine the health of the shellfish population. The study suggested that cleanup actions are operating properly and contamination did not appear to be reducing the population.

In FY06, USACE continued to conduct the compliance monitoring of the shellfish population. USACE monitored the landfill for uncontrolled releases and found none. USACE also

conducted a survey to count clams and determined the clam population was not large enough for scientific sampling. USACE performed ongoing landfill cap maintenance, including mowing, gas vent sampling, and drainage system checks.

In FY07, USACE continued compliance monitoring of the shellfish population and long-term management (LTM) of the landfill cap. USACE also completed an archive search report to obtain more information about past munitions activity at Old Navy Dump/Manchester Annex.

In FY08, USACE continued compliance monitoring of the clam population and LTM of the landfill cap. The property drafted a revised inventory project report, that recommended approval of an MMRP project.

**FY09 IRP Progress**

USACE completed the second five-year review report, a shellfish survey, and sediment sampling. USACE also awarded a contract for inspection and maintenance of the landfill cap and shoreline protection system. The cost of completing environmental restoration has changed significantly due to technical issues and changes in estimating criteria.

**FY09 MMRP Progress**

USACE continued to compile the inventory project report for the MMRP project.

**Plan of Action**

Plan of action items for Old Navy Dump/Manchester Annex are grouped below according to program category.

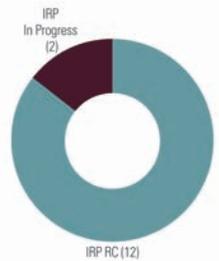
**IRP**

- Perform LTM of the landfill cap in FY10.
- Coordinate institutional controls plan with property owners in FY10.
- Complete addendum to second five-year review report in FY10.
- Complete an updated compliance monitoring report in FY10.
- Begin LTM or an operations, maintenance, and monitoring plan to replace the compliance monitoring plan in FY10.

**MMRP**

- Complete inventory project report and begin MMRP project in FY10-FY11.

<b>FFID:</b>	FL417002473600	<b>Funding to Date:</b>	\$ 39.5 million
<b>Location (Size):</b>	Orlando, Florida (2,050 acres)	<b>Est. CTC (Comp Year):</b>	\$ 12.3 million (FY 2028)
<b>Mission:</b>	Serve as naval training center; formerly used as Army Air Force and Air Force bases	<b>IRP Sites (Final RIP/RC):</b>	15 (FY2008)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Asbestos, paints, POLs, photographic chemicals, solvents, low-level radioactive wastes, VOCs, SVOCs, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-54
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

From 1941 to 1968, Orlando Naval Training Center (NTC) served as an Army air base and an Air Force base. In 1968, the installation became a naval training center. The installation has four areas: the main base, Area C, Herndon Annex, and McCoy Annex. Most of the operational and training facilities are located on the main base. Area C, west of the main base, contains warehouse and laundry operations. Herndon Annex contains warehouse and research facilities. McCoy Annex contains housing and community facilities. In July 1993, the BRAC Commission recommended closure of the installation and relocation of its activities. The installation closed on April 30, 1999. In FY94, the installation formed a Restoration Advisory Board to discuss cleanup progress with the community, and a BRAC cleanup team to develop a process for cleanup of sites. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY01.

The installation has identified 55 areas of concern and more than 300 tank systems requiring removal or assessment. The BRAC cleanup team completed a Record of Decision (ROD), selecting cleanup actions for 55 sites, and assessed and removed 55 tanks. To date, the installation has transferred 1,425 acres to the City of Orlando, and approximately 83 acres to the Federal Aviation Administration. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. The cleanup progress at Orlando NTC for FY05 through FY08 is summarized below.

In FY05, the installation continued operation and maintenance (O&M) and long-term management (LTM) at Operable Units (OUs) 1 through 4, and Study Areas (SAs) 17, 36, 39, and 52. The installation continued interim cleanup actions at OUs 2, 3, 4, and SAs 2, 36, and 39. Orlando NTC identified a new site at the main base (SA 36 Northwest [NW]) where petroleum contamination in groundwater (primarily benzene) migrated from the former main base auto service station (Building 109) and added the site to the LTM plan.

In FY06, Orlando NTC monitored and evaluated off-site contamination at OUs 2, 3, 4, and SAs 17 and 36 NW. The

installation continued to monitor interim cleanup actions and O&M/LTM at OUs 1 through 4, and SAs 17, 36, 36 NW, and 52.

In FY07, Orlando NTC continued monitoring interim cleanup actions and O&M/LTM at OUs 1 through 4, and SAs 17, 36, 36 NW, and 52. The installation also continued monitoring and evaluating off-site contamination at OUs 2, 3, and 4, and SAs 17 and 36 NW.

In FY08, Orlando NTC continued monitoring interim cleanup actions and O&M/LTM at OUs 1 through 4, and SAs 2, 17, 36, and 36 NW. The installation implemented all cleanups, and determined that no further cleanup actions were necessary for Site 52. Orlando NTC also transferred the remaining property at McCoy Annex (OU 2) and SA 17 to the Airport Authority. The installation continued monitoring and evaluation of off-site contamination at OUs 2, 3, 4, and SAs 2, 17, and 36 NW.

**FY09 IRP Progress**

Orlando NTC continued delineation of groundwater contamination from SA 36 NW, and LTM at OUs 1 through 4, and SAs 2 and 17. The installation also continued developing RODs for OUs 2, 3, and 4, and interim cleanup actions at OU 4.

**FY09 MMRP Progress**

Orlando NTC has identified no MMRP sites.

**Plan of Action**

Plan of action items for Orlando Naval Training Center are grouped below according to program category.

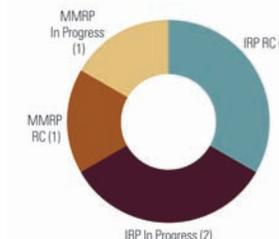
**IRP**

- Complete delineation of groundwater contamination at SA 36 NW and continue LTM at OUs 1 through 4, and SAs 2 and 17 in FY10-FY11.
- Develop uniform federal policy quality assurance proposed plan for all sites in FY10-FY11.
- Complete ROD for OUs 2, 3, and 4 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	TX69799F676300, TX69799F655100	<b>Est. CTC (Comp Year):</b>	\$ 9.1 million (FY 2043)
<b>Location (Size):</b>	Pantex Village, Texas (16,000 acres)	<b>IRP Sites (Final RIP/RC):</b>	4 (FY2015)
<b>Mission:</b>	Produce and store military weapons	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2043)
<b>HRS Score:</b>	51.22; placed on NPL in May 1994	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>IAG Status:</b>	None	<b>IRP/MMRP Status Table:</b>	Refer to pages C-7-54 and C-8-57
<b>Contaminants:</b>	VOCs, SVOCs, heavy metals, UXO, explosives		
<b>Media Affected:</b>	Groundwater, Sediment, Soil		
<b>Funding to Date:</b>	\$ 12.6 million		



## Progress To Date

The former Pantex Ordnance Plant began operations in 1942 as an Army Ordnance Corps facility. DoD declared the property excess in 1947. The property is now owned by the Department of Energy (DOE) and Texas Tech University. Operations conducted on the active DOE site include the fabrication, assembly, testing, and disassembly of nuclear ammunition and weapons. Sources of contamination included burning chemical waste in unlined pits, burying waste in unlined landfills, and the discharge of plant wastewater into surface water. The potential risk to human health and the environment was significant enough for EPA to place the property on the NPL in May 1994. DOE is solely responsible for investigating sites on their property. The U.S. Army Corps of Engineers (USACE) established an electronic administrative record for the Texas Tech University FUDS property in FY03. In FY06, USACE completed a public involvement plan to address concerns over contamination with the community for Pantex Ordnance Plant.

In FY06, USACE completed an investigation of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress for Pantex Ordnance Plant for FY05 through FY08 is summarized below.

In FY05, USACE submitted a remedial investigation (RI) report to regulators for investigations at nine areas of concern (AOCs) and performed additional site inspections to fill data gaps identified during the RI for Pantex Ordnance Plant. USACE held potentially responsible party (PRP) discussions, groups that share responsibility for cleanup at this property, including the Texas Commission on Environmental Quality, Texas Tech University, and DOE. USACE received an updated right-of-entry from Texas Tech University for a two-year permit.

In FY06, USACE conducted additional sampling and sent an addendum to the RI, which filled data gaps, and sent it to the state regulators. USACE also completed the public involvement plan. USACE revised the work plan for the MMRP. USACE also developed the draft MMRP RI report, and provided additional requested information to the lead regulatory agency. USACE developed an RI fact sheet and placed an administrative record in the Amarillo College and Carson County Public Libraries for the Pantex Ordnance Plant.

In FY07, USACE finalized the draft RI addendum report, which addressed regulatory concerns at Pantex Ordnance Plant. USACE revised the draft RI report and submitted a final draft RI report to regulators.

In FY08, USACE began discussions with state regulators and developed a path forward to address overlapping investigation activities. USACE completed the RI of MMRP sites at Pantex Ordnance Plant and submitted the associated draft report for review.

## FY09 IRP Progress

USACE completed soil sampling at three AOCs at Pantex Ordnance Plant. USACE continued further supplemental investigations at AOC Zones 2 and 9, Carbon Black Pits, and for the groundwater at Pantex Ordnance Plant. USACE also presented a plan for cleanup at Pantex Ordnance Plant. Additionally, USACE continued supplemental RI and feasibility study (FS) activities to evaluate cleanup alternatives.

Administrative issues delayed the removal of contaminated soil at three AOCs.

## FY09 MMRP Progress

USACE completed RI fieldwork and continued to revise the MMRP RI report. The FS was not required, as associated MMRP issues are addressed by USACE under the existing environmental restoration and PRP projects. USACE completed supplemental field activities.

Administrative issues delayed the completion of the RI report.

## Plan of Action

Plan of action items for Pantex Plant are grouped below according to program category.

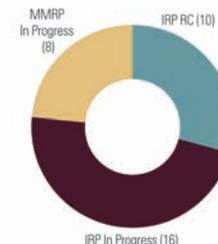
### IRP

- Continue supplemental RI/FS activities in FY10.
- Complete contaminated soil removal at three AOCs in FY10.

### MMRP

- Finalize RI report in FY11.

<b>FFID:</b>	SC417302276300	<b>Funding to Date:</b>	\$ 25.0 million
<b>Location (Size):</b>	Parris Island, South Carolina (8,043 acres)	<b>Est. CTC (Comp Year):</b>	\$ 14.2 million (FY 2040)
<b>Mission:</b>	Receive, recruit, and combat-train enlisted personnel upon their enlistment in the Marine Corps	<b>IRP Sites (Final RIP/RC):</b>	26 (FY2013)
<b>HRS Score:</b>	50.00; placed on NPL in December 1994	<b>MMRP Sites (Final RIP/RC):</b>	8 (FY2017)
<b>IAG Status:</b>	FFA signed in 2005	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Pesticides, paints, POLs, solvents, industrial wastes, metals, acids, electrolytes, ordnance compounds, VOCs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-150
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The Parris Island Marine Corps Recruit Depot (MCRD Parris Island) receives, recruits, and combat-trains personnel upon their enlistment in the Marine Corps. Contaminated Sites at the installation include landfills or spill areas where groundwater and sediment are contaminated with solvents and petroleum/oil/lubricants (POLs). The potential risk to human health and the environment from contamination at two landfill sites was significant enough for EPA to place the installation on the NPL in December 1994. DoD and EPA signed a federal facility agreement (FFA) in 2005 to discuss how they were going to proceed with cleanup. The installation began to compile an administrative record in FY96 and completed a community relations plan in FY98. There has been no community interest to form a Restoration Advisory Board to discuss the installation’s cleanup progress. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY05.

To date, the installation has signed an interim Record of Decision (ROD) for the Site 1 corrective action plan (CAP), and Sites 2, 3, and 12, which selected cleanup actions for these sites. In FY02, Parris Island conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites have been identified. The cleanup progress at MCRD Parris Island for FY05 through FY08 is summarized below.

In FY05, MCRD Parris Island issued a proposed plan and draft ROD for Site 12. The installation awarded a fixed-price environmental multi-award contract for Site 12 and issued a draft cleanup work plan. The installation also completed a long-term management (LTM) work plan for Site 1 and continued monitoring at Sites 1, 3, and 45. MCRD Parris Island implemented a CAP for the Depot gas station and completed sampling. MCRD Parris Island received determined that no further cleanup action was necessary for Building 850. The installation signed the FFA, and completed a five-year review report.

In FY06, MCRD Parris Island signed RODs for Sites 1 CAP and 2. Additionally, the installation completed a removal action and signed a ROD for Site 12. The installation also completed the RCRA facility investigation addendum while continuing a

treatability study (TS) and feasibility study (FS) to evaluate cleanup alternatives at Site 45. MCRD Parris Island continued monitoring at Sites 1 and 3, the Depot gas station, and the aviation gasoline (AVGAS) pipeline.

In FY07, MCRD Parris Island submitted the completion report for the Site 12 removal action, submitted designs for land use control for Sites 1 and 12, which restricted use of and access to those sites, and continued LTM at Sites 1 and 3. The installation submitted a remedial investigation (RI) work plan for Site 27. MCRD Parris Island continued fieldwork in support of Site 45, and awarded a contract to complete site inspections (SIs) for all eight MMRP sites.

In FY08, MCRD Parris Island continued LTM at Sites 1 and 3, the Depot Gas Station, and the AVGAS pipeline. MCRD Parris Island also drafted an SI workplan for the eight MMRP sites.

**FY09 IRP Progress**

MCRD Parris Island completed an FS for Site 45; however, regulatory issues delayed its submission. Regulatory issues also delayed completion of a TS for Site 45, and LTM at Sites 1, 3, 12, and the AVGAS pipeline. Regulatory issues delayed the completion of an RI report for Site 27, and the submission of a ROD for Site 3.

**FY09 MMRP Progress**

Parris Island completed SI work plans for eight sites.

Regulatory issues delayed completion of SIs for eight sites.

**Plan of Action**

Plan of action items for Parris Island Marine Corps Recruit Depot are grouped below according to program category.

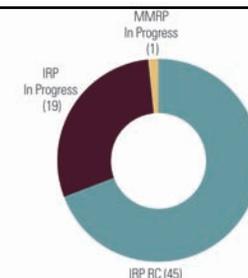
**IRP**

- Submit RI report for Site 27 in FY10-FY11.
- Complete RI addendum and TS for Site 45 in FY10-FY11.
- Continue LTM at Sites 1, 3, 12, and the AVGAS pipeline in FY10-FY11.
- Complete SI for Site 14 in FY10-FY11.
- Submit ROD for Site 3 in FY10-FY11.

**MMRP**

- Complete SIs for eight sites in FY10.

<b>FFID:</b>	MD317002453600	<b>Funding to Date:</b>	\$ 62.0 million
<b>Location (Size):</b>	Lexington Park, Maryland (6,800 acres)	<b>Est. CTC (Comp Year):</b>	\$ 31.3 million (FY 2021)
<b>Mission:</b>	Test and evaluate naval aircraft systems	<b>IRP Sites (Final RIP/RC):</b>	64 (FY2018)
<b>HRS Score:</b>	36.87; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2020)
<b>IAG Status:</b>	FFA signed in December 2000	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Heavy metals, pesticides, organics, POLs, solvents, UXO, VOCs, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-97
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Patuxent River Naval Air Station (NAS) tests and evaluates naval aircraft systems. Three environmental restoration sites at the installation require the most cleanup: a Fishing Point Landfill site (Site 1), the former sanitary landfill (Site 11), and the pest control shop (Site 17). Wastes managed at these sites included mixed solid wastes, petroleum/oil/lubricants (POLs), paints, thinners, solvents, pesticides, and photographic laboratory wastes. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1994. In 2005, the BRAC Commission recommended Patuxent River NAS for realignment. The installation formed a technical review committee in FY90 and completed a community relations plan in FY91, which is updated every three years. Patuxent NAS established a Restoration Advisory Board in FY94 that meets quarterly to discuss the installation’s cleanup progress with the community. The installation regularly updates an administrative record and two information repositories. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01, FY04, and FY09.

To date, the installation has completed Record of Decision (ROD) documents for Sites 1, 11, and 12, which selected cleanup actions for these sites. In addition, a ROD amendment was completed for Site 17. Patuxent River NAS determined that no further cleanup actions were necessary for Sites 4/5, 6, 24, and 29, and completed a proposed cleanup plan ROD for Site 39. The installation closed Site 6A (6 Operable Unit [OU] 1) in FY04. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site has been identified. Cleanup progress at Patuxent River NAS for FY05 through FY08 is summarized below.

In FY05, Patuxent River NAS completed the feasibility study (FS) to evaluate cleanup alternatives, the proposed cleanup plan, and a ROD for Sites 1/12 OU 2 and the Rifle Range Landfill. The installation completed two of four remedial investigation (RI) and FS documents.

In FY06, Patuxent River NAS completed the RI/FS, proposed cleanup plan, and ROD for Site 17 OU 2. The installation

determined that no further cleanup actions were necessary at five sites.

In FY07, Patuxent River NAS determined that no further cleanup actions were necessary for Sites 24 and 29. The installation also completed a proposed cleanup plan and ROD for Site 39 and an interim cleanup action for Site 31. Patuxent River NAS began the Site 1/12 OU 2 cleanup, and also began the Site 17 OU 2 cleanup.

In FY08, Patuxent River NAS determined that no further cleanup actions were necessary for Site 6 OU 2 and Site 4/5 OU 6, and an action ROD for Site 11 OU 2. The installation completed a cleanup action for Site 1/12 OU 2, and four RI/FS documents. Patuxent River NAS started a cleanup for Site 17 OU 2 and a design for cleanup for Site 39. Under the MMRP, Patuxent River NAS established Unexploded Ordnance (UXO) 0001 in its inventory.

**FY09 IRP Progress**

Patuxent River NAS completed a ROD for Sites 4/5 (OUs 2, 3, 4) and cleanup at Sites 17 (OU 2) and 39. Patuxent NAS also completed three site inspection reports, and a five-year review report for the base. The installation began RIs at Sites 9, 28, 34, and 44. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed completion of RODs at Sites 3 and 34.

**FY09 MMRP Progress**

Patuxent NAS continued the site inspections (SIs).

**Plan of Action**

Plan of action items for Patuxent River Naval Air Station are grouped below according to program category.

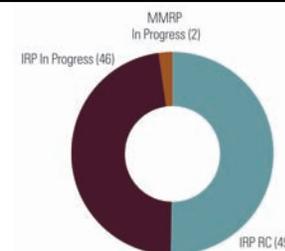
**IRP**

- Complete RODs for Sites 3 and 34 in FY10.
- Complete cleanup at Sites 4/5 (OUs 1 and 5) in FY10-FY11.
- Start RI at Site 31 in FY10-FY11.
- Complete RIs at Sites 3, 9, 28, 34, and 44 in FY10-FY11.

**MMRP**

- Complete SI reports in FY10.

<b>FFID:</b>	HI917002434200, HI917002477900, HI917002434100, HI917002434000, HI917002433900, and HI917002433400	<b>Funding to Date:</b>	\$ 193.0 million
<b>Location (Size):</b>	Pearl Harbor, Hawaii (2,162 acres)	<b>Est. CTC (Comp Year):</b>	\$ 171.9 million (FY 2035)
<b>Mission:</b>	Provide primary fleet support in the Pearl Harbor area	<b>IRP Sites (Final RIP/RC):</b>	95 (FY2018)
<b>HRS Score:</b>	70.82; placed on NPL in October 1992	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2017)
<b>IAG Status:</b>	FFA signed in March 1994	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	VOCs, SVOCs, heavy metals, PCBs, pesticides, petroleum, hydrocarbons, solvents, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to pages C-6-71, C-6-72, C-7-21, and C-8-17
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The Pearl Harbor Naval Complex consists of seven installations: the Fleet and Industrial Supply Center (FISC), the Naval Station (NS), the Naval Magazine (NAVMAG), the Naval Shipyard (NSY) and Intermediate Maintenance Facility, the Public Works Center (PWC), the Naval Submarine Base, and the Inactive Ship Maintenance Facility. Fuel supply activities, landfills, and other support operations have contaminated the soil and groundwater with volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), and metals. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1992. DoD and EPA signed a federal facility agreement (FFA) in March 1994 to outline how they were going to proceed with cleanup. Formed in FY90, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board in FY95. The installation established three information repositories in FY90 and an administrative record in FY92. Pearl Harbor Naval Complex also completed a community involvement plan in FY92, which was updated in FY95 and FY05.

The installation has completed one Record of Decision (ROD) selection cleanup actions for FISC Site 33 and NAVMAG Site 9. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. The cleanup progress at Pearl Harbor Naval Complex for FY05 through FY08 is summarized below.

In FY05, Pearl Harbor Naval Complex began the site evaluation for FISC 26. The installation began site inspection (SI) fieldwork for NSY 49, a SI for Solid Waste Management Unit (SWMU) 84, and SI fieldwork for NSY 49. Pearl Harbor Naval Complex also completed the cleanup verification report for NS 51, and 53 through 57.

In FY06, Pearl Harbor Naval Complex completed site evaluations for NS SWMU 6 and PWC 2. The installation also completed a ROD for FISC 33 and NAVMAG 9, proposed plans for NSY 41, and NAVMAG 9, a final SI for NSY SWMU 44, and removal actions at NS 35 and FISC 26. The installation began a feasibility study (FS) to evaluate cleanup alternatives for FISC

39, site characterization at PWC 47, and a removal action for FISC 44. Pearl Harbor Naval Complex continued operation of cleanup systems at NS 25, 29, 36, 37, 45, and 46. Under the MMRP, the installation began a preliminary assessment (PA) for NAVMAG Unexploded Ordnance (UXO) site 7.

In FY07, Pearl Harbor Naval Complex completed a removal action at NS SWMU 6 and an FS for FISC 39. The installation continued remedial action (RI) efforts at PWC 2 and FISC 44. Under the MMRP, Pearl Harbor Naval Complex completed the PA for NAVMAG UXO 7.

In FY08, Pearl Harbor Naval Complex continued RI/FSs for PWC SWMU 13, NS 31, FISC 45, and PWC 47. Under the MMRP, Pearl Harbor Naval Complex began an SI for NAVMAG UXO 7.

**FY09 IRP Progress**

Pearl Harbor Naval Complex completed RI fieldwork for NS 19; prepared a draft final RI work plan for FISC 44; and continued RI efforts at PWC SWMU 13, NS 31, FISC 45, and PWC 47. Pearl Harbor Naval Complex also completed an SI work plan and began fieldwork at FISC 46. The installation completed a draft ROD for NS SWMU 6 and FISC 39, and received concurrence on no further cleanup actions for NSY SWMU 44. The cost of completing environmental restoration has changed significantly due to technical issues.

Technical issues delayed the completion of a draft RI addendum for NS 19. Regulatory issues delayed the completion of a final ROD for PWC 2.

**FY09 MMRP Progress**

Pearl Harbor Naval Complex completed SI fieldwork and prepared a draft SI report for NAVMAG UXO 7.

**Plan of Action**

Plan of action items for Pearl Harbor Naval Complex are grouped below according to program category.

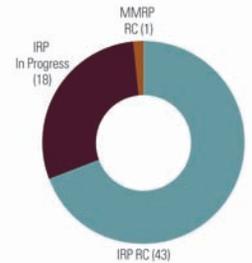
**IRP**

- Complete draft RI addendum for NS 19 in FY10.
- Complete ROD for PWC 2 in FY10.
- Complete ROD for NS SWMU 6 and FISC 39 in FY10-FY11.
- Complete SI field work and prepare SI report for NSY SWMU 84 in FY10-FY11.
- Complete the RI and start the FS for PWC SWMU 1, and Site 3 in FY10-FY11.
- Complete groundwater sampling for vanadium at NSY 42, and submit the RI/FS in FY10-FY11.
- Assume environmental restoration responsibilities from Hickam Air Force Base in FY11.

**MMRP**

- Finalize SI report for NAVMAG UXO 7 in FY10.

<b>FFID:</b>	NH157002484700	<b>Funding to Date:</b>	\$ 166.6 million
<b>Location (Size):</b>	Portsmouth/Newington, New Hampshire (4,255 acres)	<b>Est. CTC (Comp Year):</b>	\$ 17.0 million (FY 2048)
<b>Mission:</b>	Served as Strategic Air Command bomber and tanker base	<b>IRP Sites (Final RIP/RC):</b>	61 (FY2010)
<b>HRS Score:</b>	39.42; placed on NPL in February 1990	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY1996)
<b>IAG Status:</b>	FFA signed in April 1991; modified in December 1992	<b>Five-Year Review Status:</b>	Underway and planned
<b>Contaminants:</b>	VOCs, spent fuels, waste oils, POLs, pesticides, paints, TCE, SVOCs, metals, PCBs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-115
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Pease Air Force Base (AFB) served as a Strategic Air Command bomber and tanker base. Studies identified the following site types: fire training areas, burn pits, industrial facilities, landfills, and underground storage tanks. Petroleum products (JP-4 jet fuel) and industrial solvents, such as trichloroethylene (TCE), have contaminated the groundwater and soil. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1990. DoD and EPA signed a federal facility agreement (FFA) in 1991, which was last amended in 1992, to outline how they were going to proceed with cleanup. The 1988 BRAC Commission recommended closure of Pease AFB. In March 1991, the installation closed. The installation formed a BRAC cleanup team in FY93 to develop a process for cleanup of sites at Pease AFB. The installation formed a Restoration Advisory Board (RAB) in FY95 to discuss the installation's cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY99, FY04, and FY09.

Cleanup sites at Pease AFB are grouped into 13 operable units (OUs). Before closure, the installation completed interim cleanup actions at four sites, soil removal at three sites, and test pit operations at two sites. To date, Pease AFB has signed 10 Records of Decision, selecting cleanup actions at OUs 1 through 6 and 8 through 11. In FY04, Pease AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Pease AFB for FY05 through FY08 is summarized below.

In FY05, Pease AFB completed the cleanup plan for Plume 13/14, a contaminated area located in the flightline area. The installation conducted ongoing operations and maintenance (O&M) of cleanup systems, and improvements. In addition, the installation demonstrated that Zones 3 and 49 were operating properly and successfully. Pease AFB transferred all remaining property to the Pease Development Authority. The RAB and BRAC cleanup team performed community activities.

In FY06, Pease AFB continued O&M and improvement efforts for all sites. The installation awarded a contract for cleanup at

Plume 13/14. Pease AFB evaluated requirements at MMRP sites.

In FY07, Pease AFB continued O&M and improvement efforts for the remaining cleanup systems. The installation continued monitoring compliance with institutional controls (ICs), which are tools that minimize the potential for human exposure, with no violations identified.

In FY08, Pease AFB installed a soil vapor extraction (SVE) and air sparging system to reduce the concentration of certain parts of petroleum at Plume 13, and began operations. Pease AFB also installed sparge wells, which channel contaminants for extraction, to improve performance at Site 8 and continued to operate, monitor, and improve the remaining cleanup systems. The installation continued to monitor IC compliance in coordination with the local redevelopment authority and other landowners. Pease AFB completed all required MMRP closure actions.

**FY09 IRP Progress**

Pease AFB completed its third five-year review report and obtained approval for the next report. The installation began installing the system to treat fuel contamination at Pumphouse 2. The installation completed improving the Site 8 SVE system and began operating a new air sparge system. Pease AFB continued O&M across the installation.

**FY09 MMRP Progress**

Pease AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Pease Air Force Base are grouped below according to program category.

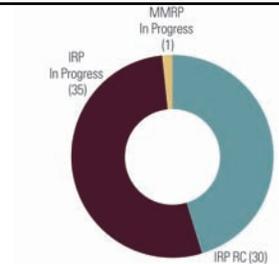
**IRP**

- Complete construction treatment system at Pumphouse 2 and begin operations in FY10.
- Complete investigation of Plume 13/14 conditions and develop a plan to restart site treatment in FY10.
- Maintain ongoing O&M in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	FL417002461000	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Pensacola, Florida (5,874 acres)	<b>Funding to Date:</b>	\$ 81.1 million
<b>Mission:</b>	Serve as a flight training center	<b>Est. CTC (Comp Year):</b>	\$ 47.4 million (FY 2042)
<b>HRS Score:</b>	42.40; placed on NPL in December 1989	<b>IRP Sites (Final RIP/RC):</b>	65 (FY2017)
<b>IAG Status:</b>	FFA signed in October 1990	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2019)
<b>Contaminants:</b>	Ammonia, asbestos, benzene, cyanide, heavy metals, paints, PCBs, pesticides, phenols, chlorinated and nonchlorinated solvents, plating wastes, VOCs, SVOCs, explosives, propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-54



**Progress To Date**

Pensacola Naval Air Station (NAS), which now serves as a flight training center, was formerly a naval air rework facility and an aviation depot. Operations that have caused contamination at the station include a foundry, machine shops, coating and paint shops, paint stripping and plating shops, various maintenance and support facilities, landfills, and storage facilities. Investigations have identified 38 CERCLA sites, 1 solid waste management unit (SWMU), and 14 underground storage tank (UST) sites. Site types include landfills, disposal sites, polychlorinated biphenyls (PCBs) transformer and spill areas, industrial wastewater treatment plant areas, and evaporation ponds. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in December 1989. DoD and EPA signed a federal facility agreement (FFA) in October 1990 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Pensacola NAS for realignment. Formed in FY90, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board in FY94. The installation completed the first five-year review report in FY03. To ensure continuous monitoring and improvement, the installation completed a second five-year review report for Operable Units (OUs) 1, 4, 11, and 13 in FY08.

To date, 12 Records of Decision (RODs) have been signed by the installation, which selected cleanup actions for 22 environmental restoration sites; 7 of these RODs required no further cleanup action for 11 environmental restoration sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. The cleanup progress at Pensacola NAS for FY05 through FY08 is summarized below.

In FY05, Pensacola NAS completed the no further action ROD for OU 15 (Site 40), which determined that no further cleanup activities were necessary at the site. The installation completed a remedial investigation (RI) at Sites 44, 45, and 46. The installation also completed groundwater monitoring at SWMU 1 and cleanup at UST 15 and 21.

In FY06, Pensacola NAS completed the no further action ROD for OU 3 (Site 2). The installation also continued groundwater monitoring at SWMU 1, OUs 1 (Site 1) and OU 4 (Site 15).

In FY07, Pensacola NAS awarded a contract to complete cleanup fieldwork for UST 20. The installation completed the ROD with land use controls (LUCs), which restrict use of and access to the site, for Sites 8, 24 (OU 13), and 38 (OU 11). The installation also continued groundwater monitoring at Site 1 (OU 1), Site 15 (OU 4), and Sites 8 and 24 (OU 13), and determined that no further cleanup actions were necessary for UST 19.

In FY08, Pensacola NAS completed the ROD with LUCs for OU 2 (Sites 11, 12, 25, 26, 27, and 30); the second five-year review report for OUs 1, 4, 11, and 13; a feasibility study (FS) to evaluate cleanup alternatives for Site 43 (OU 18); and an RI for Site 41 (OU 16). The installation also continued groundwater monitoring at Sites 1 (OU 1), 8, 15 (OU 4), 24 (OU 13), and SWMU 1. Pensacola NAS installed the air sparging to cleanup groundwater with a contaminant-free air injection into the soil, and a soil vapor extraction treatment system at Site 1159.

**FY09 IRP Progress**

Pensacola NAS continued groundwater monitoring at SWMU 1, Sites 1, 8, 15, 13, and UST 17. The installation also completed a proposed plan (PP) for OU 18 (Site 43), and an FS for OUs 16 (Site 41), 19 (Site 44), 20 (Site 45), and 21 (Site 46). Pensacola NAS completed RODs for OUs 16 (Site 41), 19 (Site 44), and a draft ROD for OU 18 (Site 43).

