

APPENDIX I: Installation Narrative Summaries

RESTORATION

Appendix I contains narratives describing environmental restoration progress and funding at 203 Department of Defense (DoD) installations and former properties. These narratives summarize Defense Environmental Restoration Program (DERP) activities at (1) active DoD installations and installation complexes, and formerly used defense sites (FUDS) that are on, or proposed for, the U.S. Environmental Protection Agency's (EPA's) National Priorities List (NPL); and (2) a majority of the installations that have undergone base realignment and closure (BRAC) as of September 30, 2005. The NPL is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. Currently, unexploded ordnance and discarded military munitions are not part of consideration for placing sites on the NPL.

Installation Narrative Format

Each narrative provides key points of information about the installation and its restoration progress. The installation's Federal Facility Identification number (FFID), size in acres, and mission are provided in the top box portion of each narrative, as are contaminants found at the installation, media affected, any Hazard Ranking System (HRS) scores, interagency agreement (IAG) status, five-year review status, total funding to date, estimated cost to completion, completion year (the year in which all response actions at the installation are completed), and final remedy in place (RIP) or response complete (RC) dates for both Installation Restoration Program (IRP) and Military Munitions Response Program (MMRP) sites.

The narrative text presents a description of the installation's past environmental restoration activities and planned efforts. The Progress to Date section provides background on the installation and summarizes past environmental restoration-related activities and key environmental restoration events. In addition, this section contains detailed descriptions of

environmental restoration progress at the installation under both the IRP and MMRP for fiscal year (FY) 2001 through FY2004. The next two sections, FY2005 IRP Progress and FY2005 MMRP Progress, address current year environmental restoration progress in detail for both the IRP and MMRP categories, respectively. The final narrative section, entitled Plan of Action, provides information on activities that will be conducted at the installation during the next two years, and is subdivided to distinguish between action items for the IRP and MMRP categories.

Reporting Requirements

This appendix fulfills the statutory reporting requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §120(e)(5) and the Superfund Amendments and Reauthorization Act (SARA) §211. Required elements of these installation narratives include a description of any hazards presented at each facility, plans and schedules for completing response actions, and an explanation of any postponements or failures to complete response actions as planned. All of these requirements are covered in the narrative text.

IAG status and Federal facility agreement status, and five-year review status are also statutorily required elements of the installation narratives. Reviews of the remedial action may be required for specific sites no less than every five years after initiating the remedy. Information on these elements can be found in the top box portion of each narrative, as well as in the narrative text.

Additionally, installation narratives include information on munitions response activity and MMRP progress to comply with requirements in the National Defense Authorization Act for Fiscal Year 2002 and the Management Guidance for the Defense Environmental Restoration Program. Past MMRP accomplishments are described in the Progress to Date section of the

narrative, while current year progress is discussed under the FY2005 MMRP Progress section. Munitions response actions for non-BRAC sites that occurred prior to the creation of the MMRP in FY2001 were addressed under the IRP. Site-level data are not available for all installations that have military munitions response actions. As the MMRP matures, additional data will be included to more accurately reflect the work that is completed or under way at these sites.

An installation may need to change its funding projections from year to year. Installations that have an estimated cost of completion greater than \$10 million must include an explanation for environmental cleanup cost estimate differences of greater than 10 percent from year to year. Significant changes in an installation's cost-to-complete estimates are noted in the FY2005 IRP Progress section, along with an explanation of why the estimate has changed. There are three explanation categories of cost-to-complete changes: technical issues (including, but not limited to, additional sites found, incomplete site data, and additional or extended remedial action operations); regulatory issues (including, but not limited to, lowering an existing cleanup requirement and creating new regulations); and estimating criteria (including, but not limited to, the addition of cost data that were overlooked or previously unknown, database updates, and corrections).

Table I-1 provides a summary of the status of NPL, proposed NPL, or BRAC installations requiring narratives and organized by Component.

**Table I-1
Status of Installations by Requiring Natives**

| Component | Total Narratives | NPL | Proposed NPL | BRAC |
|---------------|------------------|------------|--------------|-----------|
| Army | 53 | 34 | 1 | 29 |
| Navy | 69 | 49 | 1 | 28 |
| Air Force | 59 | 40 | 5 | 29 |
| DLA | 5 | 4 | 0 | 2 |
| FUDS | 17 | 17 | 0 | 0 |
| Total* | 203 | 144 | 7 | 88 |

* This report includes 203 installation narratives in Appendix J. The totals in the table above are higher, as some installations are both NPL and BRAC.