**FY09 MMRP Progress**

Pensacola NAS completed preliminary assessments for the site.

**Plan of Action**

Plan of action items for Pensacola Naval Air Station are grouped below according to program category.

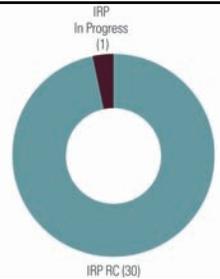
**IRP**

- Continue groundwater monitoring at SWMU 1, Sites 1, 8, 15, and 24, and UST Site 17 in FY10.
- Complete the FS and PP for OU 16 (site 41), 19 (Site 44), 20 (Site 45), and 21 (Site 46) in FY10.
- Complete RODs for OU 18 (Site 43), 20 (Site 45), and 21 (Site 46) in FY10.
- Complete radium cleanup at Sites 2, 12, and 25 in FY10-FY11.

**MMRP**

- Complete site investigations in FY10.

<b>FFID:</b>	PA317002775600, PA317002219800, and PA317002241800	<b>Funding to Date:</b>	\$ 22.7 million
<b>Location (Size):</b>	Philadelphia, Pennsylvania (1,494 acres)	<b>Est. CTC (Comp Year):</b>	\$ 1.2 million (FY 2040)
<b>Mission:</b>	Provide logistical support for ships and service craft; overhaul, repair, and outfit ships and craft; conduct research and development; test and evaluate shipboard systems	<b>IRP Sites (Final RIP/RC):</b>	31 (FY2009)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	POLs, heavy metals, PCBs, solvents, VOCs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-46 and C-8-51
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



**Progress To Date**

Philadelphia Naval Complex is comprised of Philadelphia Naval Shipyard (NSY), Naval Station (NS), and Naval Hospital (NH). Site types at the complex include landfills, oil spill areas, and disposal areas where petroleum/oil/lubricants (POLs) and heavy metals were released into groundwater and soil. In December 1988, the BRAC Commission recommended closure of the Philadelphia NH, and in July 1991, recommended closure of the Philadelphia NS and the Philadelphia NSY. Formed in FY89, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY89. The installation formed a BRAC cleanup team to develop a process for cleanup of sites. The team prepared a BRAC cleanup plan in FY94 to prioritize sites requiring environmental restoration. The BRAC cleanup plan was revised in FY97. In FY95, Philadelphia Naval Complex established an information repository and developed a community relations plan. In FY01, the installation obtained a technical assistance for public participation grant to provide the RAB with input during the property transfer process. Upon completion of all property transfer, the RAB shifted its focus to the Naval Surface Warfare Center Ship System Engineering Station. To ensure continuous monitoring and improvement, the installation completed a five-year review reports in FY04 and FY09.

To date, the installation has signed eight Records of Decision, which selected cleanup actions at environmental restoration sites. The installation also has transferred 1,218 acres of property. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Philadelphia Naval Complex for FY06 through FY08 is summarized below.

In FY06, Philadelphia Naval Complex discovered new contamination at Site 4.

In FY07, Philadelphia Naval Complex began discussions with regulators to discontinue long-term management (LTM) at Sites 4 and 5. The installation began maintenance inspections to determine necessary repairs to landfills at Sites 4 and 5, and also began discussions with regulators to address new contamination at Site 4.

In FY08, Philadelphia Naval Complex determined that the new contamination discovered at Site 4 did not require cleanup. The installation completed inspections and maintenance repair at Sites 4 and 5. The installation also finalized LTM discontinuation agreements with regulators for Sites 4 and 5; all monitoring wells were properly closed, requiring no further action at Site 5.

**FY09 IRP Progress**

Philadelphia Naval Complex continued landfill operation and maintenance at Site 4. The installation also completed a second five-year review report. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Philadelphia Naval Complex has identified no MMRP sites.

**Plan of Action**

Plan of action items for Philadelphia Naval Complex are grouped below according to program category.

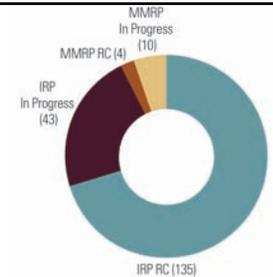
**IRP**

- Continue landfill operation and maintenance at Site 4 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	NJ221382070400	<b>Funding to Date:</b>	\$ 124.9 million
<b>Location (Size):</b>	Rockaway Township, New Jersey (6,500 acres)	<b>Est. CTC (Comp Year):</b>	\$ 96.1 million (FY 2061)
<b>Mission:</b>	Serve as host to the Army Armaments Research, Development, and Engineering Center	<b>IRP Sites (Final RIP/RC):</b>	178 (FY2012)
<b>HRS Score:</b>	42.92; placed on NPL in February 1990	<b>MMRP Sites (Final RIP/RC):</b>	14 (FY2016)
<b>IAG Status:</b>	IAG signed in April 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, explosives, PCBs, heavy metals, SVOCs, propellants, radioactive materials	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-116
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

In 1880, Dover Powder Depot, now known as Picatinny Arsenal, was established to store gunpowder. Until the 1970s, the installation manufactured explosives, propellants, and ammunition. It now houses the Joint Munitions and Lethality Life Cycle Management Command. Contaminated sites include a burning ground, landfills, underground storage tanks, former production areas, and former testing sites. Identified contaminants include volatile organic compounds (VOCs), explosives, and heavy metals. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1990. DoD and EPA signed an interagency agreement (IAG) in April 1991 to outline how they were going to proceed with cleanup. In FY96, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB). In FY98, FY05, FY08, and FY09, the installation received technical assistance for public participation funding. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY06.

To date, the installation has signed 13 Records of Decision (RODs), selecting cleanup actions for 29 sites. In FY03, Picatinny Arsenal completed an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Picatinny Arsenal for FY05 through FY08 is summarized below.

In FY05, Picatinny Arsenal completed three RODs for the Post Farm Landfill, Green Pond Brook, and Site 34 of the Burning Grounds. The installation also completed 6 remedial investigation (RI) reports, which addressed over 70 sites. The installation submitted feasibility studies (FSs) to evaluate cleanup alternatives for 25 sites and the former Defense Reutilization and Marketing Office (DRMO) Yard. Picatinny Arsenal received a technical assistance for public participation funding.

In FY06, Picatinny Arsenal awarded a performance-based contract for most of the Installation Restoration Program (IRP) sites. The installation also submitted FSs for Building 31/33 and the Midvalley Area. Picatinny Arsenal began monitored cleanup

using natural processes and long-term monitoring at Area D Groundwater, the Green Pond Brook, and the Post Farm. Picatinny Arsenal also submitted an assessment of potential risks to the environment and completed a five-year review report.

In FY07, Picatinny Arsenal determined eight sites required no further construction of cleanup systems. The installation installed the permeable reactive barrier at Area D Groundwater, and implemented land use controls, which restricted the use of or access to 13 sites in Area 20 and Site 180. The installation completed the ROD for Area E Groundwater and the Post Farm, and submitted the closure report. Under the MMRP, the installation completed the removal action of unexploded ordnance (UXO) on 28 acres of mining property and awarded a contract to conduct a removal action on 55 acres of leased property. The RAB held a meeting and published a quarterly newsletter.

In FY08, Picatinny Arsenal completed cleanup actions at Area B, and completed the excavation and disposal of the contaminated soil at Site 61. Under the MMRP, Picatinny Arsenal finalized the site inspection (SI) report, which identified and prioritized 10 sites. The installation also completed munitions and UXO removal actions, and performed an engineering evaluation and cost analysis (EE/CA) on 40 acres of leased property. Additionally, the installation performed a second removal action on 20 acres of the former DRMO Yard site. Picatinny Arsenal briefed the RAB, and received technical assistance for public participation funding.

**FY09 IRP Progress**

Picatinny Arsenal completed RODs for groundwater at Areas B and C, and the former DRMO Yard. The installation completed the Midvalley Groundwater FS, and required no further construction of cleanup systems at two sites. The installation also completed cleanup at the former DRMO Yard site. Additionally, Picatinny Arsenal completed the SI for the former Skeet Range, and completed long-term monitoring reports for groundwater at Areas B, D, and E, the Post Farm Landfill, and the Green Pond Brook.

Regulatory and technical issues delayed the release of public notices for six proposed plans (PPs) and construction of

cleanup systems at 13 sites. Regulatory issues also delayed completion of the FS at 600 Hill.

The RAB held one meeting and received technical assistance for public participation funding.

**FY09 MMRP Progress**

Picatinny Arsenal completed munitions cleanup at the former DRMO Yard and completed EE/CAs at selected BRAC facilities. The installation received funding to complete a removal action at the neighboring Tilcon Mines.

**Plan of Action**

Plan of action items for Picatinny Arsenal are grouped below according to program category.

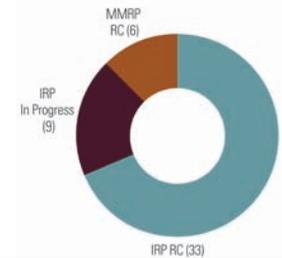
**IRP**

- Release public notices for six PPs in FY10.
- Complete construction of cleanup systems at 13 sites in FY10.
- Complete the FS for 600 Hill in FY10.
- Complete a ROD for Groups 1 and 3, and Site 78 in FY10-FY11.
- Monitor cleanup using natural processes at two groundwater sites, and continue groundwater cleanup at two sites in FY10-FY11.

**MMRP**

- Complete a removal action for 10 acres at Tilcon Mines in FY10.
- Award contract and begin RI at eligible MMRP sites in FY10.
- Perform UXO clearances and construction support for various projects in FY10-FY11.

<b>FFID:</b>	NY257002477400	<b>Funding to Date:</b>	\$ 64.7 million
<b>Location (Size):</b>	Plattsburgh, New York (3,447 acres)	<b>Est. CTC (Comp Year):</b>	\$ 19.6 million (FY 2084)
<b>Mission:</b>	Served as former bomber and tanker aircraft operations	<b>IRP Sites (Final RIP/RC):</b>	42 (FY2011)
<b>HRS Score:</b>	30.34; placed on NPL in November 1989	<b>MMRP Sites (Final RIP/RC):</b>	6 (FY2003)
<b>IAG Status:</b>	FFA signed in July 1991	<b>Five-Year Review Status:</b>	Underway and planned
<b>Contaminants:</b>	Organic solvents, pesticides, fuels, PCBs, lead, VOCs, SVOCs, metals, PCBs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-125
<b>Media Affected:</b>	Surface Water, Sediment, Soil, Groundwater		



**Progress To Date**

Plattsburgh Air Force Base (AFB) formerly supported bomber and tanker aircraft operations. Groundwater at a former fire training area (FTA) is contaminated with chlorinated solvents, as well as benzene, toluene, ethyl benzene, and xylene. Other contaminated site types include underground storage tanks, aboveground storage tanks, landfills, industrial facilities, spill sites, and training areas. The potential risk to human health and the environment was significant enough for EPA to place Plattsburgh AFB on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in July 1991 to outline how they were going to proceed with cleanup. The 1993 BRAC Commission recommended closure of Plattsburgh AFB, and the installation closed in September 1995. Plattsburgh AFB updated the BRAC cleanup plan with community input in FY04 to prioritize sites requiring environmental restoration. In FY94, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB). In FY95, Plattsburgh AFB completed a community relations plan. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY99 and FY04.

Plattsburgh AFB has grouped contaminated sites into 21 operable units (OUs). To date, the installation has closed 21 sites in concurrence with regulators. The installation has completed 12 Records of Decision (RODs), which selected cleanup actions for 12 OUs. In FY04, Plattsburgh AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Plattsburgh AFB for FY05 through FY08 is summarized below.

In FY05, Plattsburgh AFB completed construction of the cleanup system at FTA 002. The installation performed ongoing operation of cleanup systems and long-term management (LTM) at other restoration sites. Additionally, Plattsburgh AFB began evaluating requirements at MMRP sites. The RAB held two meetings.

In FY06, Plattsburgh AFB continued operations of cleanup systems and LTM. The installation completed an evaluation of MMRP sites.

In FY07, Plattsburgh AFB continued operations of cleanup systems and LTM. Plattsburgh AFB completed a study to address cleanup processes at the FTA 002 source OU, including an evaluation of the soil vapor intrusion pathway that allows volatile organic compounds (VOCs) to enter indoor air from underlying contamination in soil or groundwater. Plattsburgh AFB completed a remedial investigation (RI) at one site.

In FY08, Plattsburgh AFB continued cleanup systems operation and LTM in support of cleanup programs. The installation completed RODs for two sites and a RI at one site. Plattsburgh AFB resolved regulatory issues involving the soil vapor intrusion pathway at FTA 002.

**FY09 IRP Progress**

Plattsburgh AFB began the third five-year review report. The installation completed cleanup of the FTA 002 source OU. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Contractual and technical issues delayed completion of RODs at three sites.

**FY09 MMRP Progress**

Plattsburgh AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Plattsburgh Air Force Base are grouped below according to program category.

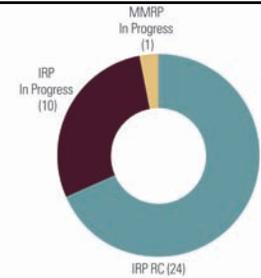
**IRP**

- Complete the third five-year report review in FY10.
- Finalize RODs for three sites in FY10.
- Complete implementation of all cleanup systems in FY11.

**MMRP**

- Close all active MMRP sites in FY10.

<b>FFID:</b>	ME117002201900	<b>Est. CTC (Comp Year):</b>	\$ 32.1 million (FY 2037)
<b>Location (Size):</b>	Kittery, Maine (278 acres)	<b>IRP Sites (Final RIP/RC):</b>	34 (FY2014)
<b>Mission:</b>	Maintain, repair, and overhaul nuclear submarines	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2005)
<b>HRS Score:</b>	67.70; placed on NPL in May 1994	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in 1999	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-93
<b>Contaminants:</b>	Pesticides, PCBs, VOCs, heavy metals, SVOCs		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 55.9 million		



**Progress To Date**

The Portsmouth Naval Shipyard (NSY) maintains, repairs, and overhauls nuclear submarines. A RCRA facility assessment in FY86 identified 28 solid waste management units (SWMUs). Site types at the installation include a landfill (LF), a salvage and storage area, and waste oil tanks. The potential risk to human health and the environment from contamination in groundwater and sensitive wetland communities was significant enough for EPA to place the installation on the NPL in May 1994. DoD and EPA signed a federal facility agreement (FFA) in 1999 to outline how they were going to proceed with cleanup. Formed in FY87, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board in FY95. Portsmouth NSY developed a community relations plan, which was updated in FY97. To ensure continuous monitoring and improvement, the installation also completed a five-year review report for Operable Unit (OU) 3 in FY07.

To date, the installation determined that no further cleanup actions were necessary for SWMUs 12, 13, 16, and 23. The installation also has completed one Record of Decision (ROD), which selected cleanup actions for three environmental restoration sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. The cleanup progress at Portsmouth NSY for FY05 through FY08 is summarized below.

In FY05, Portsmouth NSY completed cleanup at OU 3. The installation began the OU 2 feasibility study (FS) to evaluate cleanup alternatives, and continued interim off-shore monitoring at OU 4. Portsmouth NSY finalized a preliminary assessment and determined that no further cleanup actions were necessary for the MMRP site.

In FY06, Portsmouth NSY completed Site 10 fieldwork and continued the interim off-shore monitoring at OU 4. The installation also began the operation, maintenance, and monitoring program for the Jamaica Island LF.

In FY07, Portsmouth NSY completed a five-year review report for OU 3. The installation finalized the remedial investigation

(RI) for OU 1, continued monitoring OU 4, and started a removal action at Site 34.

In FY08, Portsmouth NSY completed the removal action at Site 34 and the RI for OU 1. Portsmouth NSY also continued monitoring at the OU 3 Jamaica Island landfill and constructed wetland. The installation started discussions with regulators and technical assistance groups to revise the interim off-shore monitoring sampling of OU 4.

**FY09 IRP Progress**

Portsmouth NSY began interim cleanup of lead-contaminated soil at OU 2 (Sites 6 and 29), continued monitoring the OU 3 Jamaica Island LF and constructed wetland, and completed the construction closeout report for interim cleanup at Site 34. Portsmouth NSY also continued off-shore monitoring of OU 4 under an interim ROD. The cost of completing environmental restoration has changed significantly due to technical issues.

Administrative issues delayed the completion of an FS for OU 1. Administrative and regulatory issues delayed completion of the proposed plan and ROD for OU 1.

**FY09 MMRP Progress**

The installation conducted no MMRP actions.

**Plan of Action**

Plan of action items for Portsmouth Naval Shipyard are grouped below according to program category.

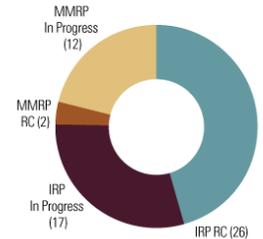
**IRP**

- Finalize the FS and begin the proposed plan and ROD for OU 1 in FY10.
- Complete interim cleanup of lead-contaminated soil and an RI at OU 2 (Sites 6 and 29) in FY10.
- Continue monitoring at Jamaica Island landfill and the constructed wetlands in FY10-FY11.
- Continue off-shore monitoring of OU 4 area under the interim ROD in FY10-FY11.
- Complete an FS at OU 2 (Sites 6 and 29) in FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CO821382072500	<b>Funding to Date:</b>	\$ 140.1 million
<b>Location (Size):</b>	Pueblo, Colorado (23,121 acres)	<b>Est. CTC (Comp Year):</b>	\$ 88.2 million (FY 2023)
<b>Mission:</b>	Store chemical munitions, plan for future closure.	<b>IRP Sites (Final RIP/RC):</b>	43 (FY2016)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	14 (FY2017)
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	POLs, heavy metals, VOCs, pesticides, explosives, PCBs, UXO, SVOCs, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-46
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Pueblo Chemical Depot (CD), formerly Pueblo Chemical Activity, stores chemical munitions. Contaminated sites include a landfill, open burning and detonation grounds, ordnance and explosives waste areas, lagoons, former building sites, oil-water separators, a TNT washout facility and discharge system, and hazardous waste storage units. Heavy metals, volatile organic compounds (VOCs), and explosives are the primary contaminants affecting soil and groundwater. In December 1988, the BRAC Commission recommended realignment of the installation. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites at Pueblo CD. Also in FY94, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the public. The community formed a local redevelopment authority, which prepared a land reuse plan. In FY96, the installation developed Team Pueblo to coordinate public involvement in restoration, reuse, closure, and cleanup. In FY99, RAB members approved the RAB charter.

In FY03, Pueblo CD conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Pueblo CD for FY05 through FY08 is summarized below.

In FY05, Pueblo CD completed groundwater treatment pilot studies at Solid Waste Management Units (SWMUs) 28, 36, and 58. The installation completed the corrective measures study (CMS) for all four South Central Terrace Area SWMUs (14, 28, 36, and 58) and submitted it to the State of Colorado. The installation received approval that no further cleanup action is required at two sites, and coordinated with the State to optimize long-term groundwater monitoring requirements.

In FY06, Pueblo CD received State approval on the South Central Terrace Area CMS (SWMUs 14, 28, 36, and 58). The installation also completed the draft CMS for the former TNT Washout Facility and SWMU 18, and requested from the State that no further cleanup actions is required at SWMU 18. Regulators approved RCRA facility investigations at SWMUs 19 and 41. Regulators also approved no further cleanup actions for SWMUs 42, 48, and 59. Additionally, the installation implemented an ion-exchange treatment at the highly

contaminated area in the Southwest Terrace, and awarded a contract for the Southern Industrial Area.

In FY07, Pueblo CD submitted and received State approval for the final CMS for SWMU 17. The installation completed investigations at SWMUs 25, 29, 35, 39, 45, 56, and 57. Pueblo CD submitted the planning process for SWMU 34.

In FY08, Pueblo CD completed and received State approval on RCRA facility investigations at SWMUs 21, 25, 35, 39, 40, and 56; SWMUs 21 and 35 were recommended for no further cleanup actions, and SWMUs 25, 39, 40, and 56 will require CMSs. The State selected cleanup actions for SWMU 17 and modified the RCRA permit accordingly. The installation awarded two performance-based contracts. The installation also completed a final groundwater treatment action at SWMUs 26 and 36, which completed Phase I of the cleanup. Pueblo CD completed fieldwork for the MMRP SWMU 34 supplemental RCRA facility investigations.

**FY09 IRP Progress**

Pueblo CD began cleanup actions at SWMUs 14, 17, 28, 36, and 58. Cleanup actions included enhanced bioremediation to promote growth of naturally occurring bacteria that treat contaminants in groundwater. Pueblo CD submitted a request requiring no further cleanup actions at SWMUs 49 and 50 and the geophysical survey plan for SWMU 60 to regulators. The installation received approval for the SWMU 45 CMS.

Technical issues delayed the approval for no further cleanup action at SWMUs 21, 49 and 50.

**FY09 MMRP Progress**

Technical issues delayed regulatory approval on the SWMU 34 supplemental RCRA facility investigations.

**Plan of Action**

Plan of action items for Pueblo Chemical Depot are grouped below according to program category.

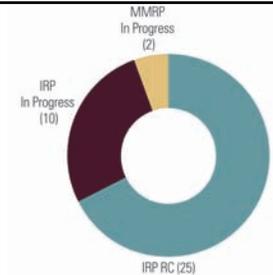
**IRP**

- Continue cleanup at SWMUs 14, 17, 28, 36, and 58 in FY10.
- Receive regulatory approval for no further cleanup action at SWMUs 21, 49, and 50 in FY10.
- Draft and implement CMS work plan for SWMUs 19 and 25 in FY10-FY11
- Implement approved RCRA facility investigations work plan for SWMU 38 in FY10-FY11.

**MMRP**

- Receive regulatory approval on the SWMU 34 supplemental RCRA facility investigations in FY10.

<b>FFID:</b>	WA017002341800, WA017002342600, WA017002726800	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Kitsap County, Washington (1,392 acres)	<b>Funding to Date:</b>	\$ 202.8 million
<b>Mission:</b>	Support ship logistics; work in construction and overhaul; provide housing and healthcare for active duty families	<b>Est. CTC (Comp Year):</b>	\$ 91.1 million (FY 2041)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>IRP Sites (Final RIP/RC):</b>	36 (FY2016)
<b>IAG Status:</b>	IAG signed for Bremerton Naval Complex in 1998; IAG signed for Jackson Park Housing Complex in 2004	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2016)
<b>Contaminants:</b>	Heavy metals, VOCs, POLs, solvents, construction debris, acids, silver nitrate, SVOCs, explosives, propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to pages C-6-179 and C-7-57



**Progress To Date**

Puget Sound Naval Shipyard (NS) supports ship logistics, works in construction and overhaul, and provides housing and healthcare for active duty families. Naval Facilities Engineering Command Northwest manages all cleanup activities at Bremerton Naval Complex (BNC) and Jackson Park Housing Complex (JPHC). Most of BNC, which includes the Puget Sound Naval Shipyard (NSY), is built on contaminated fill material. Initial assessment studies identified six sites for BNC and eight at JPHC. The main sources of contamination are past operations, such as cleaning and demilitarization of ordnance and ship construction, maintenance, and demolition. Metals and petroleum/oil/lubricants (POLs) are the primary contaminants. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1994. DoD and EPA signed an interagency agreement (IAG) for BNC in 1998 to outline how they were going to proceed with cleanup; they signed another agreement for JPHC in 2004. Formed in FY91 and FY92 respectively, JPHC and BNC converted their technical review committees responsible for communicating cleanup progress with the community to Restoration Advisory Boards in FY94. To ensure continuous monitoring and improvement, the installation completed five-year review reports for BNC in FY02 and FY07, and for JPHC in FY05.

To date, BNC has completed Records of Decision (RODs) selecting cleanup actions for Operable Units (OUs) A, BM (Marine), BT (Terrestrial), D, and Naval Supply Center (NSC). JPHC has completed a ROD for OU 1. Puget Sound NS transferred approximately two acres of BNC OU D property to the City of Bremerton. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Puget Sound NS for FY05 through FY08 is summarized below.

In FY05, Puget Sound NS continued long-term management (LTM) at BNC OUs A and C, and NSC, and signed a ROD for OU D. BNC conducted sampling in support of the cleanup system's operation at the OU BM. JPHC conducted LTM, an additional investigation to address benzene leakage at OU 1, and identified free-product in new deep wells. Under the MMRP, JPHC completed data gathering and a field summary

report at OU 3T for remedial investigation (RI) Phase I. The installation also completed a draft RI work plan and a draft feasibility study (FS) work plan to evaluate cleanup alternatives for OU 3M.

In FY06, Puget Sound NS transferred approximately two acres of BNC OU D property to the City of Bremerton. In addition, the installation began partnering and facilitating meetings with regulators for JPHC sites. Puget Sound NS continued LTM and began pilot testing to address free-product benzene at JPHC OU 1.

In FY07, Puget Sound NS resolved the JPHC OU 2 informal dispute and began planning for a supplemental RI. The installation updated the LTM program for OU A and NSC, and monitoring the cleanup system's operation at OU BM. Puget Sound NS also continued LTM and began a focused FS at JPHC OU 1. Under the MMRP, the installation completed the JPHC OU 3T Phase II RI/FS work plans and RI/FS fieldwork. Additionally, the installation and EPA resolved a formal dispute regarding JPHC OU 3T Phase II sampling. The installation completed the second five-year review report for BNC.

In FY08, Puget Sound NS continued LTM at BNC terrestrial sites and conducted a removal action at OU A. The installation continued LTM, conducted a focused FS, and completed documentation for a removal action at JPHC OU 1. Under the MMRP, Puget Sound NS completed Phase II RI/FS fieldwork and began a removal action at JPHC OU 3T. Puget Sound NS also updated community relations plans for BNC and JPHC.

**FY09 IRP Progress**

Puget Sound NS resolved a formal dispute and finalized a Marine Monitoring Report for OU BM. The installation also resolved an informal dispute and began a supplemental RI for JPHC OU 2. Puget Sound NS continued LTM, a focus FS, and began a removal action at JPHC OU 1. The installation also continued LTM at BNC Terrestrial Sites. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Puget Sound NS resolved the Phase II work plan formal dispute, and began Phase II RI/FS for OU 3M.

Administrative issues delayed completion of a Phase II RI/FS report, and draft proposed plan (PP) for JPHC OU 3T.

**Plan of Action**

Plan of action items for Puget Sound Naval Shipyard are grouped below according to program category.

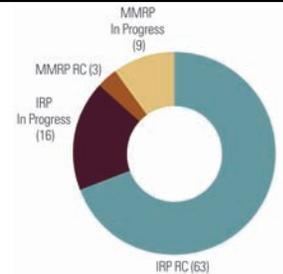
**IRP**

- Continue LTM and focused FS at JPHC OU 1 in FY10.
- Complete second JPHC five-year review report in FY10.
- Complete Phase II RI/FS report and draft PP for JPHC OU 3T in FY10.
- Continue LTM at BNC terrestrial sites in FY10.

**MMRP**

- Resolve formal dispute for stipulated penalties at JPHC OU 3T in FY10.
- Complete PP for JPHC OU 3T in FY10.
- Complete draft RI/FS report at JPHC OU 3M in FY10.
- Complete draft FS and PP for JPHC OU 2 in FY10-FY11.

<b>FFID:</b>	TX621382073800	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Texarkana, Texas (18,316 acres)	<b>Funding to Date:</b>	\$ 48.4 million
<b>Mission:</b>	Conduct ground combat; air defense systems certification; equipment support services; munitions storage, renovation and demilitarization; defense logistic support	<b>Est. CTC (Comp Year):</b>	\$ 71.3 million (FY 2017)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	79 (FY2017)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	12 (FY2017)
<b>Contaminants:</b>	Trichloroethylene, cadmium, chromium, lead, zinc, dichloroethane, dichloroethene, VOCs, SVOCs, metals	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-158



**Progress To Date**

Red River Army Depot (AD) conducts ground combat; air defense systems certification; equipment support services; munitions storage, renovation, and demilitarization; and defense logistic support. Areas of environmental concern at Red River AD include spill sites associated with previous industrial and disposal activities. Trichloroethylene (TCE) is the main contaminant affecting groundwater at the installation. In 1995, the BRAC Commission realigned Red River AD by moving the M113 vehicle mission to other depots. In 2005, the BRAC Commission further realigned Red River AD to close the munitions center and move the missile facilities. The installation retained its Tactical Wheeled Vehicle Programs, intern training, and rubber production missions. In FY95, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. In FY96, the installation prepared a BRAC cleanup plan to prioritize sites requiring environmental restoration and updated it in FY01. In FY95, the community formed the Red River Redevelopment Authority. In FY96, Red River AD formed a Restoration Advisory Board to discuss cleanup progress with the the community. The installation also maintains a partnership with the Texas Natural Resource Conservation Commission (now known as the Texas Commission on Environmental Quality) through the Defense/ State Memorandum of Agreement program.

To date, the installation has removed more than 2,000 cubic yards of contaminated sediment from the north and south stormwater drainage ditches in the Western Industrial Area. Red River AD also transferred 694 of the 797 acres of BRAC property to the Red River Redevelopment Authority. In FY03, Red River AD conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP) at the non-BRAC portion of this installation; MMRP sites were identified. Cleanup progress at Red River AD for FY05 through FY08 is summarized below.

In FY05, the installation completed a soil cleanup project at the former Incinerator Building 722, and submitted a plan for implementing corrective measures to the State of Texas for the closed hazardous waste landfill (LF). Under the MMRP, the installation also completed historical record review reports.

In FY06, Red River AD completed reports on affected property assessments and response action plans for Buildings 371 and 373, used oil tanks, and the X1 Sewer Treatment Plant. The installation also implemented the groundwater monitoring plan for the closed ordnance training center hazardous waste LF. The installation found 38 acres suitable for transfer to the Red River Redevelopment Authority. Red River AD submitted the site inspection report for MMRP sites and received regulator comments.

In FY07, Red River AD constructed two permeable walls to protect Panther Creek from contaminated groundwater. Red River AD also completed a report documenting the environmental condition of all transferable property, and a CERFA report, which documents all uncontaminated property undergoing closure or realignment, for the BRAC 2005 parcel. Red River AD submitted long-term groundwater monitoring plans for Buildings 371, 373, the Western Industrial Area, and the used oil tank facility; completed excavations to cleanup Building 1027, the used oil tank facility, and the X1 Sewer Treatment Plant; and submitted a cleanup plan for the Western Industrial Area and Panther Creek. Red River AD transferred the Northwest and Southwest Surveillance Function Test Ranges to the BRAC 2005 program. Under the MMRP, Red River AD published a public notice on the prioritization of all sites; there was no public response.

In FY08, Red River AD received regulatory concurrence to discontinue long-term management at the municipal solid waste LF, and began Phase II investigations on BRAC 2005 sites. The installation also completed groundwater classification at X1 Sewer Treatment Plant. Under the MMRP, Red River AD awarded a contract to complete a remedial investigation (RI) and a feasibility study (FS) to evaluate cleanup alternatives for five sites.

**FY09 IRP Progress**

Red River AD began a response action plan and installed monitoring networks for Panther Creek biowalls. The installation performed monitoring at the Ordnance Training Center LF, open burn (OB)/ open detonation (OD) grounds, sludge drying beds, and Chromate Equalization Lagoon. Red River AD received regulatory concurrence on proposed contaminated area management zones for Buildings 371, 373, and 433; the

Western Industrial Area; and the used oil tank facility. The cost of completing environmental restoration has changed significantly due to regulatory and technical issues.

Technical and administrative issues delayed completion of the response action plan for Panther Creek biowalls. Administrative issues delayed completion of RCRA facility investigations at four BRAC 2005 sites.

**FY09 MMRP Progress**

Red River AD began RI/FSs at five sites for the active program and two sites for the BRAC program.

**Plan of Action**

Plan of action items for Red River Army Depot are grouped below according to program category.

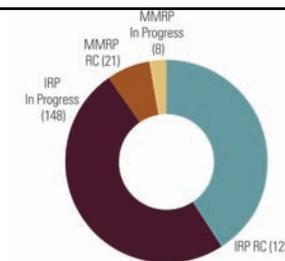
**IRP**

- Complete response action plan for Panther Creek biowalls in FY10.
- Complete RI of Defense Reutilization and Marketing Office Scrap Yard in FY10.
- Determine whether the X1 Sewer Treatment Plant is suitable to transfer in FY10.
- Complete RCRA facility investigations at four BRAC 2005 sites in FY10.
- Continue monitoring at the OB/OD grounds, Chromate Equalization Lagoon, Ordnance Training Center Landfill and sludge drying beds in FY10-FY11.

**MMRP**

- Complete RI/FSs at five active sites and two BRAC 2005 sites in FY10.

<b>FFID:</b>	AL421382074200	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Huntsville, Alabama (38,300 acres)	<b>Funding to Date:</b>	\$ 231.1 million
<b>Mission:</b>	Serve as host to the Army Aviation and Missile Command, the Space and Missile Defense Command, Redstone Technical Test Center, and the Missile and Space Intelligence Center	<b>Est. CTC (Comp Year):</b>	\$ 125.0 million (FY 2044)
<b>HRS Score:</b>	33.40; placed on NPL in June 1994	<b>IRP Sites (Final RIP/RC):</b>	271 (FY2022)
<b>IAG Status:</b>	FFA under negotiation	<b>MMRP Sites (Final RIP/RC):</b>	29 (FY2016)
<b>Contaminants:</b>	Heavy metals, solvents, MEC, perchlorate, CWM, pesticides, VOCs, SVOCs, PCBs, explosives, propellants	<b>Five-Year Review Status:</b>	Planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-1



## Progress To Date

Past operations at Redstone Arsenal included production, receipt and shipment, storage, demilitarization, and disposal of chemical and high-explosive munitions. Industrial firms also produced commercial chemicals and pesticides at the installation. Redstone Arsenal currently conducts military training, research and development; manages procurement; and supports the Army's aviation and missile weapons systems. Site types include past disposal sites, landfills, open burning and open detonation areas, chemical munitions disposal sites, and releases from rocket motor production processes. Primary contaminants of concern are heavy metals, solvents, chemical weapon materials, munitions and explosives of concern, and pesticides. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in June 1994. DoD and EPA are currently negotiating a federal facility agreement (FFA) to outline how they will proceed with cleanup. In 2005, the BRAC Commission recommended Redstone Arsenal for realignment. In 1994, Redstone Arsenal formed a technical review committee to discuss cleanup progress with the community.

Sites at Redstone Arsenal are grouped into groundwater operable units (OUs) and surface media OUs. To date, the installation has closed 21 sites and completed 10 Records of Decision (RODs), selecting cleanup actions at 13 sites. Redstone Arsenal has also signed one interim ROD for groundwater land use controls (LUCs), which restrict access to sites. Cleanup progress at Redstone Arsenal for FY05 through FY08 is summarized below.

In FY05, Redstone Arsenal awarded a performance-based contract (PBC). The installation also submitted remedial investigation (RI) reports for Sites 011, 057, 096, 098, 146, and 183. Additionally, the installation submitted a feasibility study (FS) report evaluating cleanup alternatives for Site 057. Redstone Arsenal also submitted the preliminary assessment (PA) and site inspection (SI) reports for Sites 145, 146, 147, 148, and 149.

In FY06, Redstone Arsenal determined that no further cleanup action was necessary at Site George C. Marshall Space Flight Center (MSFC) 074. Redstone Arsenal completed a proposed plan (PP) for Site 057 and submitted the corresponding ROD.

The installation completed PAs for seven sites. Under the Military Munitions Response Program (MMRP), the installation began the SI for sites suspected to contain munitions contamination.

In FY07, EPA and the Alabama Department of Environmental Management added additional personnel to the Redstone Arsenal program. The installation completed RODs for Sites 049 and 057; a groundwater interim ROD; and two RODs determining no further cleanup was necessary at Sites 011 and 047. Additionally, the installation closed three sites (Sites 223, 232, and 235); installed and launched cleanup systems for two sites (MSFC 002/087 and Site 229); and finalized RI reports for five sites (Sites 054, 056, 122, 139, and 183). The installation installed a northern perimeter well network to address contamination from off-post groundwater. The installation also updated the MMRP historical records review, and resubmitted it and the SI work plan for review.

In FY08, Redstone Arsenal closed seven sites. Redstone Arsenal also completed one ROD (MSFC 002/087) and administrative letters to close six sites (MSFC 77 and Sites 224, 229, 236, 251, and D). The installation submitted the cleanup work plans for the groundwater interim ROD and Site 049. Under the MMRP, Redstone Arsenal completed a Phase I historical records review and SI.

## FY09 IRP Progress

Redstone Arsenal awarded a PBC and completed the PP and ROD for Sites 094, 122, 183, and 196. The installation also completed FSs for 7 sites; RIs for 16 sites; cleanup work plans for Site 049; and the groundwater interim ROD. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

## FY09 MMRP Progress

Redstone Arsenal submitted the closure report for Site 282.

Redstone Arsenal decided to evaluate any new potential MMRP areas under the new contract; therefore, the installation did not begin the Phase II historical records review.

## Plan of Action

Plan of action items for Redstone Arsenal are grouped below according to program category.

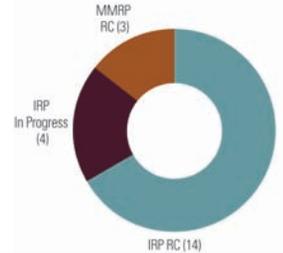
### IRP

- Complete 18 FSs, 20 PPs, 25 RIs, and 13 SIs in FY10-FY11.
- Complete a cleanup closure report, 10 LUC plans, and 11 cleanup work plans in FY10-FY11.
- Complete 12 decision documents and 15 RODs in FY10-FY11.

### MMRP

- Complete three RIs, two FSs, and two PPs in FY10-FY11.

<b>FFID:</b>	TX657152409100	<b>Est. CTC (Comp Year):</b>	\$ 2.0 million (FY 2014)
<b>Location (Size):</b>	Lubbock, Texas (2,987 acres)	<b>IRP Sites (Final RIP/RC):</b>	18 (FY2006)
<b>Mission:</b>	Conducted pilot training	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2000)
<b>HRS Score:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in 1987 and terminated in June 1999	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-51
<b>Contaminants:</b>	VOCs, POLs, metals, pesticides, herbicides, TCE, SVOCs		
<b>Media Affected:</b>	Groundwater, Surface Water, Soil		
<b>Funding to Date:</b>	\$ 128.0 million		



**Progress To Date**

Reese Air Force Base (AFB) formerly supported pilot training and related activities. Sites identified at the installation include landfills (LFs), surface impoundments, underground storage tanks, sludge spreading areas, industrial drain lines, and fire training areas. DoD and EPA signed a federal facility agreement (FFA) in 1987 to outline how they were going to proceed with cleanup, which was terminated in June 1999. The 1995 BRAC Commission recommended closure of Reese AFB, and the installation closed in September 1997. In FY96, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. Reese AFB formed a Restoration Advisory Board (RAB) in FY95 to discuss the installation’s cleanup progress with the community. To ensure continuous monitoring and improvement, Reese AFB completed a five-year review report in FY06.

To date, the installation has transferred all property. In FY06, Reese AFB determined that no further construction of cleanup systems was required. In FY04, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Reese AFB closed all MMRP sites in FY07. Cleanup progress at Reese AFB for FY05 through FY08 is summarized below.

In FY05, Reese AFB conducted pilot studies under the guaranteed fixed-price remediation contract to test the possibility of enhancing cleanup at the Tower Area and Southwest LF Plumes. Reese AFB expanded the Tower Area Plume pump-and-treat system and began demonstrating that two other sites were operating properly and successfully. The installation complied with Section 7003 of RCRA, which EPA administers at Reese AFB, by supplying approximately 50 off-base residents with alternate water supplies. Under the MMRP, Reese AFB began evaluating requirements. The RAB and BRAC cleanup team met as scheduled.

In FY06, Reese AFB completed the operating properly and successfully demonstration for the Tower Area Plume. The installation transferred all remaining property (409 acres) through an economic development conveyance that would generate jobs to the Lubbock Reese Reuse Authority, and through a public benefit conveyance to Texas Tech University

and South Plains College. Reese AFB successfully used the guaranteed fixed-price remediation contract to accelerate environmental cleanup and move the groundwater cleanup schedule ahead. The installation determined that no further construction of cleanup systems was required. Additionally, Reese AFB completed the first five-year review report. The installation conducted ongoing, full-scale, enhanced cleanup and also continued compliance with Section 7003 of RCRA. Reese AFB determined that no munitions or explosives of concern remain at the installation. The RAB and BRAC cleanup team continued to meet as needed.

In FY07, the installation continued the guaranteed fixed-price remediation contract and completed full-scale implementation of the enhanced cleanup systems. Reese AFB continued monitoring off-base private water wells in compliance with Section 7003 of RCRA. The installation performed LF maintenance, and groundwater monitoring and cleanup. Reese AFB completed the closure of all identified MMRP sites.

In FY08, Reese AFB continued to enhance the groundwater cleanup and expanded enhancements to the full-scale system, accelerating contaminant reduction in treatment areas. The installation also continued monitoring private water wells in compliance with Section 7003 of RCRA.

**FY09 IRP Progress**

Reese AFB continued the enhanced groundwater cleanup, and continued monitoring private water wells in compliance with Section 7003 of RCRA. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical issues delayed completion of the guaranteed fixed-price remediation contract.

**FY09 MMRP Progress**

Reese AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Reese Air Force Base are grouped below according to program category.

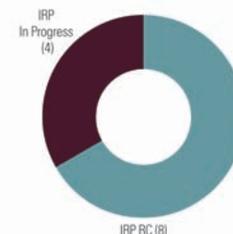
**IRP**

- Continue enhanced cleanup for groundwater in FY10-FY11.
- Continue compliance with Section 7003 of RCRA in FY10-FY11.
- Prepare a five-year review report in FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	MO757002429200	<b>Funding to Date:</b>	\$ 11.9 million
<b>Location (Size):</b>	Kansas City, Missouri (429 acres)	<b>Est. CTC (Comp Year):</b>	\$ 2.0 million (FY 2038)
<b>Mission:</b>	Supported fighter and attack aircraft operations	<b>IRP Sites (Final RIP/RC):</b>	12 (FY2004)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	POLs, PAHs, PCBs, VOCs, heavy metals, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-33
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Richards-Gebaur Air Reserve Station (ARS) formerly supported fighter and attack aircraft operations. Site types identified at the installation include a fire training area, vehicle maintenance areas, hazardous waste drum storage areas, fuel storage areas, and underground storage tanks. In July 1991, the BRAC Commission recommended closure of Richards-Gebaur ARS. The installation closed in September 1994. In FY94, Richards-Gebaur ARS formed a Restoration Advisory Board (RAB) to discuss the installation's cleanup progress with the community. In FY04, the RAB adjourned and the installation updated the community relations plan to indicate the status of cleanup efforts and identify ongoing opportunities for community involvement. To ensure continuous monitoring and improvement, Richards-Gebaur ARS completed a five-year review report in FY07.

To date, Richards-Gebaur ARS has completed decision documents for three sites, which determined that no further cleanup actions were necessary. Richards-Gebaur ARS has signed Records of Decision selecting cleanup actions for Operable Units 1 and 2. The installation has transferred all property to the local communities (which are the cities of Kansas City and Belton) or assigned to the Navy and the Army. In FY06, the installation transferred environmental responsibility for Spill Sites (SSs) 003 and 009 to the Navy. In FY04, Richards-Gebaur ARS conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Restoration Program (MMRP); no MMRP sites were identified. Cleanup progress at Richards-Gebaur ARS for FY05 through FY08 is summarized below.

In FY05, Richards-Gebaur ARS completed the management plan for land use controls (LUCs), which restrict use or access to sites, and institutional controls (ICs), which are tools that minimize the potential for human exposure. The installation also updated the groundwater monitoring plan. Richards-Gebaur ARS monitored groundwater at six sites and conducted LUC/IC inspections. In addition, the installation transferred the remaining property (232 acres) to Kansas City and the Navy.

In FY06, the installation monitored groundwater at six sites and conducted LUC/IC inspections. The installation transferred environmental responsibility for SSs 003 and 009 to the Navy.

In FY07, Richards-Gebaur ARS continued cleanup operations and long-term management (LTM) for environmental restoration sites. The installation monitored groundwater and conducted LUC/IC inspections at four sites. Richards-Gebaur ARS completed the first five-year review report, which reduced the groundwater monitoring frequency from twice per year to once per year for three of the four sites. Regulators approved the installation's explanation of significant differences between maintaining LUCs/ICs at two contaminated soil sites as proposed in the ROD, and determined that no further cleanup action was necessary. The Kansas City Port Authority requested that Richards-Gebaur ARS enter into an environmental services cooperative agreement with them such that the Port Authority would assume responsibility for the remaining cleanup operations and LTM.

In FY08, Richards-Gebaur ARS prepared an annual report on the installation's cleanup progress. The installation conducted annual groundwater monitoring and LUC/IC inspections at four sites. Kansas City Port Authority cancelled environmental services cooperative agreement negotiations to privatize environmental cleanup with Richards-Gebaur ARS.

**FY09 IRP Progress**

Richards-Gebaur ARS prepared an annual report on the installation's cleanup progress. The installation conducted annual groundwater monitoring and LUC/IC inspections at four sites.

**FY09 MMRP Progress**

Richards-Gebaur ARS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Richards-Gebaur Air Reserve Station are grouped below according to program category.

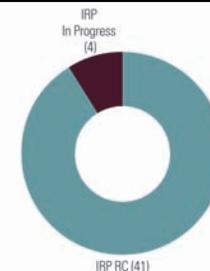
**IRP**

- Complete five-year review report in FY10.
- Conduct annual groundwater monitoring and LUC/IC inspections at four sites in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	OH557002454400	<b>Funding to Date:</b>	\$ 26.5 million
<b>Location (Size):</b>	Columbus, Ohio (2,076 acres)	<b>Est. CTC (Comp Year):</b>	\$ 7.5 million (FY 2036)
<b>Mission:</b>	Supported fighter, tanker, and cargo aircraft operations	<b>IRP Sites (Final RIP/RC):</b>	45 (FY2001)
<b>HRS Score:</b>	50.00; placed on NPL in January 1994	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Pesticides, paints, POLs, solvents, heavy metals, VOCs, SVOCs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-44
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Rickenbacker Air National Guard Base (ANGB) formerly supported aircraft operations. The installation has identified groundwater sites contaminated with metals, pesticides, and volatile organic compounds (VOCs). The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in January 1994. The 1991 BRAC Commission recommended closure of Rickenbacker ANGB. The 1993 BRAC Commission recommended realignment rather than base closure, and the installation was realigned in September 1994. The installation has formed a BRAC cleanup team to develop a process for cleanup of sites. The installation also formed a Restoration Advisory Board in FY94 to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY08.

To date, Rickenbacker ANGB has signed two Records of Decision, which selected cleanup actions at nine environmental restoration sites. The installation has also signed documents determining no further cleanup action is necessary at 3 areas of concern and 16 sites suspected to contain contamination for the Installation Restoration Program (IRP). Seven other IRP sites have been closed with regulatory concurrence. The installation has transferred over 1,700 acres to the local redevelopment authority. In FY04, Rickenbacker ANGB conducted an inventory of sites suspected to contain contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Rickenbacker ANGB for FY05 through FY08 is summarized below.

In FY05, the installation obtained approval letters for operating properly and successfully demonstrations at IRP Sites 21 and 42. Rickenbacker ANGB also completed a Statement of Basis for Site 43, determining no further cleanup was necessary as long as the installation maintained land use controls (LUCs), which restrict use of or access to the site. The installation transferred 47 acres of Parcel D3A and 15 acres of Parcel D3B, containing a petroleum/oil/lubricant (POL) bulk storage area, to the local redevelopment authority. Additionally, Rickenbacker ANGB awarded a performance-based contract to close the remaining IRP Sites: 1, 2, 21, 41, and 42. The BRAC cleanup

team reviewed the draft five-year review report and held one meeting.

In FY06, Rickenbacker ANGB added an aqueous solution of food-grade vegetable oil and simple sugars to the groundwater to act as a long-term electron donor and to accelerate site closure at Sites 41 and 42. The installation removed approximately 100 cubic yards of contaminated soil from Site 41. Rickenbacker ANGB expanded the air sparge system, which reduces the concentration of certain parts of petroleum, at Site 2; EPA Region V approved the installation's operating properly and successfully demonstration at the site. Rickenbacker ANGB completed the transfer of Site 43 (in Parcels B1/D3E, D3B, D3C, D3F, D3G, and D3K) to the local redevelopment authority. The installation retained Parcels D3I, D3J, and D3L for use by the Ohio Air National Guard. The BRAC cleanup team met twice.

In FY07, the installation completed Statements of Basis that describe improvements to groundwater sampling at Sites 41 and 42. EPA approved the installation's operating properly and successfully demonstration at Site 1. Regulators approved a minor amendment to the Site 1 post-closure plan for adding LUCs. Rickenbacker ANGB finalized an updated map of institutional controls, which are tools that minimize the potential for human exposure, and LUCs. The installation closed unused monitoring wells. Additionally, Rickenbacker ANGB transferred Parcels D3D and D3H to the local redevelopment authority. The BRAC cleanup team met twice.

In FY08, Rickenbacker ANGB completed the first five-year review report. The installation met cleanup goals and closed Site 2, as documented in a signed Statement of Basis for groundwater monitoring. Rickenbacker ANGB continued groundwater monitoring at IRP Sites 1, 21, 41, and 42. Regulators approved the minor amendment to the Site 1 post-closure plan for adding four new monitoring wells. Rickenbacker ANGB planned to close selected unused monitoring wells. The BRAC cleanup team met twice.

**FY09 IRP Progress**

Rickenbacker ANGB continued groundwater monitoring at Sites 1, 21, 41, and 42. The installation determined that no further cleanup action was needed, and that it was unnecessary to complete a Statement of Basis. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical issues delayed the decommissioning of remaining obsolete monitoring wells at Site 21.

The BRAC cleanup team met twice.

**FY09 MMRP Progress**

Rickenbacker ANGB has identified no MMRP sites.

**Plan of Action**

Plan of action items for Rickenbacker Air National Guard Base are grouped below according to program category.

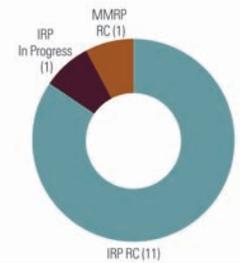
**IRP**

- Continue groundwater monitoring at Sites 1, 21, 41, and 42 in FY10-FY11.
- Update the LUCs management plan in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA921382075900	<b>Est. CTC (Comp Year):</b>	\$ 2.9 million (FY 2014)
<b>Location (Size):</b>	Riverbank, California (172 acres)	<b>IRP Sites (Final RIP/RC):</b>	12 (FY1998)
<b>Mission:</b>	Manufacture grenades, projectiles, and steel cartridge casings	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2008)
<b>HRS Score:</b>	63.94; placed on NPL in February 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	IAG signed in April 1990	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-7
<b>Contaminants:</b>	Chromium, cyanide, zinc		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 57.7 million		



**Progress To Date**

In 1942, the Army constructed the Riverbank Army Ammunition Plant (AAP) as an aluminum reduction plant to supply military requirements. Since 1951, the installation has manufactured brass and steel cartridge cases for the Army and the Navy. Other manufactured products include grenades and projectiles, which the Army ships to other ammunition plants for loading operations. Contaminated sites include an industrial wastewater treatment plant, an abandoned landfill, and four evaporation and percolation ponds located north of the plant near the Stanislaus River. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1990. DoD and EPA signed an interagency agreement (IAG) in April 1990 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Riverbank AAP for closure. Riverbank AAP formed a technical review committee in 1994 to discuss the installation’s cleanup progress with the community. To ensure continuous monitoring and improvement, Riverbank AAP completed five-year review reports in FY01 and FY06.

To date, the installation has completed one Record of Decision (ROD), which selected cleanup actions for all sites. In FY03, Riverbank AAP conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Riverbank AAP for FY05 through FY08 is summarized below.

In FY05, Riverbank AAP began to optimize the groundwater treatment system from off-site wells. The installation also completed the chromium treatment pilot test at the source of contamination. Under the MMRP, the installation awarded a contract to conduct a historical review and archive search for the small arms range.

In FY06, Riverbank AAP continued to optimize the current groundwater treatment system and completed the second five-year review report. The installation also began groundwater investigations to evaluate potential methods to expedite cleanup efforts. Under the MMRP, Riverbank AAP conducted a historical records review and archive search for the small arms range.

In FY07, Riverbank AAP completed Phase I of a report summarizing the environmental condition of all transferable property, and began fieldwork. The installation received EPA concurrence on the CERFA Category 1 acres report, which documents all contaminated property undergoing closure or realignment. Regulators approved work plans for the pilot test of an iron treatment and rebound study, which shutdown the groundwater pump-and-treat system for one year. Under the MMRP, Riverbank AAP conducted a site inspection (SI) and metal detection survey, and collected soil samples at the small arms range.

In FY08, Riverbank AAP submitted the results of the pilot treatment and rebound study for regulatory review. The installation also completed Phase II of the report summarizing the environmental condition of all transferable property and received regulatory approval. Under the MMRP, Riverbank AAP provided regulators with metal survey and soil sampling results in an SI report; EPA determined that the small arms range required no further cleanup action.

**FY09 IRP Progress**

Riverbank AAP received regulatory approval of the ferrous iron treatment and rebound pilot study report. The installation evaluated the report, determined a further course of action, and submitted a draft explanation of significant differences for the ROD to regulators for review. Riverbank AAP received comments from the regulatory agencies. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Riverbank AAP conducted no MMRP actions.

**Plan of Action**

Plan of action items for Riverbank Army Ammunition Plant are grouped below according to program category.

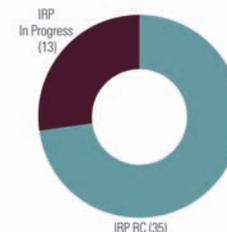
**IRP**

- Submit the revised explanation of significant differences for the ROD in FY10-FY11.
- Conduct cleanup with ferrous iron treatment in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	GA457172433000	<b>Funding to Date:</b>	\$ 186.7 million
<b>Location (Size):</b>	Houston County, Georgia (8,855 acres)	<b>Est. CTC (Comp Year):</b>	\$ 119.9 million (FY 2028)
<b>Mission:</b>	Provide logistics support for aircraft	<b>IRP Sites (Final RIP/RC):</b>	48 (FY2005)
<b>HRS Score:</b>	51.66; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in June 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	VOCs, paint strippers and thinners, paints, solvents, phosphoric and chromic acids, cyanide, carbon, oils, TCE	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-63
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

The mission of Robins Air Force Base (AFB) is to provide logistics support for aircraft. Primary contaminants at the installation include trichloroethylene (TCE) and tetrachloroethane in soil and groundwater. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in June 1989 to outline how they were going to proceed with cleanup. The Robins AFB NPL site designation consists of landfill (LF) 004 and an adjacent sludge lagoon (Waste Pile [WP] site 14) and is divided into three operable units (OUs): source control (OU 1), wetlands (OU 2), and groundwater (OU 3). In August 2003, OU 2 was removed from the NPL designation and is addressed under RCRA. In 2005, the BRAC Commission recommended Robins AFB for realignment. The installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Robins AFB completed five-year review reports in FY01 and FY06.

To date, the installation has signed one Record of Decision, which selected cleanup actions for OUs 1 and 3. Cleanup progress at Robins AFB for FY05 through FY08 is summarized below.

In FY05, Robins AFB completed the corrective action plan and implemented the selected cleanup actions for Chemical Disposal (DC) site 034, completed the cleanup actions for OU 2 and Spill Site (SS) 039, and obtained site closure for SS 042. Robins AFB also conducted operations and maintenance (O&M) activities at nine sites. The installation required no further construction of cleanup systems at all Installation Restoration Program (IRP) sites. The RAB met quarterly to discuss ongoing restoration activities.

In FY06, Robins AFB obtained site closure at SS 039 and completed its second five-year review report for OUs 1 and 3. The installation continued O&M activities at eight sites and maintained land use controls (LUCs), which restrict access, at four sites. The Air Force awarded Robins AFB the General Thomas D. White Environmental Restoration Award for its achievements. The RAB met quarterly.

In FY07, Robins AFB closed Other (OT) site 029. The installation continued O&M activities and optimized cleanup efforts at eight sites, and maintained LUCs at four sites. Under the Military Munitions Response Program (MMRP), the installation began a preliminary assessment (PA) of sites suspected to contain munitions contamination. The RAB met quarterly.

In FY08, Robins AFB continued O&M activities and optimized cleanup efforts at eight sites and maintained LUCs at four sites. Robins AFB began state-level partnering, and the RAB met quarterly.

**FY09 IRP Progress**

Robins AFB conducted O&M activities and optimized cleanup efforts at eight sites and maintained LUCs at four sites. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

The installation participated in state-level partnering, and the RAB met quarterly.

**FY09 MMRP Progress**

Robins AFB completed the PA and recommended site inspection (SI) sampling at one site. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

**Plan of Action**

Plan of action items for Robins Air Force Base are grouped below according to program category.

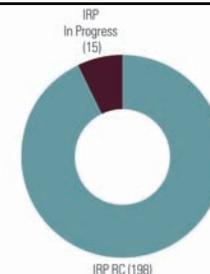
**IRP**

- Continue O&M activities at eight sites in FY10.
- Maintain LUCs at four sites in FY10.
- Begin installation-level partnering with state regulators in FY10.

**MMRP**

- Start the SI sampling in FY10.
- Complete the SI in FY11.

<b>FFID:</b>	CO821382076900	<b>Funding to Date:</b>	\$ 1,741.2 million
<b>Location (Size):</b>	Adams County, Colorado (17,228 acres)	<b>Est. CTC (Comp Year):</b>	\$ 164.1 million (FY 2039)
<b>Mission:</b>	Manufactured and stored chemical munitions	<b>IRP Sites (Final RIP/RC):</b>	213 (FY2010)
<b>HRS Score:</b>	58.15; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	IAG and FFA signed in FY89	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Pesticides, chemical agents, VOCs, chlorinated organics, PCBs, UXO, heavy metals, solvents, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-46
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Rocky Mountain Arsenal (RMA) operated chemical munitions production and destruction facilities from 1942 until 1982. Contaminated sites have included liquid waste in unlined and lined basins, open burning and detonations areas, structures, and trenches that received both liquid and solid wastes. Primary contaminants of concern are compounds used for chemical weapons materiel production and pesticides. The potential risk to human health and the environment was significant for EPA to place the installation on the NPL in July 1987. DoD and EPA signed an interagency agreement (IAG) and a federal facility agreement (FFA) in FY89 to outline how they were going to proceed with cleanup. In 1994, RMA converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY08.

To date, RMA has transferred 13,312 acres. EPA delisted 13,411 acres from the NPL between FY03 and FY06. The installation divided contaminated sites into two operable units (OUs), one containing all on-post sites and another for the area off-post. In FY96, RMA and regulators signed Records of Decisions (ROD) for both OUs at the installation. Prior to the signing of the RODs, RMA completed 14 interim response actions at 17 sites, including: the installation of 5 groundwater extraction and treatment systems on-post; and 1 off-post. Also in FY96, the installation and Shell Oil Company (a party potentially responsible for additional contamination) formed an oversight partnership that developed the design for cleanup and the cleanup implementation schedule for the on-post OU. In FY01, the Army discovered 10 M139 bomblets containing sarin, which it destroyed using the Explosive Destruction System. In FY03, RMA completed an inventory of closed, transferred, and transferring ranges. The inventory identified: 25 closed, unexploded ordnance; discarded military munitions or munitions constituents sites; and 3 closed military ranges totaling 459 acres. Cleanup progress at RMA for FY05 through FY08 is summarized below.

In FY05, RMA awarded contracts to cleanup the Shell Disposal Trenches and the Basin F Waste Pile. The installation completed construction of the cleanup system at the Existing

(Sanitary) Landfill, and operated the groundwater system north of the Basin F Well.

In FY06, RMA completed the design for cleanup and began construction on the Shell Disposal Trenches cover and the Hazardous Waste Landfill cap. The installation completed construction of the cleanup system at the Enhanced Hazardous Waste Landfill. RMA began excavation of the Basin F Wastepile. The installation also amended the ROD and drafted the cleanup designs for the Former Basin F Principal Threat and Section 36 Lime Basins soil projects. EPA removed 7,399 acres from the NPL. Of these acres, RMA transferred 7,258 to the U.S. Fish and Wildlife Service (FWS), but kept jurisdiction over areas containing water treatment systems.

In FY07, RMA completed the design for cleanup at the Section 36 Lime Basins Slurry Wall project and the Integrated Cover System. The installation began the first phase of cleanup at the Integrated Cover System, the Former Basin F Principal Threat soil project, and the Munitions Testing soil project. The installation completed cleanup for the remaining Section 35 soils and Miscellaneous Southern Tier soils (Sand Creek Lateral). The installation completed the Section 36 Balance of Areas soil project, and the Basin F Wastepile soil fieldwork. RMA continued to operate and maintain five groundwater treatment systems. The installation received Occupational Safety and Health Administration and EPA awards for the NPL delisting of the Internal Parcel.

In FY08, RMA completed the design for cleanup at the Basin F and Basin F Exterior soil projects, and awarded the contract for cleanup. The installation also completed cleanup at Munitions Testing, Basin F Wastepile, Miscellaneous Southern Tier, and the Section 35 (Sand Creek Lateral) and Section 36 soil projects. RMA completed the soil removal at Secondary Basins, and awarded the Enhanced Hazardous Waste Landfill cover construction contract. The installation also completed the second five-year review report, with regulatory approval.

**FY09 IRP Progress**

RMA signed the certification reports for the following projects: Basin F Principal Threat removal, the final phase of the Munitions Testing, Phase II of the Sanitary Sewers, Secondary Basins, and Basin F Wastepile. The installation completed the

Enhanced Hazardous Waste Landfill Cap and Lime Basins projects. Regulators approved the explanation of significant difference for the North Plants, eliminating the need for a soil cover. RMA continued to operate the groundwater treatment systems. Operation of groundwater wells led to the discovery of contamination in Lime Basins area; the installation is working with regulatory agencies to determine how to proceed with cleanup of the contaminated areas. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

RMA has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Rocky Mountain Arsenal are grouped below according to program category.

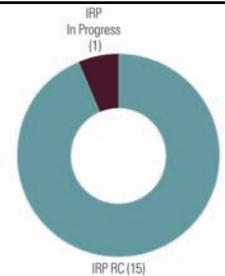
**IRP**

- Complete cleanup actions and construct engineering controls for Basin A, Lime Basins, South Plants Balance of Areas Phase II, Complex Army Disposal Trenches, Shell Disposal Trenches, and Basin F/Basin F Exterior in FY10.
- Begin third five-year review report in FY10.
- Propose deletion of approximately 2,500 acres from the NPL and transfer property to the FWS in FY10-FY11.
- Complete cleanup actions for Hazardous Waste Landfill.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA921382078000	<b>Funding to Date:</b>	\$ 68.0 million
<b>Location (Size):</b>	Sacramento, California (485 acres)	<b>Est. CTC (Comp Year):</b>	\$ 4.6 million (FY 2017)
<b>Mission:</b>	Repaired and maintained communications and electronic equipment	<b>IRP Sites (Final RIP/RC):</b>	16 (FY1997)
<b>HRS Score:</b>	44.46; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	IAG signed in September 1988	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Oil and grease, cyanide, metals, solvents, metal plating wastes, wastewater containing caustics	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-7
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

When in operation, Sacramento Army Depot (AD) provided support for communications and electronic equipment. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. In FY88, DoD and EPA signed an interagency agreement (IAG) to outline how they were going to proceed with cleanup. In 1991, the BRAC Commission recommended closure of Sacramento AD, and the installation closed in March 1995. In FY93, the installation completed a CERFA report and a BRAC cleanup plan to prioritize sites requiring environmental restoration. The installation formed a Restoration Advisory Board (RAB) in FY94 to discuss the installation's cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY01 and FY08.

To date, Sacramento AD has transferred all acreage. Sacramento AD divided its contaminated sites into four operable units (OUs). In FY92, the installation signed Records of Decision (RODs) for all four OUs, which selected cleanup actions for these sites. Sacramento AD signed a ROD for the entire installation in FY95. Cleanup progress at Sacramento AD for FY05 through FY08 is summarized below.

In FY05, Sacramento AD transferred the final installation acreage to the City of Sacramento. The installation began groundwater and soil sampling at the South Post Plume. The installation reviewed all leases in support of groundwater monitoring. Of these leases, the installation renewed several and terminated one.

In FY06, Sacramento AD completed soil and groundwater sampling for the South Post Plume.

In FY07, Sacramento AD awarded a contract for future cleanup actions. The BRAC office discussed groundwater reuse options at the depot for a prospective ethanol production plant. The installation abandoned 14 monitoring wells and 4 piezometers, which measure groundwater. The RAB held an annual meeting.

In FY08, Sacramento AD awarded the performance-based contract for groundwater treatment and submitted the groundwater management plan amendment for regulatory

review. The installation continued to evaluate the groundwater treatment system for optimization. The installation completed the groundwater rebound test to determine the cleanup's effectiveness at Extraction Well 10. Sacramento AD began work plans and real estate easements to install a new off-site extraction well at the contaminated area's boundary. Sacramento AD conducted perchlorate sampling and ruled out the installation as the source of off-site contamination. The installation also completed the five-year review report and obtained regulatory concurrence. The RAB held an annual meeting.

**FY09 IRP Progress**

Sacramento AD finalized the groundwater management plan amendment and optimization report, and continued groundwater monitoring. Sacramento AD also finalized the Extraction Well 10 rehabilitation report. The installation developed appraisals, right of entry, and easements for monitoring wells and the new Berry Avenue extraction system. Sacramento AD also submitted the Berry Avenue extraction system work plan to regulators for concurrence.

Administrative issues delayed the start of a bioremediation pilot study and focused feasibility study (FS) to evaluate cleanup alternatives.

**FY09 MMRP Progress**

Sacramento AD has identified no sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP).

**Plan of Action**

Plan of action items for Sacramento Army Depot are grouped below according to program category.

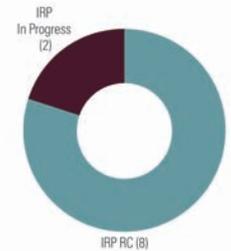
**IRP**

- Start bioremediation pilot study and focused FS in FY10.
- Finalize Berry Avenue extraction system work plan in FY10-FY11.
- Install and begin operations of the Berry Avenue extraction system and vapor extraction pilot system in FY10-FY11.
- Continue groundwater monitoring in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA917002320200	<b>Funding to Date:</b>	\$ 36.8 million
<b>Location (Size):</b>	San Diego, California (541 acres)	<b>Est. CTC (Comp Year):</b>	\$ 7.1 million (FY 2019)
<b>Mission:</b>	Provided recruit training for enlisted personnel and specialized training for officers and enlisted personnel	<b>IRP Sites (Final RIP/RC):</b>	10 (FY2019)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	Pesticides, solvents, POLs, paints, VOCs, SVOCs, metals, radioactive materials	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-8
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Prior to its closure, San Diego Naval Training Center (NTC) provided recruit training for enlisted personnel and specialized training for officers and enlisted personnel. In FY86, an initial assessment study identified 12 contaminated sites: 5 sites are being addressed under CERCLA and 7 under the underground storage tank program. Sites include a landfill and petroleum-contaminated areas. In July 1993, the BRAC Commission recommended closure of San Diego NTC and relocation of personnel, equipment, and mission support to other naval training centers. The installation closed in April 1997. Certain installation facilities and activities continued to support other Navy operations in the San Diego area. In FY99, the installation updated its BRAC cleanup plan with community input to prioritize sites requiring environmental restoration. The installation also developed a community relations plan in FY92, which was updated in FY95. In FY94, San Diego NTC established a Restoration Advisory Board (RAB) to discuss the installation’s cleanup progress with the community, and an information repository, containing the most current documents of the administrative record. The installation deactivated the RAB in 2004, but reestablished it in FY07.

To date, the installation has signed one Record of Decision (ROD) which selected cleanup actions for environmental restoration sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress for San Diego NTC for FY05 through FY08 is summarized below.

In FY05, San Diego NTC received comments from the Regional Water Quality Control Board and prepared a scope of work and preliminary cost estimates for a feasibility study (FS) to evaluate cleanup alternatives for the Boat Channel (Site 12). The installation continued to pursue an early transfer with the City of San Diego.

In FY06, San Diego NTC met with the Regional Water Quality Control Board and received comments on a final remedial investigation (RI) report, and continued early transfer discussions with the City of San Diego. The installation also awarded a contract to determine the nature and sources of

contamination at the site, and to provide an assessment of potentially responsible parties.

In FY07, San Diego NTC continued discussions with the Regional Water Quality Control Board on the final RI report, and continued to pursue an early transfer with the City of San Diego. San Diego NTC reestablished the RAB.

In FY08, San Diego NTC held discussions with the Regional Water Quality Control Board and regulators on the assessment of potential risks to the environment in the RI and viable sediment cleanup criteria. The installation began an FS to evaluate sediment cleanup alternatives for the Boat Channel (Site 12).

**FY09 IRP Progress**

San Diego NTC continued work on an FS to evaluate sediment cleanup alternatives for the Boat Channel (Site 12).

**FY09 MMRP Progress**

San Diego NTC has identified no MMRP sites.

**Plan of Action**

Plan of action items for San Diego Naval Training Center are grouped below according to program category.

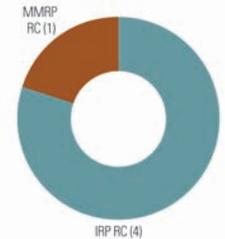
**IRP**

- Complete the FS for the Boat Channel (Site 12) and begin the proposed plan in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	IL59799F217200	<b>Funding to Date:</b>	\$ 11.3 million
<b>Location (Size):</b>	Carterville, Illinois (43,000 acres)	<b>Est. CTC (Comp Year):</b>	\$ 1.6 million (FY 2004)
<b>Mission:</b>	Manufactured and loaded ordnance for shipping	<b>IRP Sites (Final RIP/RC):</b>	4 (FY2004)
<b>HRS Score:</b>	43.70; placed on NPL in July 1987	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2003)
<b>IAG Status:</b>	IAG signed in September 1991	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Organic solvents, inorganic compounds, PAHs, PCBs, munitions, heavy metals, VOCs, explosives, SVOCs, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-8-20
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



**Progress To Date**

The former Illinois Ordnance Plant, which operated from 1942 to 1945, is located on the eastern portion of the U.S. Fish and Wildlife Service's (FWS's) Crab Orchard National Wildlife Refuge. The ordnance plant served as a manufacturing and loading site for high-explosive shells, bombs, and other weapons components. The installation initially identified 33 areas that required further investigation. The Army grouped these areas into four operable units (OUs): the Polychlorinated Biphenyls (PCBs) OU, the Metals OU, the Miscellaneous Area OU, and the Explosives and Munitions Manufacturing Area OU. The potential risk to human health and the environment was significant enough for EPA to place the property on the NPL in July 1987. DoD and EPA signed an interagency agreement (IAG) in September 1991, to outline how they were going to proceed with cleanup. The FWS established a technical working group in FY00 consisting of FWS, EPA, Illinois EPA, and the U.S. Army Corps of Engineers (USACE). To ensure continuous monitoring and improvement, USACE completed a five-year review report in FY07.

In FY96, USACE began fieldwork for the munitions and explosives of concern (MEC) engineering evaluation and cost analysis. In FY98, USACE started cleanup actions for MECs at the Explosives and Munitions Manufacturing Area OU; activities were completed in FY01. Cleanup progress for Sangamo Electric Dump/Crab Orchard National Wildlife Refuge for FY05 through FY08 is summarized below.

In FY05, USACE performed long term-management (LTM) through two rounds of groundwater monitoring in the Explosives and Munitions Manufacturing Area OU. The technical working group continued to hold meetings regarding potentially responsible parties (PRPs), who may share responsibility for environmental cleanup at this property.

In FY06, USACE continued LTM by performing two rounds of groundwater monitoring in the Explosives and Munitions Manufacturing Area OU. Based on Illinois EPA concerns, USACE installed three wells to further assist in defining the contaminated areas. USACE started preparing a draft inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP), particularly a

new land mine discovery. The technical working group continued to hold meetings regarding PRP sites.

In FY07, USACE continued LTM by performing two rounds of groundwater monitoring in the Explosives and Munitions Manufacturing Area OU. USACE also completed a five-year review report for the entire property, one cleanup project for hazardous waste, and one MMRP project. The technical working group continued to hold meetings regarding PRP sites.

In FY08, USACE continued LTM by performing two rounds of groundwater monitoring in the Explosives and Munitions Manufacturing Area OU. The technical working group continued to hold meetings regarding PRP sites.

**FY09 IRP Progress**

USACE continued LTM at the Explosives and Munitions Manufacturing Area OU. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Administrative issues between the Department of the Interior and the Department of the Army delayed completion of the PRP inventory project report.

USACE attended two technical working group meetings.

**FY09 MMRP Progress**

Administrative issues delayed the completion of the revised MMRP inventory project report and also delayed the determination of realignment applicability of the Sangamo Electric Dump and Crab Orchard National Wildlife Refuge.

**Plan of Action**

Plan of action items for Sangamo Electric Dump/Crab Orchard National Wildlife Refuge are grouped below according to program category.

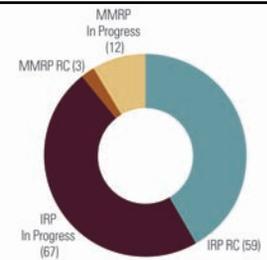
**IRP**

- Complete PRP inventory project report in FY10.
- Complete revision of plan for potentially new investigations in FY10.
- Attend both technical working group meetings in FY10.

**MMRP**

- Complete MMRP realignment process in FY10.
- Complete MMRP project revision in FY10.
- Update LTM sampling plan in FY11.

<b>FFID:</b>	IL521382080300	<b>Funding to Date:</b>	\$ 119.4 million
<b>Location (Size):</b>	Savanna, Illinois (13,062 acres)	<b>Est. CTC (Comp Year):</b>	\$ 105.2 million (FY 2045)
<b>Mission:</b>	Receive, store, and demilitarize ammunition; manufacture ammunition-specific equipment	<b>IRP Sites (Final RIP/RC):</b>	126 (FY2018)
<b>HRS Score:</b>	42.20; placed on NPL in March 1989	<b>MMRP Sites (Final RIP/RC):</b>	15 (FY2017)
<b>IAG Status:</b>	IAG signed in FY1989	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	Explosives, metals, solvents, POLs, VOCs, SVOCs, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-82
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Savanna Army Depot (AD) began operation in 1917 as the Savanna Proving Grounds. During the 1920s, the mission changed to include storage, receipt, issuance, demilitarization, and renovation of ammunition. Contaminated areas include landfills; the open burning and open detonation ground; the fire training area; and ammunition load, assemble, and pack facilities. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in March 1989. DoD and EPA signed an interagency agreement (IAG) in FY89 to outline how they were going to proceed with cleanup. In July 1995, the BRAC Commission recommended closure of the Savanna Depot Activity and relocation of the Army Defense Ammunition Center and School to McAlester Army Ammunition Plant in Oklahoma. In FY96, Savanna AD formed a BRAC cleanup team to develop a process for cleanup of sites. In FY97, the installation completed a BRAC cleanup plan to prioritize sites requiring environmental restoration, and updated it in FY04, FY05, and FY08. In FY96, Savanna AD formed a Restoration Advisory Board (RAB) to discuss the installation’s cleanup progress with the community.

To date, Savanna AD and regulators have signed one Record of Decision (ROD). The installation has also transferred approximately 4,507 acres of land. The installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Savanna AD for FY05 through FY08 is summarized below.

In FY05, Savanna AD completed remedial investigations (RIs) for three major areas of the Depot. Savanna AD awarded a performance-based contract (PBC) for nine sites. The installation also completed a report summarizing the environmental condition of transferable property and found 515 acres suitable for transfer to the local redevelopment authority. Savanna AD started the RI and feasibility study (FS) to evaluate cleanup alternatives for MMRP sites. The installation updated the BRAC cleanup plan.

In FY06, the installation awarded the PBC for Parcel 11A and found the property suitable for transfer to the local redevelopment authority. The installation also found all the

remaining local redevelopment authority properties suitable for early transfer. Savanna AD and the local redevelopment authority addressed comments from regulators to determine whether early transfer was possible. Under the MMRP, Savanna AD completed cleanup of Site 82SS; fieldwork at the Old Burning Grounds; and the munitions and explosives of concern (MEC) investigation of Zone F (local redevelopment authority [LRA] Parcel 6), the Primm’s Pond area, the River Road Strip, and the central portion of the 75-mm Graze Impact Range (E Area). Preliminary findings indicated that further cleanup was needed at the River Road Strip and Graze Impact Range. Savanna AD completed the removal action project for Sites 15/33 by sifting and treating lead-contaminated soil, debris, and small arms ammunition.

In FY07, the local redevelopment authority withdrew its request for early transfer. Savanna AD completed a report regarding the environmental condition of property for the U.S. Fish and Wildlife Service (FWS) Parcels 8A, 8C, and 9. The installation found the local redevelopment authority Parcels 6 and 15A suitable for transfer. Under the MMRP, the installation completed fieldwork for the MEC investigation at the 155-mm high explosives Impact Range, the Grenade Burial Area, and the A Area Detonation Pits. PBC contractors developed the work plan for the decontamination of explosives-contaminated buildings and submitted the plan to the DoD Explosives Safety Board for review.

In FY08, Savanna AD completed the transfer Parcels 6 and 15A to the local redevelopment authority. Savanna AD also completed several RI projects and began several FSs. The installation decontaminated 13 buildings. Under the MMRP, Savanna AD completed the MEC removal at Zone L, two soil removal actions at Sites 155 and 186, and began a follow-on MEC investigation project for additional sections of the Graze Impact Range. The installation updated the BRAC cleanup plan.

**FY09 IRP Progress**

Savanna AD transferred FWS Parcel 8A to FWS, and completed the RI fieldwork and report for Site 1. The installation completed the building decontamination project and project closeout documents for Sites 155 and 186. Savanna AD also removed 2 underground storage tanks at the depot service

station and closed 24 groundwater monitoring wells. Savanna AD completed the FS, proposed plan, and draft ROD for Sites 44 (Nitric Acid Storage Area), 111 (Outdoor Washout Plant), 192 (Manganese Ore Pile), and for 22 sites which required no further cleanup action. Additionally, the installation completed the FS for the Lower Post Groundwater and the focused FS for land use controls, which restrict use of the Plant Area.

Technical issues delayed the transfer of FWS Parcel 8C to FWS. Administrative issues delayed the transfer of FWS Parcel 9, local redevelopment authority Parcel 14, and local redevelopment authority Sewage Treatment Plant Parcel to the local redevelopment authority.

**FY09 MMRP Progress**

Savanna AD completed the Phase I MEC investigation on the Upper Function Test Range and Phase II MEC investigation of the expanded 75-mm Graze Impact Range. The installation also began the MEC investigation at Site 50.

**Plan of Action**

Plan of action items for Savanna Army Depot are grouped below according to program category.

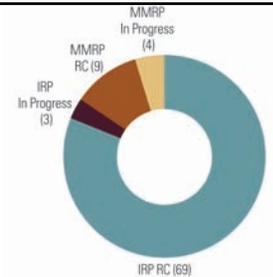
**IRP**

- Complete transfer of FWS Parcels 8C and 9, LRA Parcel 14 and LRA Sewage Treatment Plant Parcel in FY10.
- Complete fieldwork on Sites 111 and 192 in FY10-FY11.
- Begin the RI on Site 226, J-609 (Open Burn Area) in FY10-FY11.
- Begin the removal action at the Cosmoline Burial Pits in FY10-FY11.

**MMRP**

- Complete the MEC investigation for the Site 29 90-mm Case Test Area in FY10-FY11.

<b>FFID:</b>	NY221382083000	<b>Funding to Date:</b>	\$ 103.5 million
<b>Location (Size):</b>	Romulus, New York (10,594 acres)	<b>Est. CTC (Comp Year):</b>	\$ 29.0 million (FY 2022)
<b>Mission:</b>	Received, stored, distributed, maintained, and demilitarized conventional ammunition, explosives, and special weapons	<b>IRP Sites (Final RIP/RC):</b>	72 (FY2010)
<b>HRS Score:</b>	37.30; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	13 (FY2013)
<b>IAG Status:</b>	FFA signed in January 1993	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Heavy metals, radioactive isotopes, petroleum hydrocarbons, VOCs, SVOCs, chlorinated solvents, radioactive materials	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-124
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

During its operation, Seneca Army Depot (AD) stored munitions and supplies, and distributed them to the Army. The installation's operations included demilitarization and disposal of munitions and explosives of concern. Since FY78, environmental studies identified the following sites or site types: an open burning ground, an ash landfill, other landfills, low-level radioactive waste burial grounds, underground storage tanks, spill areas, fire training areas, and munitions disposal areas. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed a federal facility agreement (FFA) in January 1993 to outline how they were going to proceed with cleanup. In July 1995, the BRAC Commission recommended closing Seneca AD, except for an enclave to store hazardous materials and ores. In FY96, the installation established a BRAC cleanup team to develop a process for cleanup at Seneca AD. In September 2000, the installation closed. In FY96, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB). The community formed a local reuse authority and began developing a land reuse plan.

To date, Seneca AD has transferred 9,808 acres, including 6,981 acres of MMRP sites. The installation has signed 14 Records of Decision (RODs), selecting cleanup actions at 65 areas of concern. The installation also has signed a ROD requiring no further cleanup actions at 22 sites. In FY94, the installation completed a solid waste management classification study, identifying 72 solid waste management units. Thirty-six units required no further cleanup action or completion reports, 8 required removal actions, and 28 required remedial investigations and feasibility studies, to evaluate cleanup alternatives. The installation also achieved RCRA closure at two sites. In FY03, Seneca AD completed an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. The installation has completed cleanup at nine MMRP sites. Cleanup progress at Seneca AD for FY05 through FY08 is summarized below.

In FY05, Seneca AD completed one ROD and transferred 967 acres of property. The installation developed a second ROD

that addressed 14 sites. The installation also completed three interim cleanup actions and began a cleanup project that used mulch to treat groundwater contaminated with trichloroethylene (TCE). Seneca AD completed a site inspection and began interim cleanup actions at three MMRP sites. The RAB met quarterly.

In FY06, Seneca AD awarded a performance-based contract to complete construction of cleanup systems and to complete cleanup at six sites. Seneca AD completed cleanup at two sites. The installation also completed a ROD for four sites, including two sites with munitions and CERCLA hazardous substances. The installation addressed concern about residual chemical contamination at three MMRP sites. The RAB met quarterly.

In FY07, Seneca AD completed cleanup at two sites and an interim cleanup action at one site. The installation completed a ROD for 17 sites. Seneca AD also completed interim cleanup actions and prepared closeout documents for three MMRP sites. The installation prepared a ROD for MMRP sites with CERCLA hazardous substances.

In FY08, Seneca AD completed the deed transfer and associated environmental easement of 967 acres. The installation signed two RODs for four sites and completed cleanup at two of these sites. Seneca AD completed cleanup and began long-term management (LTM) at two MMRP sites. The RAB met quarterly.

**FY09 IRP Progress**

Seneca AD completed the ROD for Sites 1, 2, 5, 24, 48, and the design for cleanup at Sites 1, 2, and 5. The installation also completed cleanup actions at Sites 4, 5, and 38. Sites 4 and 38 were combined for tracking purposes. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical issues delayed completion of the ROD and the cleanup for Site 12. Contractual issues delayed site closure at Sites 11, 24, 48, and 59. Administrative issues delayed completing cleanup actions at Site 70.

The RAB continued to meet quarterly.

**FY09 MMRP Progress**

Seneca AD reevaluated cost and methodology for the planned removal action at Site 6 R. The installation continued LTM at Site 1 R (formerly Site 16 which was combined with Site 17).

Regulatory issues delayed completion of the ROD for Sites 2 R, 3 R, and 7 R.

**Plan of Action**

Plan of action items for Seneca Army Depot are grouped below according to program category.

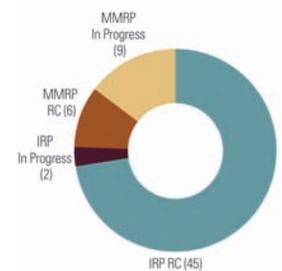
**IRP**

- Complete ROD and cleanup actions for Site 12 in FY10.
- Perform cleanup actions at Sites 6 and 25 in FY10.
- Perform annual monitoring of land use controls, which restrict use of and access to the Industrial Area, in FY10.
- Close Sites 11, 24, 48, and 59 in FY10.
- Complete cleanup actions at Site 70 in FY10.
- Complete the five-year review report in FY11.

**MMRP**

- Complete ROD for Sites 2 R, 3 R, and 7 R in FY10.
- Begin the three-year removal action at Site 6 R in FY10.
- Continue LTM at Site 1 R in FY10.
- Address regulatory concern over residual risk at MMRP sites in FY10-FY11.

<b>FFID:</b>	CA921382084300	<b>Media Affected:</b>	Groundwater, Sediment, Soil
<b>Location (Size):</b>	Herlong, California (37,977 acres)	<b>Funding to Date:</b>	\$ 89.4 million
<b>Mission:</b>	Provide world-wide expeditionary logistics support for the defenders of our Nation through: Long-term Storage, Maintenance, Care of Supplies in Storage Reset, and Container management, while embracing the Army values	<b>Est. CTC (Comp Year):</b>	\$ 96.8 million (FY 2017)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	47 (FY2011)
<b>IAG Status:</b>	FFA signed in May 1991	<b>MMRP Sites (Final RIP/RC):</b>	15 (FY2017)
<b>Contaminants:</b>	Petroleum products, solvents, explosives, metals, VOCs	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-20



**Progress To Date**

Sierra Army Depot (AD) provides logistics support, long-term storage, and maintenance. The mission resulted in contamination from burn trenches, explosives leaching beds, landfills, burial sites, spill sites, sewage lines, underground storage tanks, sumps, and fire training areas. Primary contaminants in soil and groundwater include trichloroethylene (TCE), petroleum products, and explosives. DoD and EPA signed a federal facility agreement (FFA) in May 1991 to outline how they were going to proceed with cleanup. The 1995 BRAC Commission recommended realignment of Sierra AD; the 2005 BRAC Commission recommended further realignment of Sierra AD. In FY96, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. In FY97, the installation published the BRAC cleanup plan to prioritize sites requiring environmental restoration. The installation established a Restoration Advisory Board (RAB) to discuss cleanup progress with the community in FY97. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY02 and FY07.

To date, Sierra AD has completed Records of Decision (RODs), selecting cleanup actions for 22 sites; 12 require no further cleanup action. Ongoing operations include groundwater treatment at four sites (two sites operate with pilot systems) and a soil vapor extraction system (SVE) at the Defense Reutilization and Marketing Office (DRMO) Trench Area. The installation has transferred approximately 62,636 acres. Sierra AD conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Sierra AD for FY05 through FY08 is summarized below.

In FY05, Sierra AD signed a ROD for the Upper Burning Grounds, Old Popping Furnace, and Building 79 Yard. The installation injected biological enhancements to treat groundwater at four sites. Sierra AD completed the Honey Lake Demolition Area engineering evaluation and cost analysis, and the cleanup at the East Shore area. The pump-and-treat system and the SVE system continued operations. Under the MMRP, Sierra AD completed the site inspection (SI) for all inactive sites, with the exception of the recently identified Upper

Burning Grounds Area. The installation also transferred the remaining 136 acres, and renewed its RAB charter.

In FY06, Sierra AD constructed two corrective action management units at Hansen’s Hole and the Old Popping Furnace. The installation conducted enhanced reductive dechlorination, which degrades contaminants by injecting carbon into groundwater, at four sites and continued SVE. Sierra AD completed a soil removal action at Building 79, continued cleanup using natural processes at the TNT area, and received regulatory approval of the cleanup plan for the Honey Lake Demolition Range. The installation completed the SI for seven active MMRP sites, two of which required no further cleanup action.

In FY07, Sierra AD continued SVE and completed a five-year review report for DRMO. Sierra AD completed a feasibility study (FS) to evaluate cleanup alternatives at the Abandoned Landfill, and issued a proposed plan for public comment. The installation constructed and began operating a pilot SVE system at Building 210. Sierra AD continued enhanced reductive dechlorination efforts at four sites. Under the MMRP, the installation conducted an SI at the Upper Burning Grounds Area. Based on a review of historical records, Sierra AD added and then inspected two MMRP sites.

In FY08, Sierra AD continued SVE. The installation completed the ROD, installed cleanup systems, and completed cleanup at the Abandoned Landfill. The installation continued enhanced reductive dechlorination efforts at four sites. Under the MMRP, Sierra AD addressed munitions contamination at the Upper Burning Grounds and two new sites, and completed the final SI report for these sites. The installation implemented institutional controls, which minimized the potential for human exposure, on the BRAC Dry Lake Area of Honey Lake.

**FY09 IRP Progress**

Sierra Army Depot continued enhanced reductive dechlorination. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Regulatory issues delayed completion of the ROD for Building 210.

**FY09 MMRP Progress**

Sierra AD developed a work plan for the Upper Burning Grounds, Stacy Sites, and Bureau of Land Management Sites. The installation completed additional investigative efforts at Upper Burning Grounds. Due to harsh geographic terrain, Sierra AD ended the pilot project to determine the feasibility of mechanical removal of munitions and explosives of concern.

**Plan of Action**

Plan of action items for Sierra Army Depot are grouped below according to program category.

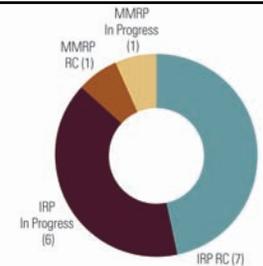
**IRP**

- Complete the ROD for the off-site Building 210 in FY10.
- Continue enhanced reductive dechlorination at four sites in FY10-FY11.
- Install on- and off-site groundwater treatment system in FY10-FY11.

**MMRP**

- Prepare contracts to cleanup eight MMRP sites in FY10-FY11.
- Gain regulatory approval of work plan for the Upper Burning Grounds in FY10-FY11.

<b>FFID:</b>	MA117002202200	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Weymouth, Massachusetts (2,094 acres)	<b>Funding to Date:</b>	\$ 59.7 million
<b>Mission:</b>	Provided logistical support for Reserve units and the Marine Air Reserve Training Detachment South Weymouth	<b>Est. CTC (Comp Year):</b>	\$ 26.2 million (FY 2039)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>IRP Sites (Final RIP/RC):</b>	13 (FY2013)
<b>IAG Status:</b>	FFA signed in November 1999	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2008)
<b>Contaminants:</b>	UXO, VOCs, SVOCs, hydrocarbons, industrial wastes, solvents, petroleum, acids, paints, metals, photographic chemicals, explosives and propellants	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-100



**Progress To Date**

Prior to closure, South Weymouth Naval Air Station (NAS) provided logistical support for reserve units and the Marine Air Reserve Training Detachment South Weymouth. Prominent contaminated site types include landfills, underground storage tanks, a tank farm storing jet fuel, sewage treatment facilities, a rubble disposal area, and a fire training area. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1994. DoD and EPA signed a federal facility agreement (FFA) in April 2000 to outline how they were going to proceed with cleanup. In July 1995, the BRAC Commission recommended closure of the South Weymouth NAS. The installation formed a BRAC cleanup team in FY92 to develop a process for cleanup of sites. Operations transferred to Brunswick NAS, and the installation closed in September 1997. Formed in FY92, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY94. In FY92, South Weymouth NAS established an administrative record and four information repositories, and also completed its community relations plan, which was updated in August 1998. The RAB received a technical assistance for public participation grant in FY99.

The installation has completed Records of Decision (RODs) selecting cleanup actions for Sites 1 through 5, 7, and 8, and Areas of Concern (AOCs) 4A, 8, 53, and 55D. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at South Weymouth NAS for FY05 through FY08 is summarized below.

In FY05, South Weymouth NAS collected supplemental groundwater data for the Site 5 proposed plan (PP), which determined that no further cleanup actions were necessary. The installation completed a revised reuse plan, which the local redevelopment authority and affected communities adopted. The State of Massachusetts issued corrective action demands for Sites 3 and 4, and the installation began cleanup efforts. South Weymouth NAS submitted a revised draft final PP for Site 1 after approval of the revised reuse plan.

In FY06, South Weymouth NAS signed the Site 5 ROD, and completed cleanup at Site 2. The installation issued the draft final feasibility study (FS), which evaluated cleanup alternatives for Site 7. Additionally, South Weymouth NAS began the design for cleanup for Site 3 and completed the required state regulation cleanup at Site 4. Under the MMRP, the installation completed a removal action for Unexploded Ordnance (UXO) 1.

In FY07, South Weymouth NAS finalized the PP and signed the ROD for Site 1. The installation also finalized the FS and PP for Site 7.

In FY08, South Weymouth NAS completed RODs for Site 7 and AOCs 4A, 8, 53, and 55D. Under the MMRP, South Weymouth NAS completed the UXO surface clearance of all beaches and accessible areas. The installation held seven RAB meetings, and the BRAC cleanup team met bimonthly to expedite closeout.

**FY09 IRP Progress**

South Weymouth NAS began a design for cleanup for Site 1. The cost of completing environmental restoration has changed significantly due to technical issues.

Technical issues delayed the completion of a design for cleanup for Site 1, and remedial investigation (RI) /FSs for Sites 9, 10, and 11. Administrative issues delayed completion of the design for cleanup for Site 3.

**FY09 MMRP Progress**

South Weymouth NAS issued the draft FS for UXO 1 for comment.

Administrative issues delayed the completion of the FS, PP and ROD for UXO 1. Technical issues delayed the implementation of land use controls (LUCs) for UXO 1, which restrict use of access to the site.

**Plan of Action**

Plan of action items for South Weymouth Naval Air Station are grouped below according to program category.

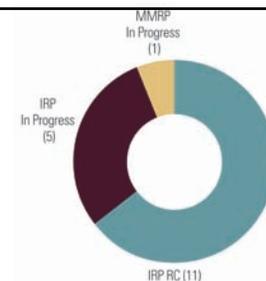
**IRP**

- Complete supplemental investigations for Sites 9, 10, and 11, and issue final RI/FSs in FY10.
- Complete design for cleanup for Sites 1 and 3 in FY10.
- Complete RODs and decision documents for one AOC and six review item areas in FY10-FY11.
- Complete cleanup actions at Site 1 in FY10-FY11.

**MMRP**

- Complete the FS, PP, and ROD for UXO 1 in FY10.
- Implement LUCs for UXO 1 in FY10.

<b>FFID:</b>	VA317002758100	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Chesapeake, Virginia (490 acres)	<b>Funding to Date:</b>	\$ 19.7 million
<b>Mission:</b>	Provide radar testing range and various administrative and warehousing facilities for the nearby Norfolk Naval Shipyard and other local Navy activities	<b>Est. CTC (Comp Year):</b>	\$ 14.3 million (FY 2039)
<b>HRS Score:</b>	50.0; placed on NPL in August 2000	<b>IRP Sites (Final RIP/RC):</b>	16 (FY2016)
<b>IAG Status:</b>	FFA signed in July 2004	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2010)
<b>Contaminants:</b>	Pesticides, heavy metals, SVOCs, solvents, explosives, VOCs, propellants, radioactive materials	<b>Five-Year Review Status:</b>	Underway
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-174



**Progress To Date**

The St. Juliens Creek Annex has been used since 1849 for storing, loading, assembling, issuing, and receiving naval ammunition. Currently, St. Juliens Creek Annex provides a radar testing range and various administrative and warehousing facilities for the nearby Norfolk Naval Shipyard and other local Navy activities. Contamination resulted from past handling of and operations involving hazardous materials. The initial assessment study revealed low concentrations of ordnance materials throughout the installation. The potential risk to human health and the environment was significant enough for EPA to place the facility on the NPL in August 2000. In 2004, DoD and EPA signed a federal facility agreement (FFA) to outline how they were going to proceed with cleanup. The installation established an administrative record in FY99, formed a Restoration Advisory Board in FY00 to discuss cleanup progress with the community, and completed a community relations plan in FY01.

The installation has completed a Record of Decision (ROD) for Site 6 in FY03, Site 4 in FY04, and Site 3 in FY06, which selected cleanup actions for these sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at St. Juliens Creek Annex for FY05 through FY08 is summarized below.

In FY05, the installation completed the final proposed cleanup plan and draft ROD for Site 3. The installation also completed the final specifications, work plan, basis of design, and construction of the soil cover for Site 4. St. Juliens Creek Annex completed the final supplemental site inspection (SI) report for Site 19. St. Juliens Creek Annex also conducted the SI screening and completed a work plan for additional groundwater delineation activities at Site 21. The installation awarded a contract for removal actions at highly contaminated areas, finalized the contaminated source document for the southern branch of the Elizabeth River watershed, and implemented engineering controls at various Installation Restoration Program (IRP) sites. The installation developed a draft community relations plan.

In FY06, St. Juliens Creek Annex completed cleanup actions, a cleanup completion report, a groundwater monitoring plan, and designed a land use control, which will restrict access to Site 4. The installation completed a final expanded remedial investigation (RI) for Site 5 and a ROD for Site 3. Additionally, St. Juliens Creek Annex completed a final engineering evaluation and cost analysis, action memorandum, interim cleanup action, and construction closeout report at Site 19.

In FY07, St. Juliens Creek Annex implemented a Triad approach at Site 2 to fully delineate the contamination. The installation also completed the Site 19 closeout report, and an additional investigation at Site 21 which completely separated the contaminated groundwater and its impact on the stormwater sewer system.

In FY08, St. Juliens Creek Annex completed the draft expanded RI report for Site 2, the final RI report and draft feasibility study (FS) to evaluate cleanup alternatives for Site 21, and the explosive safety submission and assessment of potential risks to human health for Site 5. The installation also began an Environmental Security Technology Certification Program pilot study at Site 21, and a removal action at Site 5. Under the MMRP, St. Juliens Creek Annex identified one site, Unexploded Ordnance (UXO) 001, and awarded a contract for its preliminary assessment (PA).

**FY09 IRP Progress**

St. Juliens Creek Annex completed the final expanded RI and draft FS for Site 2. The installation also completed an FS, proposed cleanup plan, and draft ROD for Site 21 interim groundwater cleanup. St. Juliens Creek Annex completed a two-year voluntary groundwater monitoring program for Site 4, and agreed to an additional monitoring event to track trends. The cost of completing environmental restoration has changed significantly due to technical issues.

Technical issues delayed completion of the final FS and proposed cleanup plan for Site 2. Regulatory issues delayed completion of the final ROD for Site 21 interim groundwater cleanup. Technical issues delayed completion of the interim cleanup action for Site 5.

**FY09 MMRP Progress**

St. Juliens Creek Annex completed the PA for UXO 001.

**Plan of Action**

Plan of action items for St. Juliens Creek Annex are grouped below according to program category.

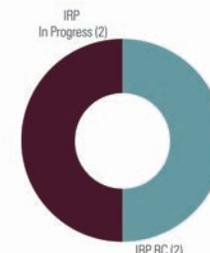
**IRP**

- Complete a five-year review report in FY10.
- Complete FS, proposed cleanup plan, and ROD for Site 2 in FY10.
- Complete interim cleanup action and proposed cleanup plan for Site 5 in FY10.
- Complete ROD and design for cleanup for Site 21 interim groundwater in FY10.

**MMRP**

- Complete SI for UXO 001 in FY10.

<b>FFID:</b>	CT121382292400	<b>Funding to Date:</b>	\$ 18.6 million
<b>Location (Size):</b>	Stratford, Connecticut (77 acres)	<b>Est. CTC (Comp Year):</b>	\$ 30.7 million (FY 2020)
<b>Mission:</b>	Manufactured engines for heavy armor vehicles and rotary wing aircraft	<b>IRP Sites (Final RIP/RC):</b>	4 (FY2020)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	PCBs, asbestos, fuel-related VOCs, solvents, metals, PAHs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-50
<b>Media Affected:</b>	Groundwater, Sediment, Soil		



**Progress To Date**

Stratford Army Engine Plant formerly manufactured engines. Contaminated site types at the installation include transformers, underground storage tanks, sludge lagoons, a fire training and explosives equipment testing area, hazardous materials and hazardous waste storage areas, and buildings constructed with material containing asbestos. Studies show that contaminants include polychlorinated biphenyls (PCBs), fuel-related volatile organic compounds (VOCs), solvents, metals, polyaromatic hydrocarbons (PAHs), and asbestos. In July 1995, the BRAC Commission recommended closure of the Stratford Army Engine Plant, and it closed in 1998. In FY96, the installation formed a BRAC cleanup team to develop a process for cleanup of sites at Stratford Army Engine Plant. The installation drafted a BRAC cleanup plan to prioritize sites requiring environmental restoration, and updated the plan in FY97 and FY99. In FY96, the installation formed a Restoration Advisory Board to discuss the installation's cleanup progress with the community. The community formed a local redevelopment authority to address socioeconomic issues related to the closure of the installation, and to develop a land reuse plan. Stratford Army Engine Plant also implemented a community relations plan, which included the establishment of an on-site public information repository.

Interim cleanup actions at the installation required the removal of 27 underground storage tanks, the capping of 3 sludge lagoons, and the removal of chromium-contaminated soil. In FY02, Stratford Army Engine Plant conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Stratford Army Engine Plant for FY05 through FY08 is summarized below.

In FY05, the installation submitted the draft feasibility study (FS) and the proposed plan (PP), which outlined cleanup alternatives to address the potential risks associated with soil, soil vapor, and groundwater contamination.

In FY06, Stratford Army Engine Plant addressed comments from regulators on the FS and PP. The installation also addressed regulatory concerns regarding the assessment of potential risks to the environment documented in the remedial investigation (RI).

In FY07, Stratford Army Engine Plant began the process to transition to the private ownership of Hollywood East.

In FY08, Stratford Army Engine Plant continued the process of transitioning to private ownership. The installation updated and reapplied for the Coastal Zone Management Act determination, and completed a full property survey.

**FY09 IRP Progress**

Stratford Army Engine Plant completed the RI/FS. To facilitate property transfer, the installation entered into a RCRA stewardship permit agreement with the Connecticut Department of Environmental Protection. This agreement sets basic goals and the overall schedule for cleanup, and is transferable to the new owner (Hollywood East).

Administrative issues delayed completion of the PP and the Record of Decision (ROD), which will select cleanup actions for the remaining sites.

**FY09 MMRP Progress**

Stratford Army Engine Plant has identified no MMRP sites.

**Plan of Action**

Plan of action items for Stratford Army Engine Plant are grouped below according to program category.

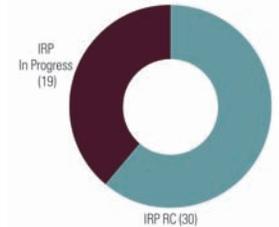
**IRP**

- Complete the PP and the ROD in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	OK657172439100	<b>Est. CTC (Comp Year):</b>	\$ 46.7 million (FY 2023)
<b>Location (Size):</b>	Oklahoma City, Oklahoma (5,041 acres)	<b>IRP Sites (Final RIP/RC):</b>	49 (FY2008)
<b>Mission:</b>	Repair aircraft, weapons, and engines	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	42.24; placed on NPL in July 1987	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in December 1988	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-138
<b>Contaminants:</b>	Organic solvents, heavy metals, petroleum, VOCs, SVOCs		
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		
<b>Funding to Date:</b>	\$ 222.2 million		



## Progress To Date

The mission of Tinker Air Force Base (AFB) is to repair aircraft, weapons, and engines. Environmental studies at Tinker AFB revealed a 220-acre contaminated area in the upper aquifer at Soldier Creek and Building 3001. Additional sites at Tinker AFB include landfills, underground storage tanks (USTs), waste pits, fire training areas, spill sites, and low-level radioactive waste sites. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. The NPL designation consists of the Building 3001 and Soldier Creek sites. DoD and EPA signed a federal facility agreement (FFA) in December 1988 to outline how they would proceed with cleanup. In 2005, the BRAC Commission recommended Tinker AFB for realignment. The installation formed a Restoration Advisory Board in FY94 to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, Tinker AFB completed five-year review reports in FY99, FY03, and FY07.

To date, the installation has signed Records of Decision (RODs) which selected cleanup actions for Building 3001 and Soldier Creek. In FY05, the Air Force conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Tinker AFB for FY05 through FY08 is summarized below.

In FY05, Tinker AFB completed a Decision Document (DD), which selected the cleanup action at Storage Tank (ST) site 08 (four fuel sites). Tinker AFB also completed cleanup at ST 08. The installation required no further construction of cleanup systems at Groundwater Contamination (CG) site 38.

In FY06, Tinker AFB completed the study phases and DDs, and required no further construction of cleanup systems at the East Groundwater Management Unit (CG 39) and the Gator Facility Groundwater Management Unit (CG 40).

In FY07, Tinker AFB signed a ROD for the Soldier Creek off-base Groundwater Other (OT) site 05 and Operable Unit (OU) 03 and completed its third five-year review report for Building 3001 and Soldier Creek. The installation began an MMRP preliminary assessment (PA).

In FY08, Tinker AFB completed a corrective measures study and DD for Industrial Waste Pit (WP) 1 (WP 18). The installation completed all remaining study phases and DDs, and required no further construction of cleanup systems at all 40 Installation Restoration Program (IRP) sites. The installation completed the MMRP PA; no sites were identified.

## FY09 IRP Progress

Tinker AFB continued operating and maintaining active recovery systems. The installation also continued sampling and analyzing cleanup systems using natural processes. Tinker AFB optimized all installed and operational cleanup systems and successfully operated and maintained all cleanup actions in accordance with RODs and DDs. The installation contracted a new feasibility study to evaluate options to address contamination at the NPL site. The cost of completing environmental restoration has changed significantly due to technical issues.

## FY09 MMRP Progress

Tinker AFB completed the modified PA and recommended five sites for inspection. The Air Force is reviewing its inventory of sites known or suspected of containing munitions for the MMRP.

## Plan of Action

Plan of action items for Tinker Air Force Base are grouped below according to program category.

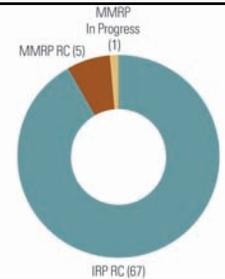
### IRP

- Continue operating and maintaining active recovery systems in FY10.
- Continue optimizing all active cleanup systems in FY10.
- Update Building 3001 contaminated area status and risk assessment for the amended ROD in FY10.

### MMRP

- Complete site inspections for five sites in FY10.

<b>FFID:</b>	PA321382089200	<b>Funding to Date:</b>	\$ 18.1 million
<b>Location (Size):</b>	Tobyhanna, Pennsylvania (1,296 acres)	<b>Est. CTC (Comp Year):</b>	\$ 2.0 million (FY 2011)
<b>Mission:</b>	Provide logistics for communications and electronics equipment	<b>IRP Sites (Final RIP/RC):</b>	67 (FY2005)
<b>HRS Score:</b>	37.93; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	6 (FY2011)
<b>IAG Status:</b>	IAG signed in September 1990	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Heavy metals, solvents, VOCs, PCBs, POLs, UXO	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-46
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Tobyhanna Army Depot (AD) provides support for communications and electronics equipment. Identified contaminated sites include landfills, a disposal pit, underground storage tanks, burn areas, drum staging areas, a surface disposal area, a waste treatment plant, a spill site area, an unexploded ordnance (UXO) area, and a fire fighting training area. Contamination at these sites has included volatile organic compounds (VOCs), solvents, and heavy metals in groundwater; solvents, metals, polychlorinated biphenyls (PCBs), and petroleum/oil/lubricants (POLs) in surface water and sediment; and solvents, metals, PCBs, POLs, and UXO in soil. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in August 1990. DoD and EPA signed an interagency agreement (IAG) in September 1990 to outline how they were going to proceed with cleanup. The 2005 BRAC commission recommended Tobyhanna AD for realignment. In FY95, the installation formed a Restoration Advisory Board to discuss cleanup progress with the community and, in FY98, the installation completed a community relations plan. To ensure continuous monitoring and improvement, Tobyhanna AD completed five-year review reports in FY02 and FY07.

Environmental studies beginning in FY80 have identified 65 areas of concern (AOCs) covering the entire installation; EPA partially delisted 62 of the AOCs from the NPL in FY01. Tobyhanna AD has completed six Records of Decision, which selected cleanup actions for environmental restoration sites. In FY02, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Tobyhanna AD from FY05 through FY08 is summarized below.

In FY05, Tobyhanna AD issued the final site inspection (SI) report under the MMRP. Based on the recommendations in the SI report, the installation fenced off an additional 45 acres to control access to OU 4, and repaired the existing UXO fence.

In FY06, Tobyhanna AD continued to control access to OU 4 by maintaining the UXO fence and warning signs.

In FY07, Tobyhanna AD completed a five-year review report. The installation also continued to control access to OU 4 by maintaining the UXO fence and warning signs.

In FY08, Tobyhanna AD continued to control access to OU 4 by maintaining the UXO fence and warning signs. The installation began removing UXO on 29 acres based on recommendations from the BRAC 2005 realignment.

**FY09 IRP Progress**

Tobyhanna AD completed long-term groundwater monitoring at OUs 1, 5, and Area U, and began developing work plans for off-post sampling for vapor intrusion due to contaminated groundwater and soil. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Tobyhanna AD completed a UXO removal action on 27 acres based on the recommendations from the BRAC 2005 realignment. The installation continued to maintain UXO fence and warning signs, and continued to control access to OU 4. Tobyhanna AD also began the remedial investigation for the UXO removal action in support of a main gate expansion project.

**Plan of Action**

Plan of action items for Tobyhanna Army Depot are grouped below according to program category.

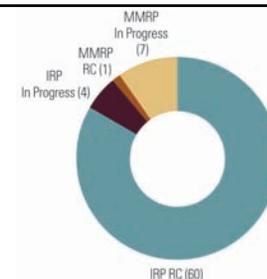
**IRP**

- Continue long-term groundwater monitoring at OUs 1, 5, and Area U in FY10.
- Complete off- post residential sampling for vapor intrusion and investigative study in FY10-FY11.

**MMRP**

- Begin UXO removal action to support main gate expansion project in FY10.
- Continue UXO removal action in support of the BRAC 2005 realignment in FY10-FY11.
- Continue to control access to OU 4 by maintaining UXO fence and warning signs in FY10-FY11.

<b>FFID:</b>	UT821382089400	<b>Funding to Date:</b>	\$ 126.2 million
<b>Location (Size):</b>	Tooele, Utah (24,732 acres)	<b>Est. CTC (Comp Year):</b>	\$ 37.7 million (FY 2016)
<b>Mission:</b>	Store and demilitarize munitions	<b>IRP Sites (Final RIP/RC):</b>	64 (FY2010)
<b>HRS Score:</b>	53.95; placed on NPL in August 1990	<b>MMRP Sites (Final RIP/RC):</b>	8 (FY2016)
<b>IAG Status:</b>	FFA signed in September 1991	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Metals, VOCs, SVOCs, propellants, explosives, petroleum hydrocarbons, PCBs, solvents	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-168
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Tooele Army Depot (AD) stores and demilitarizes munitions. Identified sites at Tooele AD include open burning and open detonation areas, ammunition demilitarization facilities, landfills, firing ranges, industrial sites, underground storage tanks, surface impoundments, and drain fields. Organic solvents and metals are the primary site contaminants. The potential risk to human health and the environment was significant enough for EPA to place Tooele AD on the NPL in August 1990. The Army and EPA signed a federal facility agreement (FFA) in September 1991 to outline how they were going to proceed with cleanup. The CERCLA FFA and a RCRA corrective action permit currently regulate Tooele AD's environmental restoration program. In 1993, the BRAC Commission recommended realignment of the Tooele AD maintenance missions with the installation retaining its conventional ammunition storage and demilitarization mission. During FY94, the installation formed a BRAC cleanup team and a Restoration Advisory Board to discuss the installation's cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed a five-year review report for all sites in FY02.

To date, Tooele AD has completed four Records of Decision (RODs), which selected cleanup actions at seven operable units (OUs). The installation transferred 41 acres to the Tooele City Redevelopment Agency in FY96 and the remaining BRAC property (1,663 acres) in FY99. Tooele AD retained 23,610 acres for the conventional ammunition mission. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); seven sites were identified in the active portion of this installation. Cleanup progress at Tooele AD for FY05 through FY08 is summarized below.

In FY05, Tooele AD consolidated and capped lead-contaminated soil at the former Bomb Washout Facility, Solid Waste Management Unit (SWMU) 42, to complete cleanup action at the site. The installation also completed corrective measures consisting of soil and vegetation improvements at the former Sanitary Landfill, SWMUs 12 and 15. Tooele AD completed a soil cleanup project at the former Small Arms Firing Range.

In FY06, Tooele AD completed an evaluation of cleanup alternatives for addressing lead-contaminated soil at SWMU 6 and submitted the proposal for regulatory review. Under the MMRP, the installation completed a historical records review and prepared a project work plan for conducting a site inspection (SI).

In FY07, Tooele AD completed site recharacterization and reevaluation of the proposed cleanup at SWMU 56 and received regulatory approval. The installation completed fieldwork for the evaluation of groundwater cleanup actions at SWMU 2, and field activities as required by the RCRA facility investigation at SWMU 58. The installation also completed construction of the soil composting facilities. Tooele AD completed MMRP SI field activities for identified MMRP sites, prepared a draft SI report on findings, and presented it to the program stakeholders for review and comment.

In FY08, Tooele AD signed the ROD for OU 9, implemented corrective measures at SWMU 56, and gained approval of the site completion report. The installation completed site characterization and started evaluations of potential cleanup at SWMU 58. Tooele AD continued operation of the soil composting process at SWMU 10 and completed interim cleanup actions at SWMU 23 (OU 9). Tooele AD also finalized the MMRP SI report and obtained stakeholder approval. The installation also moved SWMU 6 from the Installation Restoration Program (IRP) to the MMRP to address munitions and explosives of concern and soil contamination concurrently.

**FY09 IRP Progress**

Tooele AD completed composting explosives-contaminated soil at SWMU 10. The installation started source area cleanup to remove vapor contaminants from the soil at SWMU 58. The installation also started a corrective measures study for groundwater contamination at SWMUs 2 and 58. The cost of completing environmental restoration has changed significantly due to technical issues and changes in estimating criteria.

**FY09 MMRP Progress**

Tooele AD awarded a contract to conduct remedial investigations (RIs) at six sites and remove lead-contaminated soils at the Old Burn Area (formerly SWMU 6).

**Plan of Action**

Plan of action items for Tooele Army Depot are grouped below according to program category.

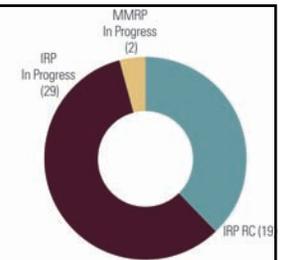
**IRP**

- Complete implementation of source area cleanup actions at SWMU 58 in FY10.
- Complete implementation of cleanup actions for groundwater contamination at SWMUs 2 and 58 in FY10.

**MMRP**

- Complete removal of lead-contaminated soil from the Old Burn Area (formerly SWMU 6) in FY10.
- Complete RIs at six sites in FY11.

<b>FFID:</b>	CA957182457500	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Solano County, California (6,383 acres)	<b>Funding to Date:</b>	\$ 114.0 million
<b>Mission:</b>	Provide air refueling and strategic airlift services	<b>Est. CTC (Comp Year):</b>	\$ 40.2 million (FY 2036)
<b>HRS Score:</b>	29.49; placed on NPL in November 1989	<b>IRP Sites (Final RIP/RC):</b>	48 (FY2011)
<b>IAG Status:</b>	FFA signed in September 1990; amended May 1993, October 1995, July 1996, November 1997, July 1998, December 2003, February 2005	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2014)
<b>Contaminants:</b>	VOCs, heavy metals, POLs, PAHs, SVOCs, TCE, solvents, pesticides, PCBs, BTEX	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-31



**Progress To Date**

Travis Air Force Base (AFB) was established in 1943. Contaminated sites include old landfills (LFs), a closed sewage treatment plant, four fire training (FT) areas, a cyanide disposal pit, solvent spill areas, a storm sewage drainage system, a pesticide disposal site, and a low-level radioactive waste burial site. Past activities at the installation resulted in the release of metals, pesticides, fuels, solvents, and petroleum/oils/lubricants (POLs), which migrated into the soil, sediment, surface water, and groundwater. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in November 1989. DoD and EPA signed a federal facility agreement (FFA) in September 1990, which was last updated in February 2005, to outline how Travis AFB was going to proceed with cleanup. In FY95, the installation formed a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. The installation received funding for technical assistance for public participation in FY99. To ensure continuous monitoring and improvement, Travis AFB completed five-year review reports in FY03 and FY08.

Cleanup activities at the installation were initially divided into four operable units (OUs), but were later regrouped by similar contaminants into two OUs. Travis AFB signed two interim Records of Decision (RODs) in 1997 and 1999, which selected interim groundwater cleanup actions for the two OUs. In addition, the installation signed a ROD in 2002 for soil cleanup at the West/Annexes/Basewide OU. Travis AFB also signed a ROD in 2006 for the North, East, and West Industrial OU and for soil, sediment, and surface water cleanup. The installation has completed all cleanup actions for soil sites in the West/Annexes/Basewide OU. In FY05, Travis AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Travis AFB for FY05 through FY08 is summarized below.

In FY05, Travis AFB completed the risk assessment for the North, East, and West Industrial OU sites and proposed cleanup actions for soil, sediment, and surface water. The installation held a public meeting to discuss regulatory agency comments on the proposed groundwater cleanup actions for the two OUs. The installation completed a draft final design for

cleanup at one North, East, and West Industrial OU soil site and awarded a contract for cleanup at five North, East, and West Industrial OU soil sites (Sediment [SD] Site 001, FT 003, FT 005, LF 007, and SD 033). Travis AFB began a preliminary assessment (PA) of the MMRP site. The installation held a public tour of on-base sites, and the RAB voted to meet twice per year based on the installation's cleanup progress.

In FY06, the installation signed a ROD for the North, East, and West Industrial OU and for soil, sediment, and surface water cleanup. The installation awarded a contract for soil cleanup at FT 004 and SD 045. Travis AFB installed a new extraction well at Disposal Pit (DP) 039 and three additional monitoring wells in the contaminated area downgradient from the site. In addition, the installation completed the tree planting study at the identified site. Under the MMRP, Travis AFB completed the PA. Travis AFB also held two partnering meetings per month and provided a tour to 10 members of the California Regional Water Quality Control Board.

In FY07, Travis AFB developed the designs for cleanup, quality program plans, and cleanup work plans for the remaining soil sites. The installation completed soil cleanup at SD 045, removing over 4,400 cubic yards of contaminated soil and restoring the site to residential cleanup levels. The installation began soil cleanup actions at FTs 003 and 004. Travis AFB held discussions with regulatory agencies to focus on the status of groundwater sites and planned efforts to ensure that all required cleanup systems are constructed at all sites. The installation began developing a statement of objectives for a performance-based contract that will install and launch cleanup systems at the remaining 19 groundwater sites. Travis AFB finalized the PA of the MMRP site.

In FY08, Travis AFB continued cleanup operation and monitoring efforts for groundwater and began the ROD for all groundwater at the base. The installation performed studies on the Central and North Groundwater Treatment Plants to determine the cleanup's effectiveness. Travis AFB developed and received regulatory approval on a North Groundwater Treatment Plant Optimization Technical Memorandum. The installation completed cleanup and the corresponding report for FT 003, FT 004, LF 007, and SD 045. FT 003, SD 045, and ST 028 required no further construction of cleanup

systems. Travis AFB also completed a second five-year review report.

**FY09 IRP Progress**

Travis AFB completed cleanup actions at SDs 001 and 033. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Administrative issues delayed the site inspection (SI).

**Plan of Action**

Plan of action items for Travis Air Force Base are grouped below according to program category.

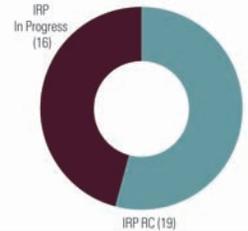
**IRP**

- Complete feasibility study to determine cleanup alternatives for remaining groundwater sites in FY10.
- Complete proposed plan and begin ROD for remaining groundwater sites in FY10.

**MMRP**

- Complete the SI in FY10.

<b>FFID:</b>	CA917002333000	<b>Funding to Date:</b>	\$ 153.3 million
<b>Location (Size):</b>	Treasure Island, California (1,075 acres)	<b>Est. CTC (Comp Year):</b>	\$ 30.8 million (FY 2032)
<b>Mission:</b>	Provide services and materials to support units of operating forces and shore activities	<b>IRP Sites (Final RIP/RC):</b>	35 (FY2015)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFSRA signed in September 1992	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Petroleum hydrocarbons, VOCs, SVOCs, chlorinated solvents, metals, pesticides, PCBs, explosives, propellants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-27
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Treasure Island Naval Station (NS) provides services and materials to support units of operating forces and shore activities. Contamination is largely the result of migration of petroleum products from fueling operation areas and disposal of waste materials. Sites include former fire training areas, a landfill, a former dry cleaning facility, an old bunker area, fuel farms, a service station, and a waterline replacement area. DoD and EPA signed a federal facility site remediation agreement (FFSRA) in September 1992 to outline how they were going to proceed with cleanup. In July 1993, the BRAC Commission recommended closure of Treasure Island NS with relocation of the Naval Reserve Center and the Naval Technical Training Center. The installation completed operational closure in September 1997. In FY92, the installation established two information repositories and an administrative record, and completed a community relations plan, which was updated in FY02 and FY08. Formed in FY92, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY94. The RAB received a technical assistance for public participation grant in FY99.

To date, the installation has signed Records of Decision (RODs) for Sites 30 and 31, which selected cleanup actions for those sites. The installation also signed five RODs requiring no further action at Sites 9, 10 and 13. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Treasure Island NS for FY05 through FY08 is summarized below.

In FY05, Treasure Island NS received regulatory concurrence that no further cleanup actions were necessary at four petroleum sites. The installation also completed the RI reports for Sites 9, 10, and 30, and a groundwater investigation at Site 33. Treasure Island NS signed a ROD requiring no further action for Site 13 off-shore sediments. The installation installed a groundwater pilot study for cleanup using natural processes at Site 21.

In FY06, Treasure Island NS obtained regulatory concurrence for closure of Petroleum Pipeline D 1B groundwater, and

installation restoration Site 7. The installation completed Proposed Plans (PPs) requiring no action for Sites 9 and 10. The installation also completed the historical radiological assessment for the base, a radiological survey in Building 233, and the supplemental Environmental Baseline Survey to determine the presence of potential environmental hazards. The installation also found portions of Treasure Island and Yerba Buena Island suitable for transfer.

In FY07, Treasure Island NS completed the Site 21 RI report, the feasibility studies (FSs) to evaluate cleanup alternatives for Sites 30 and 31, and the Site 12 engineering evaluation and cost analysis and action memorandum. The installation also completed the screening level assessment of potential risks to the environment. Additionally, Treasure Island NS signed RODs requiring no action for Sites 9 and 10.

In FY08, Treasure Island NS completed a combined RI/FS for Site 24, an RI report for Site 32, and PPs for Sites 30 and 31. Treasure Island NS updated the community relations plan.

**FY09 IRP Progress**

Treasure Island NS completed and obtained regulatory concurrence on final radiological status surveys for Buildings 343 and 344. The installation completed an FS for Site 21; RI reports for Sites 8, 28, and 29; and signed RODs for Sites 30 and 31. Treasure Island NS began Toxic Substance Control Act polychlorinated biphenyls (PCB) soil cleanup at Site 32, and a design for cleanup at Site 31. The installation continued the removal action at three Solid Waste Disposal Areas in Site 12. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed closure of Petroleum Site 25, and completion of the Site 11 interim RI. Technical issues delayed completion of radiological fieldwork for the sewer drain systems associated with Building 233, and completion of an RI at Site 33.

**FY09 MMRP Progress**

Treasure Island NS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Treasure Island Naval Station are grouped below according to program category.

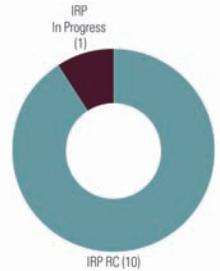
**IRP**

- Obtain regulatory concurrence for closure of Petroleum Site 25 in FY10.
- Complete Toxic Substance Control Act PCB soil cleanup at Site 32 in FY10.
- Complete removal action at Site 12 Solid Waste Disposal Areas in FY10.
- Complete interim RI for Site 11, and RIs for Sites 6, 12, and 33 in FY10.
- Complete FSs for Sites 27 and 33, and PPs for Sites 21, 24, 27, and 28 in FY10.
- Complete radiological fieldwork for the sewer drain systems associated with Building 233 in FY10.
- Complete design for cleanup and cleanup at Site 31 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	NJ217002269500	<b>Est. CTC (Comp Year):</b>	\$ 19.8 million (FY 2039)
<b>Location (Size):</b>	Trenton, New Jersey (529 acres)	<b>IRP Sites (Final RIP/RC):</b>	11 (FY2000)
<b>Mission:</b>	Test engine systems and components	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	N/A	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-117
<b>Contaminants:</b>	Freon, mercury, solvents, fuels, VOCs, SVOCs, metals, TCE		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 27.5 million		



**Progress To Date**

Trenton Naval Air Warfare Center (NAWC) Aircraft Division tests engine systems and components. Site types include underground storage tanks, disposal areas, and spill sites. Contamination at the installation resulted from various fuels used to operate engines during tests and from trichloroethylene (TCE), ethylene glycol, and freon used to cool the air entering the engines. Investigations have detected residues of fuels and solvents in the groundwater and soil. In July 1993, the BRAC Commission recommended closure of Trenton NAWC. Operations were transferred to the Arnold Engineering Development Center and the Patuxent River Naval Air Station in December 1998. Formed in FY91, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY93; the RAB formally adjourned in FY01. To ensure continuous monitoring and improvement, Trenton NAWC completed five-year review reports in FY04 and FY09.

In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Trenton NAWC Aircraft Division for FY05 through FY08 is summarized below.

In FY05, the installation continued operation and maintenance (O&M) of the groundwater treatment system. The installation completed a work plan for a bioaugmentation pilot study for groundwater to remove contaminants using natural processes, and fieldwork began. Trenton NAWC conducted a review in accordance with state regulations, which require one every other year.

In FY06, Trenton NAWC Aircraft Division continued O&M of the groundwater treatment system.

In FY07, the installation completed the bioaugmentation pilot study and report. The installation also completed the review and received state certification.

In FY08, Trenton NAWC continued O&M and conducted an optimization study of the groundwater treatment system; the installation performed a bioaugmentation injection at the site.

The installation also submitted a draft plan to regulators to relocate the treatment plant and extraction wells.

**FY09 IRP Progress**

Trenton NAWC completed a second five-year review, and continued O&M of the groundwater treatment system.

**FY09 MMRP Progress**

Trenton NAWC has identified no MMRP sites.

**Plan of Action**

Plan of action items for Trenton Naval Air Warfare Center Aircraft Division are grouped below according to program category.

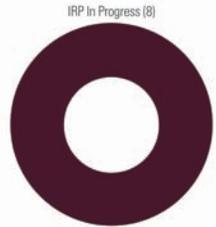
**IRP**

- Continue O&M of groundwater treatment system in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	AZ957282593400	<b>Est. CTC (Comp Year):</b>	\$ 3.1 million (FY 2017)
<b>Location (Size):</b>	Tucson, Arizona (84 acres)	<b>IRP Sites (Final RIP/RC):</b>	8 (FY1997)
<b>Mission:</b>	Provide Air National Guard training	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	57.86; placed on NPL in September 1983	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>IAG Status:</b>	FFA signed in October 1994	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-5
<b>Contaminants:</b>	POLs, petroleum hydrocarbons, TCE, chromium, PCE		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 18.4 million		



**Progress To Date**

The Air National Guard (ANG) base at Tucson International Airport (IAP) provides fighter pilot training and is home to the 162nd Fighter Wing. The installation is part of the Tucson IAP. In addition to the ANG base, the IAP (covering approximately 10 square miles) includes Air Force Plant 44, airport property owned by the City of Tucson (and managed by the Tucson Airport Authority), adjacent Indian reservation property, and several residential areas in Tucson and South Tucson. Sites identified at this installation include fire training areas, solvent dumping areas, storm drainage discharge areas, the old wash rack area, petroleum/oil/lubricant (POL) areas, and spill areas. The principal contaminant is trichloroethylene (TCE) in groundwater, but tetrachloroethylene (PCE) and chromium are also present. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in September 1983. DoD and EPA signed a federal facility agreement (FFA) covering the 84-acre ANG base in October 1994 to outline how they were going to proceed with cleanup. In FY95, the installation formed a Restoration Advisory Board to discuss cleanup progress with the community. To aid in environmental cleanup, the installation also established successful partnerships with citizens and regulators through the Unified Community Advisory Board. To ensure continuous monitoring and improvement, Tucson IAP ANG completed five-year review reports in FY03 and FY09.

To date, the installation has signed one Record of Decision, which selected cleanup actions at eight sites. In FY05, Tucson IAP ANG conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Tucson IAP ANG for FY05 through FY08 is summarized below.

In FY05, Tucson IAP ANG continued operating the groundwater treatment system. The installation also continued partnering with EPA and the Arizona Department of Environmental Quality.

In FY06, Tucson IAP ANG continued operating the groundwater treatment system and made adjustments to enhance operation; EPA and the Arizona Department of Environmental Quality concurred on the systems effectiveness. The installation

maintained its Defense and State Memorandum of Agreement partnership with the Arizona Department of Environmental Quality and continued participation in the Unified Community Advisory Board.

In FY07, Tucson IAP ANG continued operating the groundwater treatment system and continued partnering with EPA and the Arizona Department of Environmental Quality. Tucson IAP ANG also installed three additional pairs of monitoring wells and sampled the northwest edge of the TCE-contaminated area. The installation participated in Unified Community Advisory Board meetings.

In FY08, Tucson IAP ANG awarded a performance-based cleanup operation project. The installation conducted groundwater modeling for the entire base and installed additional monitoring wells along the western edge of the contaminated area. The installation continued operation of the groundwater treatment system and replaced the groundwater treatment system air strippers. The installation also continued to partner with EPA, the Arizona Department of Environmental Quality, and the Unified Community Advisory Board.

**FY09 IRP Progress**

Tucson IAP ANG completed its second five-year review report. The installation operated and maintained the groundwater treatment system to continue capturing TCE. The installation constructed one new groundwater monitoring well and abandoned old groundwater monitoring wells. Tucson IAP ANG also installed injection and monitoring wells and performed a chemical injection pilot test. Tucson IAP ANG maintained regulatory compliance within the framework of the FFA and conducted a green remediation survey to identify opportunities for energy conservation and more environmentally friendly cleanup technologies. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Tucson IAP ANG conducted public affairs activities through EPA, the Arizona Department of Environmental Quality, and the Unified Community Advisory Board.

**FY09 MMRP Progress**

Tucson IAP ANG has identified no MMRP sites.

**Plan of Action**

Plan of action items for Tucson International Airport are grouped below according to program category.

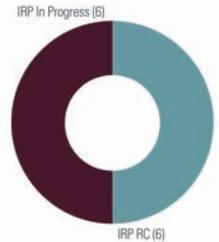
**IRP**

- Continue operation and maintenance of the groundwater treatment system in FY10.
- Continue chemical injection pilot test at groundwater wells in FY10.
- Continue to partner with EPA, the Arizona Department of Environmental Quality, and the Unified Community Advisory Board in FY10.
- Maintain regulatory compliance within the framework of the FFA in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	CA917302478300	<b>Funding to Date:</b>	\$ 70.0 million
<b>Location (Size):</b>	Tustin, California (1,603 acres)	<b>Est. CTC (Comp Year):</b>	\$ 15.5 million (FY 2042)
<b>Mission:</b>	Supported operations of the Third Marine Aircraft Wing	<b>IRP Sites (Final RIP/RC):</b>	12 (FY2013)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFSRA signed in August 1999	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	MTBE, petroleum hydrocarbons, pentachlorophenol, naphthalene, BTEX, TCP, SVOCs, metals, dichloroethane, dichloroethene, TCE, VOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-28
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

Tustin Marine Corps Air Station (MCAS) supports operations of the Third Marine Aircraft Wing. These operations have resulted in contamination in installation groundwater and soil. DoD and EPA signed a federal facility site remediation agreement (FFSRA) in FY99 to outline how they were going to proceed with cleanup. In FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. In July 1991, the BRAC Commission recommended closure of Tustin MCAS with retention of the family housing and related personnel facilities to support El Toro MCAS. In FY93, the commission recommended closure of Tustin MCAS, which included those support facilities retained at Tustin MCAS. The installation issued a draft CERFA final environmental baseline survey for the base to determine the presence of potential environmental hazards in FY01. In FY94, Tustin MCAS formed a Restoration Advisory Board to discuss cleanup progress with the community. The installation regularly updates two administrative records and two information repositories. To ensure continuous monitoring and improvement, Tustin MCAS completed a five-year review report at Operable Unit (OU) 3 in FY07.

To date, the installation has signed Records of Decision (RODs), which selected cleanup actions for five sites. The installation also transferred over 1,300 acres of property. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at the installation for FY05 through FY08 is summarized below.

In FY05, Tustin MCAS completed a removal action, final ROD, cleanup plan, and selected soil removal activities for OU 1A. The installation issued the final ROD and completed a work plan, cleanup plan, and field activities for OU 1B. The installation also continued long-term management (LTM) at OU 3. Tustin MCAS issued a final ROD requiring no further cleanup actions for OU 4A. Additionally, the installation finalized the closure report for the arsenic areas of concern (AOCs), and closed the last AOC in the compliance program. The installation also developed and obtained concurrence from the California Regional Water Quality Control Board of closure criteria for the

methyl tertiary-butyl ether (MTBE)-contaminated area groundwater site (Underground Storage Tank (UST) 222).

In FY06, Tustin MCAS started a five-year review report at OU 3, continued the LTM phase of a landfill cap, and completed all soil removal activities at OUs 1A and 1B. Tustin MCAS also continued cleanup of the MTBE-contaminated area (UST 222) under an interim petroleum corrective action plan.

In FY07, Tustin MCAS completed the design for cleanup and work plan, and began field activities for groundwater cleanup at OUs 1A and 1B. The installation completed a five-year review report and continued LTM at OU 3. The installation also completed and implemented a final supplemental investigation work plan to conduct additional groundwater and soil sampling, and began revising the draft feasibility study (FS) to evaluate cleanup alternatives at OU 4B sites. Tustin MCAS found approximately 4.8 acres of property suitable for transfer.

In FY08, Tustin MCAS continued LTM activities at OU 3. The installation began the North Treatment System and ongoing operation and maintenance (O&M) activities at OUs 1A and 1B. The installation also finalized a technical memorandum for the supplemental investigation at Site 6 and the mingled contaminated areas.

**FY09 IRP Progress**

Tustin MCAS continued cleanup of the MTBE-contaminated area (UST 222), and LTM activities at OU 3. The installation also completed the final FS report, proposed plan, and the draft ROD for OU 4B. Additionally, the installation completed the long-term O&M plan and draft operating properly and successfully report, and continued O&M activities at OUs 1A and 1B. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Tustin MCAS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Tustin Marine Corps Air Station are grouped below according to program category.

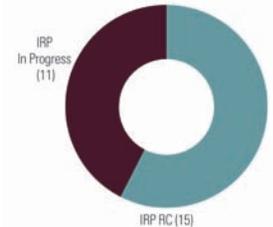
**IRP**

- Continue cleanup at MTBE-contaminated area (UST 222), and LTM activities at OU 3 in FY10-FY11.
- Complete cleanup completion report if groundwater data permits in FY10-FY11.
- Complete the final ROD, and begin a design for cleanup and cleanup activities at OU 4B in FY10-FY11.
- Complete the final operating properly and successfully report, and continue O&M activities for OUs 1A and 1B in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	MN521382090800	<b>Funding to Date:</b>	\$ 160.9 million
<b>Location (Size):</b>	Arden Hills, Minnesota (2,370 acres)	<b>Est. CTC (Comp Year):</b>	\$ 35.9 million (FY 2039)
<b>Mission:</b>	Provide support to DoD tenants; formerly manufactured small-arms ammunition and projectile casings	<b>IRP Sites (Final RIP/RC):</b>	26 (FY2010)
<b>HRS Score:</b>	59.60; placed on NPL in September 1983	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in August 1987	<b>Five-Year Review Status:</b>	Completed and underway
<b>Contaminants:</b>	VOCs, PCBs, heavy metals, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-105
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Twin Cities Army Ammunition Plant (AAP) formerly manufactured small arms ammunition and projectile casings, and supported DoD tenants. The installation grouped sites requiring environmental restoration, including former landfills, burning and burial grounds, ammunition testing and disposal sites, industrial operations buildings, and sewer system discharge areas, into three Operable Units (OUs). Past waste disposal practices released contaminants into soil, groundwater, and sediment. Contaminated groundwater has impacted municipal water supplies. Ammunition-related metals, volatile organic compounds (VOCs), and polychlorinated biphenyls (PCBs) are the primary soil contaminants at Twin Cities AAP. The potential risk to human health and environment was significant enough for EPA to place the installation on the NPL in September 1983. DoD and EPA signed a federal facility agreement (FFA) in 1987 to outline how they were going to proceed with cleanup. In 1985, Twin Cities AAP established a technical review committee to discuss the installation’s cleanup progress with the community, and converted it into a Restoration Advisory Board (RAB) in FY96. Twin Cities AAP procured funding for technical assistance for public participation to support the RAB in FY99. To ensure continuous monitoring and improvement, the installation completed five-year review reports for OUs 1, 2, and 3 in FY99, FY04, and FY09.

Twin Cities AAP has signed three Records of Decision (RODs) selecting cleanup actions for 19 sites. In FY03, the installation conducted an inventory of sites suspected to contain munitions contaminations for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Twin Cities AAP for FY05 through FY08 is summarized below.

In FY05, Twin Cities AAP obtained regulatory approval for an assessment of potential risks to human health for various water bodies, and began a feasibility study (FS) to evaluate cleanup remedies. Regulators also approved the site inspection reports for the 135 and 535 Primer/Tracer Areas; an evaluation report demonstrating that vapors from contaminated soils in OU 1 do not migrate to indoor air pathways; and the closeout report for Site G, with the exception of land use controls (LUCs) that restrict the use of and access to the site.

In FY06, Twin Cities AAP received regulatory approval for an alternatives analysis addressing revised and new cleanup actions for Site C. The installation signed a ROD Amendment for OU 1, resolving disagreements over groundwater containment and the need for further cleanup action deeper in the aquifer. Additionally, the installation signed a ROD Amendment for OU 3, documenting the final decision to turn off the extraction well. Twin Cities AAP removed contaminated sediment from a ditch near the 135 Primer/Tracer Area, and regulators approved the closeout report. Regulators also conditionally approved a closeout report for construction of a cover over contaminated soil at the 1900 Yard Range of the Outdoor Firing Range, pending resolution of LUCs.

In FY07, the installation solved LUC issues for Site C-2 and signed a ROD Amendment addressing cleanup actions for soil, sediment, surface water, and groundwater. Twin Cities AAP conducted groundwater operation and maintenance. Additionally, the installation prepared a work plan for the engineering evaluation and cost analysis (EE/CA) at the 135 and 535 Primer/Tracer Areas.

In FY08, Twin Cities AAP signed two ROD Amendments addressing LUCs and cleanup at various OU 2 sites. Twin Cities AAP also accelerated fieldwork at Site K, approved EE/CAs for Building 102 and the excavation and off-site disposal of soil contamination, and completed investigation work at the 535 Primer/Tracer Area. The installation received regulatory approval to turn off the Site A groundwater pump-and-treat system. Additionally, Twin Cities AAP completed sampling at Marsden Lake and Pond G in support of the Aquatic Sites FS.

**FY09 IRP Progress**

Twin Cities AAP received approval for the 535 Primer/Tracer Area EE/CA, completed the soil removal fieldwork, and began to prepare the closeout report. Twin Cities AAP completed a soil removal action at Site K and submitted the closeout report for regulatory review. The installation also implemented groundwater cleanup at Building 102, and turned off the groundwater pump-and-treat system at Site C. Twin Cities AAP completed its third five-year review report. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed the design for LUCs at OU 2, the final approval for various soil cleanup closeout reports, and the aquatic sites FS.

**FY09 MMRP Progress**

Twin Cities AAP has identified no MMRP sites.

**Plan of Action**

Plan of action items for Twin Cities Army Ammunition Plant are grouped below according to program category.

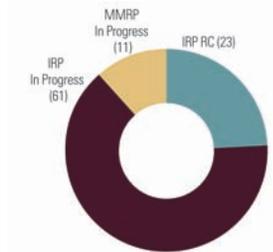
**IRP**

- Obtain approval for the design for LUCs at OU 2, various soil closeout reports, and the Aquatic Sites FS in FY10.
- Complete transfer of the remaining 585 acres (including Area 135) in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	FL457152412400	<b>Funding to Date:</b>	\$ 42.7 million
<b>Location (Size):</b>	Panama City, Florida (28,824 acres)	<b>Est. CTC (Comp Year):</b>	\$ 47.6 million (FY 2038)
<b>Mission:</b>	Provide advanced F-15 and F-22 fighter training	<b>IRP Sites (Final RIP/RC):</b>	84 (FY2020)
<b>HRS Score:</b>	50.00; placed on NPL in April 1997	<b>MMRP Sites (Final RIP/RC):</b>	11 (FY2021)
<b>IAG Status:</b>	FFA under negotiation	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	POLs, chlorinated solvents, pesticides, metals, PCBs, general refuse, VOCs, SVOCs, PAHs, BTEX	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-56
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Tyndall Field was activated in 1941 and served as the Flexible Gunnery School of the U.S. Army Air Corps. The installation became Tyndall Air Force Base (AFB) in 1947, and its current mission is F-15 Eagle and F-22 Raptor fighter training under the 325th Fighter Wing. The primary contaminant of concern is DDT in the sediments. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in April 1997. A federal facility agreement (FFA) and an interagency agreement (IAG) between DoD and EPA are currently under negotiation and will outline how DoD and EPA will proceed with cleanup when signed. The 2005 BRAC Commission recommended Tyndall AFB for realignment. Tyndall AFB is involved in a partnering initiative with EPA, the Florida Department of Environmental Protection, and natural resource trustees serving as the installation's technical review committee responsible for communicating cleanup progress with the community.

Tyndall AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Tyndall AFB for FY05 through FY08 is summarized below.

In FY05, Tyndall AFB received a concurrence that no further cleanup actions were necessary for three sites (Landfills [LFs] 001 and 003, and Spill Site [SS] 014). The installation also completed draft remedial investigation (RI) studies recommending no further cleanup actions for two additional sites (LF 005 and other [OT] Site 037). The installation began preliminary assessments (PAs) of the MMRP sites.

In FY06, Tyndall AFB implemented cleanup actions for LFs 006 and 007, Fire Training (FT) area 017, and SS 026 to reduce exposure risks. In cooperation with EPA and the Florida Department of Environmental Protection, the installation implemented the technical portions of the preferred alternatives outlined in the proposed plans. Tyndall AFB required no further construction of cleanup systems at SSs 015 and 019, and FT 023, and investigated and closed Area of Concern (AOC) 006. The installation converted another AOC to a cleanup site Firing Range (FR) 038 and awarded the RI/feasibility study (FS) to conduct the investigation and identify cleanup alternatives.

Tyndall AFB awarded a performance-based contract to cleanup or close all remaining active sites, except FR 038.

In FY07, the installation completed the PA under the MMRP. Tyndall AFB identified 12 areas that met MMRP eligibility criteria.

In FY08, Tyndall AFB screened and added Debris Removal (DB) site 039 to the cleanup program. The installation performed additional characterization at LF 005 as requested by EPA and the Florida Department of Environmental Protection. The installation conducted an investigation of debris and downgradient migration on and beneath the surface.

**FY09 IRP Progress**

Regulatory issues delayed the completion of site characterization, FSs, and selection of cleanup actions for LFs 001, 003, 005, 006 and 007, FT 017, and SS 026. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

**FY09 MMRP Progress**

Regulatory issues delayed the completion of the site inspection (SI) for all MMRP sites.

**Plan of Action**

Plan of action items for Tyndall Air Force Base are grouped below according to program category.

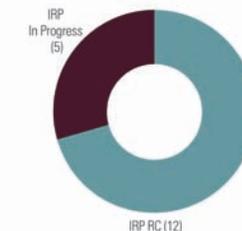
**IRP**

- Sign FFA with EPA and the Florida Department of Environmental Protection in FY10.
- Perform additional investigation on LF 001, 003, 006, 007, FR 038, and SSs 015 and 026 in FY10.
- Close FTs 016, 017, 023, OT 018, and SS 019 in FY10.
- Complete RI/FS at OT 029 and DB 039 in FY10.
- Complete site characterization, FSs, and select cleanup actions for LFs 001, 003, 005, 006, 007, SSs 015 and 026, and FR 038 in FY10.

**MMRP**

- Complete SI and begin RI for all sites in FY10.

<b>FFID:</b>	MA121382063100	<b>Funding to Date:</b>	\$ 43.5 million
<b>Location (Size):</b>	Natick, Massachusetts (78 acres)	<b>Est. CTC (Comp Year):</b>	\$ 12.5 million (FY 2029)
<b>Mission:</b>	Research and develop food, clothing, equipment, and materials for military operations	<b>IRP Sites (Final RIP/RC):</b>	17 (FY2012)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in July 2006	<b>Five-Year Review Status:</b>	Completed
<b>Contaminants:</b>	Pesticides, herbicides, pentachlorophenol, solvents, PCBs, VOCs, SVOCs, metals	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-99
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Since 1954, the U.S. Army Soldiers Systems Center (Soldiers Systems Center) has supported industrial, laboratory, and storage activities for research and development in food science and in aeromechanical, clothing, material, and equipment engineering. Contaminated site types include buildings, spill sites, storage areas, disposal pits, dry wells, and underground storage tanks. Operations used various volatile organic compounds (VOCs), including tetrachloroethylene (PCE), trichloroethylene (TCE), carbon disulfide, benzene, and chloroform. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1994. In FY06, DoD and EPA signed a federal facility agreement (FFA) to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended the Soldiers Systems Center for realignment. In FY95, the installation established a Restoration Advisory Board (RAB) to discuss cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed a five-year review report for the Natick Research, Development, and Engineering Center (NRDEC) 05 site in FY07.

Soldiers Systems Center has signed Records of Decision (RODs) selecting cleanup actions for Building T 25 and NRDECs 07, 10, and 17. The Building T 25 ROD contained a unique partnering cooperative agreement involving the Town of Natick, the Massachusetts Department of Environmental Protection, EPA, and the installation. Soldiers Systems Center has performed several cleanup actions, including waste removal and the removal of contaminated soil and pavement from a drum storage area. The installation has also removed a 1,000-gallon storage tank for waste oil and associated contaminated soil, as well as polychlorinated biphenyl (PCB)-contaminated soil, from an exploded transformer. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at the Soldiers Systems Center for FY05 through FY08 is summarized below.

In FY05, Soldiers Systems Center started soil removal at NRDEC 03/13 and NRDEC 09/12. Soldiers Systems Center also replaced Monitoring Well 35B. The installation began an

updated site inspection for NRDEC 11 (former Post Drinking Water Wells site) and the remedial investigation (RI) for NRDEC 16 (Buildings 22 and 36). In addition, the installation submitted a study evaluating the potential risk to the environment due to sediment accumulation, and the potential risk to human health due to consuming fish from high-sediment areas.

In FY06, Soldiers Systems Center completed soil removal at NRDEC 03/13, the RI for NRDEC 11, and a feasibility study (FS) to evaluate cleanup alternatives at NRDEC 16. The installation also completed additional fish consumption risk assessment analyses, as requested by EPA in connection with three sediment sites (NRDECs 07, 10, and 17).

In FY07, Soldiers Systems Center submitted a pilot study work plan to expand the existing groundwater treatment system to NRDECs 11 and 16. The installation completed an FS for three sediment sites (NRDECs 07, 10, and 17) and soil removal at NRDECs 09 and 12. The installation also signed a ROD, which determined that NRDECs 03, 06, and 13 required no further cleanup actions. The RAB met quarterly and provided review and comments on various draft reports.

In FY08, Soldiers Systems Center completed the design for cleanup for NRDECs 07 and 17, which qualified for a ROD determining no further action. The installation signed RODs for the T 25 soil site and Buildings 13, 14, and 19 (NRDECs 05, 09, 12, and 14), which closed all soil sites at Soldiers Systems Center. The installation completed expanding the groundwater treatment system to include NRDECs 11 and 16. The RAB met twice to review and comment on various draft reports.

**FY09 IRP Progress**

Soldiers Systems Center completed RODs for T 25 Outfall, and for Buildings 2 and 45 Parking Lot Outfall (NRDECs 07 and 17). The installation also completed the design for cleanup, proposed plan, and ROD for the Main Stormwater Outfall sediment site (NRDEC 10). The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

Soldiers Systems Center has identified no MMRP sites.

**Plan of Action**

Plan of action items for U.S. Army Soldiers Systems Center are grouped below according to program category.

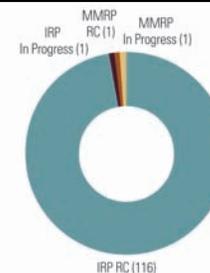
**IRP**

- Complete groundwater ROD amendment in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	OR021382091700	<b>Est. CTC (Comp Year):</b>	\$ 24.7 million (FY 2023)
<b>Location (Size):</b>	Hermiston, Oregon (19,729 acres)	<b>IRP Sites (Final RIP/RC):</b>	117 (FY2003)
<b>Mission:</b>	Store ammunition	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2018)
<b>HRS Score:</b>	31.31; placed on NPL in July 1987	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in October 1989	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-140
<b>Contaminants:</b>	UXO, pesticides, nitrates, explosives, heavy metals		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 55.9 million		



**Progress To Date**

In 1941, the Army established Umatilla Ordnance Depot as a facility for storing conventional munitions. Between 1945 and 1955, the installation's functions expanded to include demolition, renovation, and maintenance of ammunition. In 1962, the Army began to store chemical munitions at the depot. Identified sites include explosives-washout lagoons, an open burning and open detonation area, pesticide disposal pits, a deactivation furnace, and landfills. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1987. DoD and EPA signed a federal facility agreement (FFA) in October 1989 to outline how they were going to proceed with cleanup. In December 1988, the BRAC Commission recommended realignment of the installation and in 2005, the BRAC Commission recommended its closure. In FY93, Umatilla Ordnance Depot transferred its conventional weapons mission to another installation and in FY94, the installation formed a BRAC cleanup team to develop a process for cleanup of sites. Also in FY94, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board. In FY98, the installation officially changed its name from Umatilla Ordnance Depot to Umatilla Chemical Depot (CD). To ensure continuous monitoring and improvement, Umatilla CD completed five-year review reports in FY99, FY04, and FY09.

To date, the installation has signed eight Records of Decision (RODs) and one decision document, selecting cleanup actions for 68 sites. In FY03, Umatilla CD conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Umatilla CD for FY05 through FY08 is summarized below.

In FY05, the installation completed an MMRP ROD for UMAD 001 R 01, the Quality Assurance Function Range.

In FY06, the installation completed the work plan to address munitions and explosives of concern (MEC) at the Quality Assurance Function Range.

In FY07, Umatilla CD began the groundwater pump-and-treat cleanup study, which evaluated the potential to decrease

contamination by modifying the pumping rates of groundwater and removing contamination from source zones. The installation conducted groundwater pump-and-treat plant maintenance, which consisted of rebuilding extraction pumps, and replacing vault covers and electronics.

In FY08, Umatilla CD completed the Washout Lagoons Enhancement Study and identified the need for two additional extraction wells at the groundwater treatment facility. The installation began to develop a groundwater model for the installation as part of the strategy to close the pump-and-treat system. Under the MMRP, Umatilla CD approved the cleanup management plan for the Quality Assurance Function Range and began the surplus property determination. Umatilla CD reopened the 1,750-acre MMRP Ammunition Demolition Area for future cleanup of MEC. The installation also completed the Explosives Site Safety Submission for the Quality Assurance Function Range, which was subsequently approved by the DoD Explosives Safety Board.

**FY09 IRP Progress**

Umatilla CD began a report to summarize the environmental condition of all transferable property based on BRAC 2005. The installation completed its third five-year review report.

Regulatory issues delayed completion of the ROD and revised monitoring plan for the landfill. Technical issues delayed the cleanup report for groundwater treatment.

**FY09 MMRP Progress**

Umatilla CD completed fieldwork and cleanup at the Quality Assurance Function Range. The installation completed all MEC cleanup, and issued a report to address post-cleanup actions.

**Plan of Action**

Plan of action items for Umatilla Chemical Depot are grouped below according to program category.

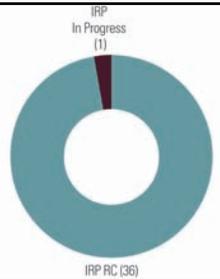
**IRP**

- Complete pulse pumping and develop a plan to enhance pump-and-treat facility operation in FY10.
- Complete the environmental conditions report of all transferable property in FY10.
- Complete the ROD and monitoring plan for the landfill in FY10.

**MMRP**

- Support the local redevelopment authority in completion of the reuse plan for the Ammunition Demolition Area in FY10.

<b>FFID:</b>	VA321382093100	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Vint Hill Farms, Virginia (696 acres)	<b>Funding to Date:</b>	\$ 12.0 million
<b>Mission:</b>	Supported logistics for signal intelligence and electronics warfare weapon systems and equipment; provide intelligence fusion material capability	<b>Est. CTC (Comp Year):</b>	\$ 2.1 million (FY 2010)
<b>HRS Score:</b>	N/A	<b>IRP Sites (Final RIP/RC):</b>	37 (FY2007)
<b>IAG Status:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Metals, VOCs, petroleum hydrocarbons, pesticides, PAHs, PCBs, asbestos, cyanide, photographic wastes	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-7-56



**Progress To Date**

During the 1940s and 1950s, Vint Hill Farms Station served as a training center for Signal Corps personnel and as a refitting station for signal units. The mission resulted in contaminated underground storage tanks (USTs), landfills, lagoons, storage areas, pit areas, fire training areas, disposal areas, and spill sites. During FY90, a preliminary assessment (PA) identified 26 sites contaminated with asbestos-containing materials, lead-based paint areas, and transformers containing polychlorinated biphenyls (PCBs). In FY90, soil and groundwater sampling revealed petroleum and solvent contamination. In 1993, the BRAC Commission recommended closure of Vint Hill Farms Station. Vint Hill Farms Station closed in October 1997. The installation formed a Restoration Advisory Board (RAB) in FY95 to discuss the installation’s cleanup progress with the community; the RAB adjourned in FY06. To ensure continuous monitoring and improvement, Vint Hill Farms Stations completed a five-year review report for Sites 1 and 39 in FY05.

Vint Hill Farms Station had transferred the entire 696 acres by FY03. With the exception of Area Requiring Environmental Evaluation 34, which was discovered post-transfer, all environmental investigation and cleanup is complete. In FY03, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Vint Hill Farms Station for FY05 through FY08 is summarized below.

In FY05, Vint Hill Farms Station completed a five-year review report for Sites 1 and 39. The installation maintained all institutional controls, which minimize the potential for human exposure. Vint Hill Farms Station conducted annual sampling at Site 1, and results were consistent with past sampling.

In FY06, Vint Hill Farms Station and the Virginia Department of Environmental Quality signed a decision document that selected cleanup actions for Area Requiring Environmental Evaluation 34. The installation began cleanup, which required source removal at a highly contaminated area and long-term management. The installation awarded a performance-based contract (PBC) for treatment and began fieldwork. The

installation also conducted annual sampling at Site 1. The RAB officially adjourned.

In FY07, Vint Hill Farms Station continued the PBC fieldwork at Area Requiring Environmental Evaluation 34 and successfully treated the highly contaminated soil. The groundwater in the highly contaminated area showed a 94 percent reduction in chlorinated solvents. Vint Hill Farms Station and the Virginia Department of Environmental Quality agreed to a long-term monitoring plan for all sites. The installation continued Area Requiring Environmental Evaluation 34 and Site 1 monitoring under this plan.

In FY08, Vint Hill Farms Station incorporated Area Requiring Environmental Evaluation 34 sampling into the annual long-term monitoring plan, with the exception of the quarterly sampling at two wells. The installation completed annual sampling requirements and inspected land use controls (LUCs), which restrict the use of and access to Sites 1 and 42; all LUCs were in compliance.

**FY09 IRP Progress**

Vint Hill Farms Station performed annual sampling and LUC inspections at Sites 1 and 42; all LUCs were in compliance. The installation received regulatory concurrence to reduce sampling at two wells from quarterly to annually.

**FY09 MMRP Progress**

Vint Hill Farms Station has identified no MMRP sites.

**Plan of Action**

Plan of action items for Vint Hill Farms Station are grouped below according to program category.

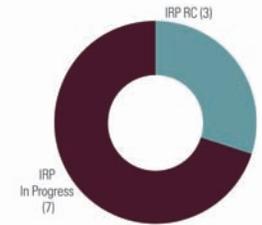
**IRP**

- Complete a five-year review report for Sites 1, 39, and 42 in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	PA317002454500	<b>Media Affected:</b>	Groundwater, Surface Water, Soil
<b>Location (Size):</b>	Warminster Township, Pennsylvania (817 acres)	<b>Funding to Date:</b>	\$ 27.5 million
<b>Mission:</b>	Perform research, development, testing, and evaluation for naval aircraft systems and antisubmarine warfare systems; perform associated software development	<b>Est. CTC (Comp Year):</b>	\$ 17.4 million (FY 2041)
<b>HRS Score:</b>	57.93; placed on NPL in October 1989	<b>IRP Sites (Final RIP/RC):</b>	10 (FY2004)
<b>IAG Status:</b>	FFA signed in September 1990	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>Contaminants:</b>	Heavy metals, firing range wastes, fuels, land sewage sludges, non-industrial solid wastes, paints, PCBs, VOCs, SVOCs	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-143



**Progress To Date**

Warminster Naval Air Warfare Center (NAWC) Aircraft Division performs research, development, testing, and evaluation for naval aircraft systems and antisubmarine warfare systems. Contaminated site types include waste burn pits, sludge disposal pits, landfills, waste pits, and a fire training area. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1989. DoD and EPA signed a federal facility agreement (FFA) in September 1990 to outline how they were going to proceed with cleanup. In July 1991 and July 1995, the BRAC Commission recommended Warminster Naval Air Warfare Center NAWC for realignment and closure, respectively. The installation closed in March 1997. Formed in FY88, Warminster NAWC converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY94. The installation also completed a community relations plan and established an administrative record in FY94. To ensure continuous monitoring and improvement, Warminster NAWC completed five-year review reports in FY02 and in FY07.

To date, the installation has signed Records of Decision (RODs) selecting cleanup actions for Operable Unit (OU) 1, Area A, and Sites 6 and 7. In addition, the installation signed RODs requiring no further actions for Sites 4 (OU 6), 5, 8, and Areas B and D. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Warminster NAWC Aircraft Division for FY05 through FY08 is summarized below.

In FY05, Warminster NAWC Aircraft Division continued groundwater monitoring according to the long-term management plan, and continued the well reduction strategy through discussions with the technical evaluation group. The installation also continued work on the groundwater treatment system and maintained and operated land use controls, which limit access to sites.

In FY06, Warminster NAWC Aircraft Division prepared a work plan to address the higher contaminant levels found at Area C, and continued to streamline the monitoring program.

In FY07, Warminster NAWC Aircraft Division completed the work plan for the optimization study of the groundwater extraction system, and continued to streamline the monitoring program. The installation discussed alternatives for source removal and conducted field investigations at Area C. The installation also coordinated with EPA and the Pennsylvania Department of Environmental Protection to investigate potentially responsible parties located west of the former facility, and continued working with the Warminster Municipal Authority to provide contaminant protection of Water Supply Wells 13 and 26. Warminster NAWC Aircraft Division began to install a new extraction well at Area A. The installation held four RAB meetings, and completed a second five-year review report.

In FY08, Warminster NAWC Aircraft Division continued implementation of modifications to the groundwater treatment system as determined by the optimization study. The installation coordinated with EPA Region 3 and PADEP to identify the source of off-site groundwater contamination. The installation also continued operation and maintenance (O&M), and performance monitoring of the groundwater extraction and treatment system. Warminster NAWC held four RAB meetings.

**FY09 IRP Progress**

Warminster NAWC continued coordination with EPA Region 3 and Pennsylvania Department of Environmental Protection on the off-site source investigation, and continued (O&M) and performance monitoring of the groundwater extraction and treatment system.

The installation held quarterly RAB meetings.

**FY09 MMRP Progress**

Warminster NAWC has identified no MMRP sites.

**Plan of Action**

Plan of action items for Warminster Naval Air Warfare Center Aircraft Division are grouped below according to program category.

**IRP**

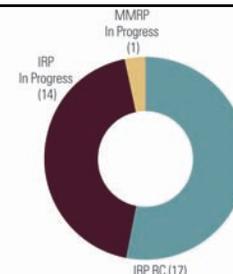
- Continue O&M and performance monitoring of the groundwater extraction and treatment system in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

**FFID:** DC317002431000  
**Location (Size):** Washington, DC (63 acres)  
**Mission:** Provide resources, including administrative space, housing, training facilities, logistical support, and supplies, for Washington Navy Yard tenants and other assigned units  
**HRS Score:** 48.57; placed on NPL in July 1998  
**IAG Status:** FFA signed in June 1999  
**Contaminants:** Solvents, metals, VOCs, SVOCs, PCBs, pesticides  
**Media Affected:** Groundwater, Surface Water, Sediment, Soil

**Funding to Date:** \$ 34.1 million  
**Est. CTC (Comp Year):** \$ 5.5 million (FY 2017)  
**IRP Sites (Final RIP/RC):** 31 (FY2013)  
**MMRP Sites (Final RIP/RC):** 1 (FY2010)  
**Five-Year Review Status:** This installation is not required to complete a five-year review report.  
**IRP/MMRP Status Table:** Refer to page C-7-17



**Progress To Date**

Washington Navy Yard (NY) provides resources, including administrative space, housing, training facilities, logistical support, and supplies, for the installation tenants and other assigned units. Investigations at the Washington NY initially identified 18 contaminated sites and 3 leaking underground storage tank sites. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in July 1998. DoD and EPA signed a federal facility agreement (FFA) in June 1999 to outline how they were going to proceed with cleanup. The installation updated the FFA with a RCRA consent order signed in July 1997. In 2005, the BRAC Commission recommended Washington NY for realignment. The installation developed a community relations plan in FY99.

To date, the installation has completed Records of Decision (RODs) selecting cleanup actions for Sites 1 through 5, 7, 9, 11, 13, 14, and 16. Washington NY has also signed two RODs requiring no further cleanup actions. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Washington NY for FY05 through FY08 is summarized below.

In FY05, Washington NY continued removal actions for Site 10 and completed the site screening area fill field investigation. The installation finalized the proposed cleanup plan and a ROD requiring no further cleanup for Site 14. The installation also finalized the remedial investigation (RI) and developed the proposed cleanup plan for Site 16. Washington NY completed a final feasibility study to evaluate cleanup alternatives for Site 5.

In FY06, Washington NY continued cleanup at Site 10. The installation finalized the Operable Unit (OU) 2 sediment work plan. The installation also finalized RODs for Sites 5 and 16. Washington NY completed the work plan and field investigations for the Site 6 extended RI, and provided a response to comments for regulators. Under the MMRP, the installation finalized a preliminary assessment for the Experimental Battery site.

In FY07, Washington NY continued cleanup at Site 10. The installation completed Phase I fieldwork for the sediment investigation. The installation also finalized the work plan for site screening areas 3, 8, and 10 (now Sites 21, 22, and 23), and the removal action at Site 6. Washington NY also finalized RODs for Sites 1, 2, 3, 7, 9, 11, and 13.

In FY08, Washington NY completed fieldwork and draft RI reports for Site 6 and Sites 21, 22, and 23 (site screening areas 3, 8, and 10). The installation also completed the Phase I investigation report for site screening area 12, and a Phase II draft work plan for OU 2. Additionally, Washington NY completed an investigation report for site screening areas 9 and 14. Under the MMRP, the installation prepared a work plan for the site inspection (SI) at the Experimental Battery site.

**FY09 IRP Progress**

Washington NY completed the Phase II field investigation for OU 2. The cost of completing environmental restoration has changed significantly due to technical issues.

Regulatory issues delayed completion of the draft RI for Site 6, and the RI and feasibility study (FS) to evaluate cleanup alternatives for site screening area 14. Regulatory issues delayed completion of the RI for site screening area 12.

**FY09 MMRP Progress**

Contractual issues delayed completion of the SI for the Experimental Battery site.

**Plan of Action**

Plan of action items for Washington Navy Yard are grouped below according to program category.

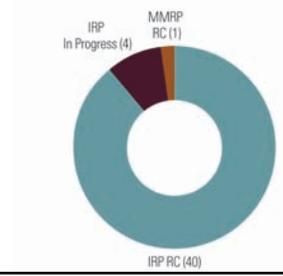
**IRP**

- Complete RI/FS for site screening area 14, and RI for site screening area 12 in FY10.
- Complete draft RIs for Sites 6, 22, 23, and site screening area 14 in FY10-FY11.
- Complete draft report for OU 2 field investigations in FY10-FY11.
- Complete vapor intrusion studies for Sites 8 and 21 in FY10-FY11.

**MMRP**

- Complete SI for the Experimental Battery site in FY10.

<b>FFID:</b>	WV39799F346100	<b>Funding to Date:</b>	\$ 77.7 million
<b>Location (Size):</b>	Point Pleasant, West Virginia (2,704 acres)	<b>Est. CTC (Comp Year):</b>	\$ 35.7 million (FY 2021)
<b>Mission:</b>	Manufactured TNT	<b>IRP Sites (Final RIP/RC):</b>	44 (FY2014)
<b>HRS Score:</b>	35.72; placed on NPL in September 1983	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2003)
<b>IAG Status:</b>	IAGs signed in September 1987 and July 1989	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	TNT, DNT, organic compounds, VOCs, SVOCs, metals, propellants, explosives, other contaminants	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-182
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

From 1941 to 1946, West Virginia Ordnance Works manufactured TNT from toluene, nitric acid, and sulfuric acid. Principal contaminated sites include TNT manufacturing areas, wastewater sewer lines, and wastewater ponds known as the red and yellow water ponds. By-products of the manufacturing process included TNT, dinitrotoluene, and organic compounds, which migrated into groundwater, soil, surface water, and sediment. The potential risk to human health and the environment was significant enough for EPA to place West Virginia Ordnance Works on the NPL in September 1983. DoD and EPA signed the first interagency agreement (IAG) in September 1987, and a second IAG in July 1989, to outline how they were going to proceed with cleanup. EPA partially delisted a 509-acre parcel from the NPL in FY03 and an additional 1,004 acres in FY04. Formed in FY94, the U.S. Army Corps of Engineers (USACE) converted its technical review committee, responsible for communicating cleanup progress with the community, into a Restoration Advisory Board in FY98. To ensure continuous monitoring and improvement, USACE completed five-year review reports in FY95, FY00, and FY05.

The property is grouped into Operable Units (OUs) 1 through 5 and 7 through 13. OU 7 is managed by another party responsible for cleanup, and OU 13 is under EPA management with no further cleanup action planned for the Army. To date, DoD and EPA have signed Records of Decision (RODs) which selected cleanup actions for OUs 1, 2, and 11. USACE and EPA determined that OUs 10 and 12 required no further cleanup action. The former OU 6 was changed to Environmental Unit 06. In FY03, USACE conducted an inventory of closed, transferred, and transferring ranges and sites suspected to contain munitions contamination. Cleanup progress at West Virginia Ordnance Works for FY05 through FY08 is summarized below.

In FY05, USACE completed the third five-year review report. USACE also completed the treatability study (TS) for OU 9.

In FY06, USACE completed the draft feasibility study to evaluate cleanup alternatives and began proposed plans (PPs) for OUs 8 and 9.

In FY07, USACE continued the PP for OUs 8 and 9, and the long-term management (LTM) program. EPA concurred that the OU 4 groundwater treatment system was operating properly and successfully.

In FY08, USACE continued LTM and conducted a TS for OU 8.

**FY09 IRP Progress**

USACE continued LTM. USACE also continued operations and maintenance (O&M) of groundwater treatment systems at OU 2, and made repairs to the treatment system at OU 5. USACE began a TS to treat groundwater at OU 4. The cost of completing environmental restoration has changed significantly due to technical issues and changes in estimating criteria.

Regulatory issues delayed the PP and ROD for no further cleanup action at OUs 8 and 9.

**FY09 MMRP Progress**

USACE closed MMRP Project 50.

**Plan of Action**

Plan of action items for West Virginia Ordnance Works are grouped below according to program category.

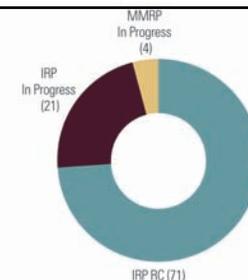
**IRP**

- Prepare fourth five-year review report in FY10.
- Complete the PP and ROD for OUs 8 and 9 in FY10.
- Continue O&M of groundwater treatment systems at OU 2 in FY10-FY11.
- Evaluate results of TS at OU 4 in FY10-FY11.
- Continue LTM program in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	WA017002336100	<b>Contaminants:</b>	PCBs, PAHs, chlorinated solvents, VOCs, SVOCs, metals
<b>Location (Size):</b>	Oak Harbor, Washington (7,000 acres)	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Mission:</b>	Serve as host to training and operations center for two squadrons: Center for U.S. Marine Corps and Navy Reserve training in the Pacific Northwest	<b>Funding to Date:</b>	\$ 98.0 million
<b>HRS Score:</b>	39.64 (Seaplane Base), placed on NPL in February 1990, delisted in 1995; 48.48 (Ault Field), placed on NPL in February 1990	<b>Est. CTC (Comp Year):</b>	\$ 37.9 million (FY 2041)
<b>IAG Status:</b>	FFA signed in September 1990	<b>IRP Sites (Final RIP/RC):</b>	92 (FY2020)
		<b>MMRP Sites (Final RIP/RC):</b>	4 (FY2020)
		<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-180



**Progress To Date**

Whidbey Island Naval Air Station (NAS) is a training and operations center for two squadrons: Center for U.S. Marine Corps, and Navy Reserve training in the Pacific Northwest. Whidbey Island NAS occupies four areas on Whidbey Island, Washington: Ault Field, Seaplane Base, Coupville Outlying Field, and Lake Hancock Target Range. Past disposal practices from aircraft maintenance, vehicle maintenance, public works shop activities, and fire training activities have contributed to contamination. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1990. DoD and EPA signed a federal facility agreement (FFA) in September 1990 to outline how they were going to proceed with cleanup. EPA delisted the Seaplane Base from the NPL in 1995. In 2005, the BRAC Commission recommended Whidbey Island NAS for realignment. In FY94, the installation converted its technical review committee responsible for communicating cleanup progress with the community into the Navy's first Restoration Advisory Board. Washington NAS updated the community relations plan in FY96. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY98, FY05, and FY09.

To date, the installation has completed five Records of Decision (RODs), which selected cleanup actions for five sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Whidbey Island NAS for FY05 through FY08 is summarized below.

In FY05, Whidbey Island NAS began investigating the potential for a new contaminant of concern from Area 6. The installation began an optimization study on a pump-and-treat system and a liquid hydrocarbon recovery system.

In FY06, Whidbey NAS continued treatment operations at OUs 1 and 5, and upgraded hardware at OU 1. The installation continued treatment at Sites 6 and 52 through pump-and-treat and fuel recovery operations. The installation confirmed contamination in one off-site well, and completed re-sampling of Site 16 Runway Ditches.

In FY07, Whidbey Island NAS continued treatment operations at OUs 1 and 5. The installation also conducted 1,4-dioxane sampling to define contaminated area boundaries. Whidbey Island NAS completed an explanation of significant differences with the ROD for land use controls (LUCs), which restricts access to Sites 6 and 52. The installation suspended fuel recovery at Site 52. Under the MMRP, Whidbey Island NAS completed preliminary assessments (PAs) at four sites with regulatory concurrence, and identified three additional areas of concern.

In FY08, Whidbey Island NAS completed an explanation of significant differences document with the ROD for LUCs, and continued treatment operations at OU 1. Whidbey Island NAS also installed off-site wells to monitor 1,4-dioxane and replaced a private well contaminated with 1,4-dioxane. Under the MMRP, the installation developed work plans for site inspections (SIs) at six sites.

**FY09 IRP Progress**

Whidbey Island NAS continued treatment operations and monitoring at OU 1, and completed a LUC implementation plan. The installation also completed its third five-year review report.

Contractual issues delayed complete installation of a bioventing treatment system, which increases oxygen flow in the soil to treat petroleum-contaminated soil.

**FY09 MMRP Progress**

Whidbey Island NAS conducted SIs at six sites.

**Plan of Action**

Plan of action items for Whidbey Island Naval Air Station Ault Field and Seaplane Base are grouped below according to program category.

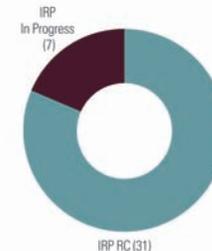
**IRP**

- Complete installation of bioventing system to begin treatment of petroleum-contaminated soils in FY10.
- Maintain LUCs at applicable areas in FY10-FY11.
- Evaluate ROD for cleanup goals at selected compounds, and for the removal of 1, 4-dioxane, in FY10-FY11.
- Continue operations and maintenance of the groundwater extraction, treatment, and recharge at OU 1 in FY10-FY11.
- Conduct PA on private property to identify possible sources of 1,4-dioxane contamination in FY10-FY11.

**MMRP**

- Determine if further action is necessary based on results from the SI in FY10-FY11.

<b>FFID:</b>	MD317002344400	<b>Funding to Date:</b>	\$ 39.2 million
<b>Location (Size):</b>	Silver Spring, Maryland (710 acres)	<b>Est. CTC (Comp Year):</b>	\$ 1.8 million (FY 2021)
<b>Mission:</b>	Research, develop, test, and evaluate ordnance technology	<b>IRP Sites (Final RIP/RC):</b>	38 (FY2006)
<b>HRS Score:</b>	N/A	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	N/A	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Explosive compounds, waste oils, PCBs, heavy metals, VOCs, SVOCs, propellants, radioactive materials	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-29
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

White Oak Naval Surface Warfare Center (NSWC) researched, developed, tested, and evaluated ordnance technology. Past activities at the installation included landfill disposal of oils, polychlorinated biphenyls (PCBs), solvents, paint residue, and other chemicals (including mercury); disposal of chemical research wastewater in dry wells; burning of explosive ordnance; and composting of sludge. Records also indicate that a radium spill occurred. Contaminants of concern are volatile organic compounds (VOCs), PCBs, cadmium, chromium, lead, mercury, nickel, and ordnance compounds. In July 1995, the BRAC Commission recommended closure of White Oak NSWC. The facility closed in July 1997. White Oak NSWC formed a BRAC cleanup team in FY98 to develop a process for cleanup of sites. The BRAC cleanup team developed a cleanup plan with community input to prioritize sites requiring cleanup in FY96. Formed in FY89, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY96. In FY94, the installation established an administrative record, an information repository, and a community relations plan. White Oak NSWC updated the BRAC cleanup plan and community relations plan in FY02. To ensure continuous monitoring and improvement, White Oak NSWC completed a five-year review report in FY06.

To date, the installation has completed 12 Records of Decision (RODs), which selected cleanup actions for 12 sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no sites were identified. Cleanup progress at White Oak NSWC for FY05 through FY08 is summarized below.

In FY05, White Oak NSWC completed and signed all remaining RODs for Area of Concern (AOC) 2, and Sites 4, 5/13, and 9; cleanup began for these sites.

In FY06, White Oak NSWC continued to operate cleanup systems at Sites 5/13, 7, 9, and 11, and began cleanup at Sites 4, 49, and AOC 2. A Navy Tiger Team optimized the cleanup at Site 11. White Oak NSWC awarded a contract for cleanup at Solid Waste Management Unit (SWMU) 87. The RAB met twice

per year, and the installation completed a five-year review report.

In FY07, White Oak NSWC completed the active phase of cleanup at Sites 5/13, 7, 9, 11, 49, and SWMU 87 (AOC 2). The installation successfully negotiated the discontinuation of the facility's pump-and-treat system. EPA rescinded the unilateral RCRA administrative order, which previously governed the environmental restoration of White Oak NSWC. The installation held two RAB meetings, and decided to reduce future RAB meetings from twice per year to once per year.

In FY08, White Oak NSWC continued performance monitoring of the cleanup system operation at Sites 5/13, 7, 9, 11, 46, 49, and SWMU 87 (AOC 2). The installation held one RAB meeting.

**FY09 IRP Progress**

White Oak NSWC completed cleanup at Site 4, and continued to operate cleanup systems at Sites 5/13, 7, 9, 11, 46, 49, and SWMU 87 (AOC 2). The installation also designed land use controls (LUCs) for Sites 7, 9, and 11, which will restrict access to the sites. The cost of completing environmental restoration has changed significantly due to technical issues.

Administrative issues delayed completion of designed LUCs for Sites 4, 13, 49, and SWMU 87 (AOC 2).

**FY09 MMRP Progress**

White Oak NSWC has identified no MMRP sites.

**Plan of Action**

Plan of action items for White Oak Naval Surface Warfare Center are grouped below according to program category.

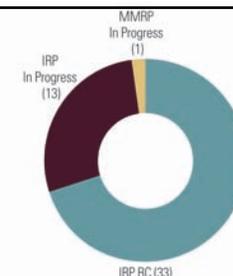
**IRP**

- Continue operation of cleanup systems at Sites 4, 5/13, 7, 9, 11, 46, 49, and SWMU 87 (AOC 2) in FY10.
- Complete LUCs for Sites 4, 13, 49, and SWMU 87 (AOC 2) in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	FL417002324400	<b>Funding to Date:</b>	\$ 39.7 million
<b>Location (Size):</b>	Milton, Florida (3,842 acres)	<b>Est. CTC (Comp Year):</b>	\$ 20.5 million (FY 2054)
<b>Mission:</b>	Train student naval aviators	<b>IRP Sites (Final RIP/RC):</b>	46 (FY2012)
<b>HRS Score:</b>	50.00; placed on NPL in May 1994	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2014)
<b>IAG Status:</b>	FFA signed in March 2009	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Pesticides, PCBs, VOCs, heavy metals, chlorinated hydrocarbons, SVOCs, radioactive materials	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-54
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



## Progress To Date

Whiting Field Naval Air Station (NAS) trains student naval aviators, and has administrative responsibility for the Outlying Landing Field Barin, located in Alabama. Beginning in FY85, studies at this installation identified contaminated sites at Whiting Field NAS and the Outlying Landing Field Barin. Site types include disposal areas and pits, storage areas, spill areas, landfills, a disposal and burning area, a maintenance area, underground storage tanks (USTs), fuel pits, fire training areas, and drainage ditches. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in May 1994. DoD and EPA signed federal facility agreement (FFA) in FY09 to outline how they are going to proceed with cleanup. Whiting Field NAS formed a technical review committee responsible for communicating cleanup progress with the community in FY90; formed a technical review committee for the Outlying Landing Field Barin in FY02; converted both technical review committees to Restoration Advisory Boards (RABs) in FY05; and adjourned the RABs in FY09. The installation completed the Outlying Landing Field Barin's Community Relations Plan in FY93 and updated the community relations plan in FY03. To ensure continuous monitoring and improvement, the installation completed five-year review reports for Sites 1 and 2 in FY06.

Whiting Field NAS has closed 12 sites. The installation closed Sites 3, 5/5A, 8, 9, 12, 14, 36, and 37 with no action, and Sites 6, 29, 31, and 38 with no further cleanup actions. The installation determined that Sites 1, 2, 10, 11, 13, 15, 17, 18, 30, 32, 33, and 35 required land use controls (LUCs), which restrict access to the sites. The installation also has closed ten sites at Outlying Land Field Barin. To date, the installation has signed 22 Records of Decision (RODs), which selected cleanup actions for 22 environmental restoration sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRPs sites were identified. Cleanup progress at Whiting Field NAS for FY05 through FY08 is summarized below.

In FY05, Whiting Field NAS continued cleanup for Site 7; continued monitoring LUCs for Sites 1, 2, 30, 32, and 33; signed five RODs requiring no action; and completed three

cleanup designs for cleanup action. The installation continued operations at UST 000002 and monitoring at UST 000005.

In FY06, Whiting Field NAS continued cleanup at Site 7 and UST 000002, and monitoring at Sites 1, 2, 30, 32, 33, and UST 000005. The installation completed six RODs: one ROD requiring no further action, and five RODs requiring LUCs. The installation also conducted cleanup operations at UST 000002. Under the MMRP, Whiting Field NAS submitted the preliminary assessment (PA) for the site. Whiting Field NAS completed five-year review reports for Sites 1 and 2.

In FY07, Whiting Field NAS completed LUC RODs for Sites 10 and 11. The installation prepared designs for LUCs at Sites 13, 15, 17, 18, and 35, and continued monitoring at Sites 1, 2, 30, 32, and 33. Under the MMRP, Whiting Field NAS identified two new sites (Former Gunnery Area and Skeet Range) in the PA, and awarded a contract for the site inspection (SI).

In FY08, Whiting Field NAS completed RODs for Sites 2 and 16; designs for LUCs at Sites 10 and 11; and the remedial investigation (RI) at Site 41. The installation continued cleanup activities at Sites 4 and 7, including installation and sampling of new groundwater and soil vapor extraction wells. The installation also continued RI activities at Site 40, including installation and sampling of new monitoring wells. Under the MMRP, Whiting Field NAS drafted a work plan for the SI at the former Gunnery Area and Skeet Range.

## FY09 IRP Progress

Whiting Field NAS continued cleanup at Site 7. DoD and EPA signed the FFA.

No RAB meeting was held this past year but annual newsletters to all RAB members will continue and future meetings are possible.

## FY09 MMRP Progress

Whiting Field NAS completed work plan for the SI for the former Gunnery Area and Skeet Range.

## Plan of Action

Plan of action items for Whiting Field Naval Air Station are grouped below according to program category.

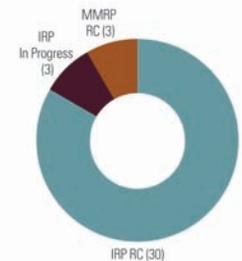
### IRP

- Continue cleanup at Sites 4 and 7 in FY10.
- Complete cleanup and a ROD for Site 39 in FY10.
- Complete RI at Site 40 in FY10.
- Complete ROD and interim cleanup at Site 41 in FY10.

### MMRP

- Complete the SI for the former Gunnery Area and Skeet Range in FY10.

<b>FFID:</b>	AZ957002858200	<b>Est. CTC (Comp Year):</b>	\$ 57.4 million (FY 2061)
<b>Location (Size):</b>	Mesa, Arizona (4,043 acres)	<b>IRP Sites (Final RIP/RC):</b>	33 (FY2011)
<b>Mission:</b>	Supported pilot training and ground equipment maintenance	<b>MMRP Sites (Final RIP/RC):</b>	3 (FY2008)
<b>HRS Score:</b>	37.93; placed on NPL in November 1989	<b>Five-Year Review Status:</b>	Completed and planned
<b>IAG Status:</b>	FFA signed in FY1990	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-13
<b>Contaminants:</b>	VOCs, POLs, heavy metals, pesticides, UXO, SVOCs		
<b>Media Affected:</b>	Groundwater and Soil		
<b>Funding to Date:</b>	\$ 70.9 million		



**Progress To Date**

Williams Air Force Base (AFB) formerly supported pilot training and ground equipment maintenance. The installation has identified restoration sites, which include the liquid fuels storage area, Fire Protection Training Area (FPTA) 002, a collapsed stormwater line, spill sites (SSs), landfills (LFs), storage tanks (STs), and an old pesticide and paint shop. The potential risk to human health and the environment was significant enough for EPA to place Williams AFB on the NPL in 1989. DoD and EPA signed a federal facility agreement (FFA) in FY90 to outline how they were going to proceed with cleanup. The 1991 BRAC Commission recommended closure of the installation, and the installation closed in September 1993. With community input, the installation updated the BRAC cleanup plan to prioritize sites requiring environmental restoration in FY97 and FY05. To ensure continuous monitoring and improvement, Williams AFB completed five-year review reports in FY01 and FY06.

Williams AFB consolidated restoration sites into three operable units (OUs). In FY93, the installation created two more OUs after an environmental assessment of 30 additional areas. EPA and Williams AFB agreed to create a sixth OU in FY97. To date, Williams AFB has signed Records of Decision (RODs) selecting cleanup actions for OUs 1 through 5. The installations has transferred approximately 3,888 acres. In FY04, Williams AFB conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. The installation closed all three MMRP sites in FY08. Cleanup progress at Williams AFB for FY05 through FY08 is summarized below.

In FY05, Williams AFB removed contamination from the Bullet Fragment Area of Concern (AOC), completing cleanup actions at the site. The installation began evaluating requirements at MMRP sites.

In FY06, Williams AFB began constructing a thermal treatability study (TS) pilot at OU 2 (ST 012). Williams AFB also installed additional groundwater monitoring wells and awarded a contract for a supplemental remedial investigation (RI) at OU 1 (LF 004). The installation submitted a five-year review report to regulators for review.

In FY07, Williams AFB continued long-term management (LTM) and began fieldwork for a supplemental investigation at OU 1 (LF 004).

In FY08, Williams AFB completed construction for a pilot TS and began its operation at OU 2 (ST 012). Williams AFB continued LTM at OU 1 (LF 004), and drafted a ROD for OU 6 (SS 017). Williams AFB transferred 31.3 acres for reuse. The installation closed all three MMRP sites.

**FY09 IRP Progress**

Williams AFB completed an extensive RI and feasibility study (FS) to evaluate cleanup alternatives at OU 1 (LF 004). The installation continued to operate the TS at OU 2 (ST 012). Williams AFB began the preliminary assessment and site inspection fieldwork for the Parcel N Debris AOC. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical and administrative issues delayed completion of the ROD amendment for OU 3 (FPTA 002) and the ROD for OU 6 (SS 017). Technical issues delayed completion of the pilot TS operation.

**FY09 MMRP Progress**

Williams AFB conducted no MMRP actions.

**Plan of Action**

Plan of action items for Williams Air Force Base are grouped below according to program category.

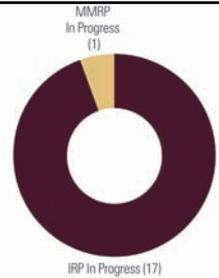
**IRP**

- Prepare five-year review report in FY10.
- Complete ROD for OU 6 (SS 017) and ROD amendment for OU 3 (FPTA 002) in FY10.
- Complete RI/FS report and ROD amendment for OU 1 (LF 004) in FY10.
- Complete fieldwork and report at the Parcel N Debris AOC in FY10.
- Complete five-year review report in FY10-FY11.
- Complete operation and evaluation of the pilot TS at OU 2 (ST 012) in FY10-FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	VA317002460500	<b>Funding to Date:</b>	\$ 12.0 million
<b>Location (Size):</b>	Yorktown, Virginia (1,578 acres)	<b>Est. CTC (Comp Year):</b>	\$ 15.0 million (FY 2025)
<b>Mission:</b>	Supply Atlantic Fleet ships and provide recreational opportunities to military and civilian personnel	<b>IRP Sites (Final RIP/RC):</b>	17 (FY2013)
<b>HRS Score:</b>	48.72; placed on NPL in December 2000	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2008)
<b>IAG Status:</b>	FFA signed in March 2005	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>Contaminants:</b>	VOCs, explosives, propellants, PAHs, metals, PCBs, SVOCs	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-174
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Williamsburg Fleet Industrial Supply Center (FISC) supplies Atlantic Fleet ships and provides recreational opportunities to military and civilian personnel. Contaminants at the installation include semivolatile organic compounds (SVOCs), polyaromatic hydrocarbons (PAHs), metals, and polychlorinated biphenyls (PCBs). These primarily affect groundwater, surface water, and sediment. The potential risk to human health and the environment from eight sites that are hydrologically connected to the Chesapeake Bay was significant enough for EPA to place Williamsburg FISC on the NPL in December 2000. DoD and EPA signed a federal facility agreement (FFA) in FY05 to outline how they were going to proceed with cleanup. The Naval Weapons Station Yorktown Restoration Advisory Board meets twice per year to discuss cleanup progress for Williamsburg FISC with the community.

To date, Sites 1, 4, 7, 9, 10, and 11, and Areas of Concern (AOCs) 1 and 2 have been investigated. Williamsburg FISC completed a Record of Decision (ROD) requiring no further action at Site 1. In FY03, the installation completed a Decision Document (DD) requiring no further response actions for Sites 2, 3, 5, 6, 8, and 10. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); one MMRP site was identified. Cleanup progress at Williamsburg FISC for FY05 through FY08 is summarized below.

In FY05, Williamsburg FISC signed an FFA for Cheatham Annex. The installation began cleanup at the area of debris discovered in the treeline, south of the original soil removal action at Site 1. The installation also completed a sediment work plan for a remedial investigation (RI) at Site 1 and began sampling. Williamsburg FISC completed the RI with a screening level assessment of potential risks to the environment at Sites 4 and 9.

In FY06, Williamsburg FISC completed the time-critical removal action shoreline stabilization project at Site 7. Under the MMRP, the installation completed a preliminary assessment and began a site inspection (SI) for the closed Marine Pistol and Rifle Range.

In FY07, Williamsburg FISC completed an RI with a screening level assessment of potential risks to the environment at Site 11. The installation also began a removal action for sediments at Site 1, completed a surface debris removal at AOC 7 (Drum and Can Disposal Area), and conducted investigations at the AOC north of Cheatham Annex Depot Building 14. Under the MMRP, the installation completed a field investigation of the closed Marine Pistol and Rifle Range, and began the SI report.

In FY08, Williamsburg FISC completed an RI with a baseline assessment of potential risks to the environment, and began an engineering evaluation and cost analysis at Site 11. The installation completed a final removal action for sediments at Site 1. Under the MMRP, Williamsburg FISC completed the SI report for the closed Marine Pistol and Rifle Range.

**FY09 IRP Progress**

Williamsburg FISC completed a ROD requiring no further action at Site 1. The installation also completed the removal of sediments at highly contaminated areas at Site 11, and completed SI fieldwork for Pennimann AOCs.

Regulatory issues delayed completion of the SI report for Penniman AOCs.

**FY09 MMRP Progress**

Williamsburg FISC conducted no MMRP actions.

**Plan of Action**

Plan of action items for Williamsburg FISC, Cheatham Annex are grouped below according to program category.

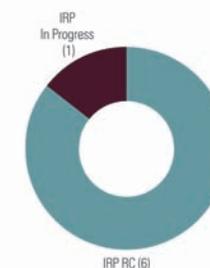
**IRP**

- Complete SIs at Sites 4, 7, 9, AOC 3, and Penniman AOCs in FY10.
- Complete proposed plan and ROD requiring no further cleanup actions at Site 11 in FY10.
- Complete ROD at Site 7 in FY11.
- Complete RI at AOC 9 in FY11.
- Complete DD requiring no further cleanup actions at AOCs 2 and 7 in FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	PA357122534900	<b>Est. CTC (Comp Year):</b>	\$ 1.4 million (FY 2013)
<b>Location (Size):</b>	Willow Grove, Pennsylvania (210 acres)	<b>IRP Sites (Final RIP/RC):</b>	7 (FY2007)
<b>Mission:</b>	Train personnel for air transport and air evacuation activities	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>HRS Score:</b>	50.00; placed on NPL in September 1995	<b>Five-Year Review Status:</b>	This installation is not required to complete a five-year review report.
<b>IAG Status:</b>	None	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-46
<b>Contaminants:</b>	SVOCs, chlorinated solvents, jet fuel, VOCs		
<b>Media Affected:</b>	Groundwater, Sediment, Soil		
<b>Funding to Date:</b>	\$ 8.4 million		



**Progress To Date**

The primary mission of the 913th Airlift Wing at the Willow Grove Air Reserve Station (ARS) is to train personnel for various air transport and air evacuation activities, to operate base facilities and air terminals, and to provide support to assigned units. Industrial activities at Willow Grove ARS include aircraft maintenance, base civil engineering, and fuel storage. Aircraft maintenance operations involve the full range of repair and maintenance activities for aircraft and aerospace ground equipment. Base civil engineering operations involve generation of waste solvents, oils, miscellaneous chemicals, and paints from various shops, including a paint shop, plumbing shop, photography lab, carpentry shop, and several flammable-material storage facilities. Fuel storage operations include the bulk storage of jet fuel. The potential risk to human health and the environment was significant enough for DoD and EPA to jointly place the installation and the adjacent Willow Grove Naval Air Station on the NPL in September 1995. The installation formed a joint Restoration Advisory Board (RAB) with the Navy in August 1994 to discuss cleanup progress with the community.

Willow Grove ARS conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP) in FY05; no MMRP sites were identified. Cleanup progress at Willow Grove ARS for FY05 through FY08 is summarized below.

In FY05, the installation completed quarterly groundwater sampling from the monitoring wells and performance sampling at Zones B, D, and H. Willow Grove ARS also performed a cleanup process optimization study and completed a preliminary cleanup system design of petroleum/oil/lubricants (POL) site (ST 01) to evaluate site conditions. Willow Grove ARS held quarterly RAB meetings.

In FY06, Willow Grove ARS completed two quarterly compliance samplings. The installation also completed the final cleanup system design of ST 01, abandoned 13 monitoring wells, and developed a work plan for a supplemental investigation on the POL site to fill data gaps and complete site characterization. The installation held quarterly RAB meetings.

In FY07, Willow Grove ARS constructed a cleanup system and performed operations and maintenance (O&M). Additionally, the installation completed three compliance samplings. The installation also conducted a field investigation at ST 01.

In FY08, Willow Grove ARS performed cleanup system O&M, and performance sampling at Zone H associated with ST 01. The installation also completed four compliance samplings, a follow-on investigation, and an alternatives analysis at this site.

**FY09 IRP Progress**

Willow Grove ARS completed four compliance samplings at ST 01. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Technical issues delayed the removal of contaminated soils and the relocation of the cleanup system to the off-base leased property at the ST 01.

**FY09 MMRP Progress**

Willow Grove ARS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Willow Grove Air Reserve Station are grouped below according to program category.

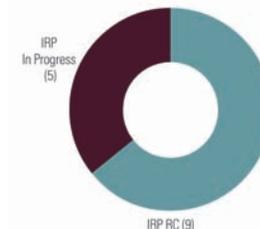
**IRP**

- Conduct a pilot treatability study on the contaminated soils and implement recommendations in FY10.
- Install manifold on and relocate the cleanup system at ST 01 in FY10.
- Complete the removal of the contaminated soils at ST 01 in FY10.
- Continue O&M on the cleanup system and conduct quarterly compliance monitoring at ST 01 in FY10-11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	PA317002231200	<b>Funding to Date:</b>	\$ 11.3 million
<b>Location (Size):</b>	Willow Grove, Pennsylvania (1,090 acres)	<b>Est. CTC (Comp Year):</b>	\$ 4.6 million (FY 2041)
<b>Mission:</b>	Serve as Reserve naval air station for aviation training activities	<b>IRP Sites (Final RIP/RC):</b>	14 (FY2013)
<b>HRS Score:</b>	50.00; placed on NPL in September 1995	<b>MMRP Sites (Final RIP/RC):</b>	None
<b>IAG Status:</b>	FFA signed in 2005	<b>Five-Year Review Status:</b>	Planned
<b>Contaminants:</b>	Heavy metals, PCBs, POLs, solvents, VOCs, SVOCs, explosives, propellants, radioactive materials	<b>IRP/MMRP Status Table:</b>	Refer to page C-7-46
<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil		



**Progress To Date**

Willow Grove Naval Air Station (NAS) Joint Reserve Base serves as a reserve NAS for aviation training activities. Contaminated site types include landfills, underground storage tanks, and a fire training area. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in September 1995. In FY05, DoD and EPA signed a federal facility agreement (FFA) to outline how they were going to proceed with cleanup. The 2005 BRAC Commission recommended closure of Willow Grove NAS Joint Reserve Base. Formed in FY90, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board (RAB) in FY95; the RAB meets regularly. Willow Grove NAS Joint Reserve Base established an administrative record and information repository in FY91, and a community relations plan was developed in FY97.

To date, the installation has signed a Record of Decision (ROD) requiring no further cleanup actions for soil at Site 1. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no MMRP sites were identified. Cleanup progress at Willow Grove NAS Joint Reserve Base for FY05 through FY08 is summarized below.

In FY05, the BRAC Commission recommended closure of Willow Grove NAS Joint Reserve Base. The installation also completed the FFA.

In FY06, the Navy and EPA, with concurrence from the Pennsylvania Department of Environmental Protection, signed a ROD requiring no further cleanup actions for soil at Site 1. Willow Grove NAS Joint Reserve Base also completed a work plan and fieldwork for a remedial investigation (RI) at Site 3.

In FY07, Willow Grove NAS Joint Reserve Base completed the CERFA identification of uncontaminated parcels; EPA concurred with the determination. The Navy and EPA, with concurrence from the Pennsylvania Department of Environmental Protection, signed a ROD requiring no further cleanup action for soil at Site 5.

In FY08, Willow Grove NAS Joint Reserve Base completed a groundwater proposed cleanup plan and ROD for Site 1, and follow-on geophysical surveys at Site 3. The installation also began a groundwater biostimulation pilot study at Site 5 by adding nutrients to groundwater to stimulate naturally occurring bacteria. Willow Grove NAS joint reserve base conducted three RAB meetings, held a tour of environmental restoration sites, and continued partnering efforts with regulators.

**FY09 IRP Progress**

Willow Grove NAS joint reserve base completed additional testing for the RI at Site 3, and the RI at Site 2.

Administrative issues delayed completion of the design for groundwater land use controls, which restricts use of or access to groundwater at Site 1. Technical issues delayed completion of the ROD requiring no further cleanup action at Site 2.

**FY09 MMRP Progress**

Willow Grove NAS has identified no MMRP sites.

**Plan of Action**

Plan of action items for Willow Grove Naval Air Station Joint Reserve Base are grouped below according to program category.

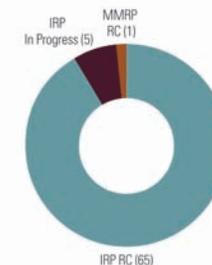
**IRP**

- Complete groundwater pilot study operations at Site 5 and begin proposed plan (PP) in FY10.
- Complete the RI for Site 3, and begin the FS and PP in FY10.
- Sign ROD requiring no further cleanup actions for Site 2 in FY10.
- Conduct Phase I RI at Site 12 in FY10.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	OH557172431200	<b>Funding to Date:</b>	\$ 196.9 million
<b>Location (Size):</b>	Dayton, Ohio (8,145 acres)	<b>Est. CTC (Comp Year):</b>	\$ 16.6 million (FY 2028)
<b>Mission:</b>	Serve as host to many organizations, including headquarters Air Force Materiel Command	<b>IRP Sites (Final RIP/RC):</b>	70 (FY2010)
<b>HRS Score:</b>	57.85; placed on NPL in October 1989	<b>MMRP Sites (Final RIP/RC):</b>	1 (FY2003)
<b>IAG Status:</b>	FFA signed in March 1991	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Acids, plating wastes, VOCs, waste oils and fuels, SVOCs, solvents, TCE	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-135
<b>Media Affected:</b>	Soil and Groundwater		



## Progress To Date

Wright-Patterson Air Force Base (AFB) serves as host to many organizations, including headquarters Air Force Materiel Command. Past activities at Wright-Patterson AFB created spill sites (SSs) and unlined waste disposal areas, including landfills (LFs), fire training areas, underground storage tanks, earth fill disposal areas, and coal storage areas. Soil and groundwater are contaminated with volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), trichloroethylene (TCE), benzene, toluene, ethyl benzene, xylene compounds, and fuel and its combustion by-products. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1989. DoD and EPA signed a federal facility agreement (FFA) in March 1991 to outline how they were going to proceed with cleanup. To ensure continuous monitoring and improvement, the installation completed five-year review reports in FY00 and FY06.

To date, the installation has identified 66 sites and 4 areas of concern (AOCs). Wright-Patterson AFB has signed Records of Decision (RODs) to select cleanup actions at LFs 8 and 10 (Operable Unit [OU] 1) and SSs 2, 3, and 10 (OU 2). Additionally, the installation signed RODs requiring no further cleanup actions at 41 sites (38 sites, 2 AOCs, and an explosive ordnance disposal range). The installation also signed an additional ROD requiring no further cleanup actions at 21 soil sites. In FY97, the installation signed the ROD for the Groundwater OU. After signing the RODs, the installation discovered contamination at two AOCs (Buildings 25 and 79/95) and two sites (Buildings 58 and 59). In FY05, the installation conducted an inventory of sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); no new MMRP sites were identified. Cleanup progress at Wright-Patterson AFB for FY05 through FY08 is summarized below.

In FY05, Wright-Patterson AFB conducted operation and maintenance (O&M) and long-term management (LTM) activities.

In FY06, Wright-Patterson AFB completed its second five-year review report and optimized O&M and LTM requirements. Wright-Patterson AFB also completed the removal action of

contaminated soils at Facility 20055. The installation completed a quality assurance project plan and received regulatory approval.

In FY07, Wright-Patterson AFB accomplished a cleanup process optimization for LFs 8 and 10, which reduced overall monitoring at these sites by 30 percent. The installation began a preliminary assessment (PA) of MMRP sites at the installation.

In FY08, Wright-Patterson AFB continued O&M and LTM of groundwater and LF operations. The installation completed a soil cover project at LF 7 and abandoned groundwater monitoring wells. Wright-Patterson AFB received approval of the ROD for the Groundwater OU cleanup optimization process. The installation also began the pump-and-treat system at OU 5. Wright-Patterson AFB completed additional interim actions to address VOCs in soil at Building 55.

## FY09 IRP Progress

Wright-Patterson AFB continued O&M and LTM of groundwater and LF operations. The installation also continued development of a proposed plan (PP) for soils at Building 59 and AOC Buildings 25 and 79/95. Regulators approved and the installation implemented the reduction of analytical sampling of monitoring wells and confirmation of well abandonment. The installation began a contract to perform a final soil removal action at Building 55. The installation awarded projects to conduct its third five-year review report and partially delist soil sites from the NPL. The cost of completing environmental restoration changed significantly due to changes in estimating criteria.

## FY09 MMRP Progress

The US Army Corps of Engineers performed archive searches and field investigations in support of a PA at the installation.

## Plan of Action

Plan of action items for Wright-Patterson Air Force Base are grouped below according to program category.

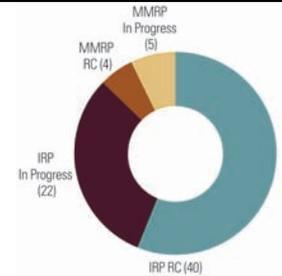
### IRP

- Continue O&M at LFs and LTM of groundwater in FY10.
- Continue groundwater treatment system optimization in FY10.
- Complete cleanup action, a PP, and a ROD at Building 55 in FY10.
- Complete the third five-year review report in FY10.
- Compile documentation for partial delisting of soils from the NPL and submit to regulators in FY10.
- Continue OU 2 ROD optimization in FY10.

### MMRP

- Complete review and coordination of a PA in FY10.
- Complete review and coordination of the site inspection (SI) work plan and complete SI in FY10.

<b>FFID:</b>	MI557002427800	<b>Est. CTC (Comp Year):</b>	\$ 19.5 million (FY 2047)
<b>Location (Size):</b>	Oscoda, Michigan (4,627 acres)	<b>IRP Sites (Final RIP/RC):</b>	62 (FY2010)
<b>Mission:</b>	Supported fighter, bomber, and cargo aircraft operations	<b>MMRP Sites (Final RIP/RC):</b>	9 (FY2010)
<b>HRS Score:</b>	50.00; placed on NPL in January 1994	<b>Five-Year Review Status:</b>	Underway and planned
<b>IAG Status:</b>	N/A	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-103
<b>Contaminants:</b>	Spent solvents, UXO, VOCs, SVOCs, metals, POLs		
<b>Media Affected:</b>	Surface Water, Soil, Groundwater		
<b>Funding to Date:</b>	\$ 62.8 million		



**Progress To Date**

Prior to its closure, the mission of Wurtsmith Air Force Base (AFB) was to conduct tactical fighter and bomber training. Sites at the installation include a waste solvent underground storage tank (UST), bulk storage areas for petroleum/oil/lubricants (POLs), aboveground storage tanks, fire training areas, landfills (LFs), and an aircraft crash site. Volatile organic compounds (VOCs) at the installation include trichloroethylene (TCE), dichloroethene, vinyl chloride, benzene, toluene, ethyl benzene, and xylenes, all of which primarily affect groundwater. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in January 1994. The 1991 BRAC Commission recommended closure of Wurtsmith AFB and the installation closed in June 1993. The BRAC cleanup team developed a BRAC cleanup plan with community input to prioritize sites requiring environmental restoration. The installation formed a Restoration Advisory Board in FY94 to discuss its cleanup progress with the community. To ensure continuous monitoring and improvement, the installation completed a five-year review report in FY04.

In FY04, the installation conducted an inventory of sites suspected to contain contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Wurtsmith AFB for FY05 through FY08 is summarized below.

In FY05, Wurtsmith AFB completed remedial investigation (RI) fieldwork at Spill Site (SS) 072 and prepared the draft RI report. The installation obtained approval of a five-year review report. The installation began evaluating requirements at identified MMRP sites.

In FY06, Wurtsmith AFB completed a site assessment for the UST at Building 5002 and fieldwork at LFs 030 and 031 to provide additional cleanup information to the Michigan Department of Environmental Quality. The installation also submitted a risk assessment to the state to modify the allowable discharge of tetrachloroethylene (PCE) into the wetland. Under the MMRP, Wurtsmith AFB completed an archive search report to identify and evaluate all sites and determine necessary follow-on actions. The installation identified five additional MMRP sites: Fire-In Butt, Skeet Range (South), Skeet Range (West), Grenade Range, and North

Explosive Ordnance Disposal Range. In FY07, Wurtsmith AFB completed decision documents (DDs) selecting cleanup actions for Storage Tanks (STs) 068, 069, and 071. The installation also mapped the potential for well water to come from a PCE-contaminated area at Other (OT) site 024 and cleared a 52-acre parcel for transfer. The installation investigated LFs 030 and 031 and cleared a 17-acre parcel for transfer. Wurtsmith AFB began plans to resolve a RCRA cap issue at LFs 030 and 031 by proposing to install a pump-and-treat system. Under the MMRP, Wurtsmith AFB completed a site inspection (SI) at the Fire-In Butt and recommended that no further cleanup action was necessary. The installation completed SI work plans for four other sites and cleared munitions explosives of concern from the North Explosive Ordnance Disposal Range. Wurtsmith AFB placed land use controls (LUCs) on land transfers at two MMRP sites (the Bombing/Strafing Range and the Weapons Storage Area), restricting the use of or access to the sites.

In FY08, Wurtsmith AFB awarded a contract for cleanup design and action at SS 072, cleanup implementation at LFs 030 and 031, and a qualitative risk assessment at LF 027. The installation completed an SI for Fire Protection Training Area (FPTA) 002. Wurtsmith AFB documented that SS 071 was operating properly and successfully, which allowed two parcels located on the site to be transferred. In addition, Wurtsmith AFB implemented LUCs on all property within the installation's boundaries. The installation completed SI fieldwork at four MMRP sites.

**FY09 IRP Progress**

Wurtsmith AFB drafted the DD for LFs 030 and 031, which included the pump-and-treat system proposal. The installation began designing cleanup processes for LFs 030 and 031, and SS 072, and began a feasibility study (FS) to evaluate cleanup alternatives at SS 072. Wurtsmith AFB completed an SI at FPTA 002. The cost of completing environmental restoration has changed significantly due to changes in estimating criteria.

Contractual issues delayed completion of the FS for SS 072. Regulatory issues delayed completion of the DD for LFs 030 and 031 and the explanation of significant differences for the

ROD for Site OT 024. Technical issues delayed completion of the risk assessment for LF 027 and the draft DD for FPTA 002.

**FY09 MMRP Progress**

The installation completed groundwater fieldwork at the Grenade Range; no further cleanup action is required. Wurtsmith AFB implemented LUCs at all MMRP sites.

Regulatory issues delayed completion of DDs for four MMRP sites.

**Plan of Action**

Plan of action items for Wurtsmith Air Force Base are grouped below according to program category.

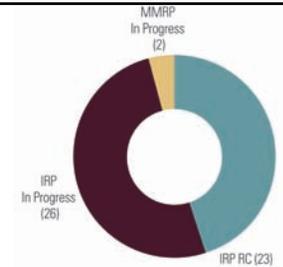
**IRP**

- Complete DD for LFs 030 and 031, and begin constructing cleanup systems in FY10.
- Complete DD/FS for SS 072 and begin constructing cleanup systems in FY10.
- Complete DD for FPTA 002 in FY10.
- Begin new investigation at LF 027 in FY10.
- Complete explanation of significant differences for the ROD for OT 024 in FY10.
- Obtain approval of five-year review report in FY10.

**MMRP**

- Conduct ongoing hazard recognition training in FY10.
- Complete DDs for four MMRP sites in FY10.

<b>FFID:</b>	VA317002417000	<b>Media Affected:</b>	Groundwater, Surface Water, Sediment, Soil
<b>Location (Size):</b>	Yorktown, Virginia (10,624 acres)	<b>Funding to Date:</b>	\$ 57.6 million
<b>Mission:</b>	Provide technical support and maintenance, modifications, production, loading, off-loading, and storage for Atlantic Fleet	<b>Est. CTC (Comp Year):</b>	\$ 25.9 million (FY 2039)
<b>HRS Score:</b>	50.00; placed on NPL in October 1992	<b>IRP Sites (Final RIP/RC):</b>	49 (FY2018)
<b>IAG Status:</b>	FFA signed in August 1994	<b>MMRP Sites (Final RIP/RC):</b>	2 (FY2014)
<b>Contaminants:</b>	Acids, asbestos, explosives, cadmium, zinc, lead, mercury, PAHs, VOCs, paint thinners, solvents, PCBs, waste oils, nickel, varnishes, SVOCs, metals, propellants, explosives	<b>Five-Year Review Status:</b>	Completed and planned
		<b>IRP/MMRP Status Table:</b>	Refer to page C-6-175



**Progress To Date**

Yorktown Naval Weapons Station (NWS) provides ordnance technical support and related services to the Atlantic Fleet. Six contaminated sites are hydrologically connected to the Chesapeake Bay. Contaminants include explosive nitramine compounds and volatile organic compounds (VOCs) that affect groundwater, surface water, and sediment. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in October 1992. DoD and EPA signed a federal facility agreement (FFA) in September 1994 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Yorktown NWS for realignment. Formed in FY91, the installation converted its technical review committee responsible for communicating cleanup progress with the community into a Restoration Advisory Board in FY95. In FY02, the installation updated the community relations plan. To ensure continuous monitoring and improvement, Yorktown NWS completed five-year review reports in FY02 and FY08.

To date, Yorktown NWS has completed 16 Records of Decision (RODs), which selected cleanup actions for 16 sites. In FY02, the installation conducted an inventory of all sites suspected to contain munitions contamination for the Military Munitions Response Program (MMRP); MMRP sites were identified. Cleanup progress at Yorktown NWS for FY05 through FY08 is summarized below.

In FY05, Yorktown NWS finalized a ROD requiring no further cleanup action for soils at Site 4, and a ROD requiring no action for Site 18. Additionally, the installation completed the draft final long-term monitoring report for Site 12, and work plans for investigation of mercury contamination in Ballard Creek downstream of Site 12. The installation also finalized the remedial investigation (RI) for Sites 27 through 30, work plans for Operable Unit (OU) 1, and master project plans.

In FY06, Yorktown NWS completed a ROD requiring no action for Site 27, and long-term monitoring at Sites 1, 3, and 7. The installation began a baseline assessment of potential risk to the environment for the wetlands downgradient of Site 12 (Supply Support Area (SSA) 25). Under the MMRP, Yorktown NWS completed the preliminary assessment and began the site

inspection (SI) for the Morale, Welfare, and Recreation Skeet Range.

In FY07, Yorktown NWS completed the Round I RI and began the Round II RI for groundwater at OU 1. The installation also completed an engineering evaluation and cost analysis for Site 30. Under the MMRP, Yorktown NWS completed the field investigation for the closed Morale, Welfare, and Recreation Skeet Range and began the SI report.

In FY08, Yorktown NWS determined that all sites were in compliance. The installation also completed the removal action at Site 30. Under the MMRP, the installation completed an SI report for the closed Morale, Welfare, and Recreation Skeet Range with no further cleanup action required. Yorktown NWS also completed a second five-year review report.

**FY09 IRP Progress**

Yorktown NWS continued Round II RI for groundwater at OU 1; however, administrative issues delayed its completion. Regulatory issues delayed completion of a ROD for Site 29 and groundwater for Sites 11 and 17. The cost of completing environmental restoration has changed significantly due to technical issues.

**FY09 MMRP Progress**

The installation completed an evaluation of potential hazards at Site 2 for prioritization purposes.

**Plan of Action**

Plan of action items for Yorktown Naval Weapons Station are grouped below according to program category.

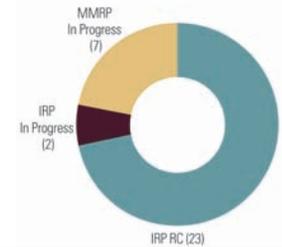
**IRP**

- Complete RI at Site 31, and Round II RI at OU 1 in FY10.
- Complete RODs for Sites 11, 17, and 29 in FY10.
- Complete removal action at Site 32 (SSA 25) in FY10.
- Complete RI at Sites 1, 3, and 6 in FY11.

**MMRP**

There are no MMRP actions scheduled for FY10 or FY11.

<b>FFID:</b>	AZ917302449300	<b>Funding to Date:</b>	\$ 51.5 million
<b>Location (Size):</b>	Yuma, Arizona (4,741 acres)	<b>Est. CTC (Comp Year):</b>	\$ 14.2 million (FY 2021)
<b>Mission:</b>	Support tactical aircrew combat training for Pacific and Atlantic Fleet Marine Corps Forces	<b>IRP Sites (Final RIP/RC):</b>	25 (FY2001)
<b>HRS Score:</b>	32.24; placed on NPL in February 1990	<b>MMRP Sites (Final RIP/RC):</b>	7 (FY2019)
<b>IAG Status:</b>	FFA signed in January 1992	<b>Five-Year Review Status:</b>	Completed and planned
<b>Contaminants:</b>	Petroleum hydrocarbons, SVOCs, trihalomethanes, VOCs, metals, explosives, propellants, JP-5	<b>IRP/MMRP Status Table:</b>	Refer to page C-6-12
<b>Media Affected:</b>	Groundwater and Soil		



**Progress To Date**

The Yuma Marine Corps Air Station (MCAS) supports tactical aircrew combat training for Pacific and Atlantic Fleet Marine Corps Forces. Initial investigations conducted at the installation identified 20 CERCLA sites and 5 underground storage tank (UST) sites. Site types include landfills, sewage lagoons, liquid waste disposal areas, and ordnance and low-level radioactive material disposal sites. The potential risk to human health and the environment was significant enough for EPA to place the installation on the NPL in February 1990. DoD and EPA signed a federal facility agreement (FFA) in January 1992 to outline how they were going to proceed with cleanup. In 2005, the BRAC Commission recommended Yuma MCAS for realignment. To ensure continuous monitoring and improvement, the installation completed a five-year review report for Operable Unit (OU) 2 in FY03 and updated it in FY04. The installation also completed a five-year review report for OU 1 in FY04.

To date, the installation signed two Records of Decision which selected cleanup actions for 25 Installation Restoration Program (IRP) sites. The installation required no further construction of cleanup systems at three of eighteen soil IRP sites. The remaining fifteen sites, and five UST IRP sites have closed. One groundwater site (OU 1) is made up of four areas contaminated with chlorinated solvent (Plume Areas 1, 2, 3, and 6) and two areas contaminated with fuel (Plume Areas 4, 5, and 5a). OU 1 Areas 4, 5, 5a, and 6 closed. Cleanup progress at Yuma MCAS for FY05 through FY08 is summarized below.

In FY05, the installation abandoned monitoring wells at Plume Areas 5a and 6. The installation also requested permanent shutdown of the operating cleanup system and site closure at Plume Area 2. The installation continued operation and maintenance (O&M) at one groundwater cleanup system at OU 1, and long-term management (LTM) at Plume Areas 1, 2, and 3. The installation investigated and found no significant contamination at Plume Area 3.

In FY06, Yuma MCAS requested and received site closures at Plume Areas 2 and 3. The EPA approved the permanent shutdown of the operating cleanup system located at the leading edge of a plume area. The installation reduced LTM from quarterly to twice per year and reduced the number of

monitoring wells by 50 percent. The installation also continued O&M at one groundwater remedial system at OU 1 and continued LTM at Plume Area 1. Under the MMRP, the installation began work plans for site inspections (SIs).

In FY07, Yuma MCAS continued LTM at Plume Area 1. The installation abandoned monitoring wells at Plume Areas 2 and 3, and shutdown the air sampling (AS) and soil vapor extraction (SVE) system. Yuma MCAS continued to maintain the AS/SVE system in temporary shutdown mode at the highly contaminated area. Yuma MCAS also performed groundwater sampling as detailed in the LTM work plan. Under the MMRP, the installation prioritized all sites, developed work plans, and began fieldwork for SIs.

In FY08, Yuma MCAS continued LTM at Plume Area 1, and monitoring of the groundwater rebound in the shutdown AS/SVE system. Under the MMRP, the installation completed abandonment of groundwater monitoring wells. Yuma MCAS also published a public notice of the SIs in the local newspaper.

**FY09 IRP Progress**

Yuma MCAS completed the inventory and inspection of all wells installed at the base. The installation also completed its last monitoring event for groundwater rebound for possible permanent AS/SVE shutdown.

Contractual issues delayed completion of the abandonment report for the Leading Edge of a Plume Area.

**FY09 MMRP Progress**

Technical issues delayed completion of work plans for SIs.

**Plan of Action**

Plan of action items for Yuma Marine Corps Air Station are grouped below according to program category.

**IRP**

- Complete the five-year review report in FY10.
- Complete the well abandonment report for the Leading Edge of a Plume Area in FY10-FY11.
- Submit a request for closure of OU1 in FY10-FY11.

**MMRP**

- Identify sites that require no further cleanup action and further characterize sites within the SI report in FY10.