As environmental restoration progresses, some installations previously included in this appendix no longer require a narrative. A narrative may no longer be needed for many reasons, including the installation's deletion from the NPL or a DoD determination of No Further Action Required for the property. For installations that do not require narratives after FY2005, these narratives note a "last narrative" status in the FY05 IRP Progress section. Table I-2 lists installations that previously had narratives in this appendix, the reason for each installation's removal from the appendix, and the year of the last Annual Report to Congress in which a full-text narrative for the installation appears. There are four narratives that appeared in the FY2004 Annual Report to Congress that are not listed in this year's report—Kaho'olawe Island, Fort Totten, Indianapolis Naval Air Warfare Center, and Midway Naval Air Facility. Naval Activity Puerto Rico was added to the FY2005 report. Although Naval Activity Puerto Rico is not a BRAC property, Congress has mandated that it be treated as such, and therefore DoD has included an installation narrative for FY2005. Naval District Washington, West Area has changed its primary name to Naval Support Facility, Dahlgren.

Table I-3 provides an index to the Appendix I narratives, listing all of the installation narratives alphabetically, by Component. For each installation in this appendix, the index also includes the status of the installation (NPL, proposed NPL, or BRAC) and the page on which each restoration narrative is located. The installation narratives are arranged in alphabetical order by installation name.

Appendix R of this report defines acronyms found in the installation narratives. More specific information about site status and program costs for each installation in this appendix can be found in Appendix J, the IRP and MMRP Status Tables. More detailed information on environmental restoration activities at an installation prior to FY2001 can be found in the installation narratives from earlier editions of the DERP Annual Report to Congress, which can be accessed through the FY2005 DoD Environmental Programs Annual Report to Congress Web site at <http://www.denix.osd.mil/DEP2005>.

**Table I-2
Installations No Longer Requiring Narratives**

| Installation | FFID | State | NPL/BRAC | Reason Narrative Archived | Last ARC Full Narrative Appeared | IRP/MMRP Status Table References |
|-----------------------------------------------------------|-----------------------------------|-------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|
| Army | | | | | | |
| Army Research Laboratory-Woodbridge | VA321382098100 | VA | BRAC 1991 | All remedies are in place at this installation and all property has been transferred. | FY2001 | J-3-42 |
| Cameron Station | VA321022013900 | VA | BRAC 1988 | All remedies are in place at this installation and all property has been transferred. | FY2000 | J-2-34 |
| Defense Distribution Depot Ogden | UT821002092200 | UT | NPL/ BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2003 | J-2-34 |
| Detroit Arsenal and Tank Plant | MI521382026800 | MI | BRAC 1995 | The Army has completed all required actions at the installation. The installation achieved remedy in place and response complete status and all property has been transferred. | FY2002 | J-3-22 |
| Fitzsimons Army Medical Center | CO821162033300 | CO | BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2003 | J-3-8 |
| Fort Benjamin Harrison | IN521372040200 | IN | BRAC 1991 | The Army has completed all required actions at the installation. The installation achieved remedy in place and response complete (RC) status and all property has been transferred. | FY2000 | J-3-15 |
| Fort Greely | AK021452215500 | AK | BRAC 1995 | The installation became part of the Strategic Missile Defense Command and is no longer a BRAC installation. | FY2002 | J-2-1 |
| Fort Totten | NY221022089700 | NY | BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2004 | J-3-28 |
| Hingham Annex | MA121402280500 | MA | BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2003 | J-3-20 |
| Military Ocean Terminal, Bayonne | NJ221352275200 | NJ | BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2002 | J-3-27 |
| Presidio of San Francisco | CA921402079100 | CA | BRAC 1988 | The Army is no longer responsible for restoration activities at this installation. Subsequent activities will be conducted by the Presidio Trust. | FY1999 | J-3-5 |
| Schofield Barracks | HI921452223900 | HI | NPL | The installation has reached the construction complete milestone and has been delisted from the NPL | FY2000 | J-1-109 |
| Sudbury Training Annex | MA121402300900 | MA | NPL/ BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2003 | J-3-20 |
| Navy | | | | | | |
| Glenview Naval Air Station and Libertyville Training Site | IL517002293000/ IL517009999900 | IL | BRAC 1993 | The transfer of all property was completed and no further cleanup is required by Navy. | FY2003 | J-3-14 |

| Installation | FFID | State | NPL/BRAC | Reason Narrative Archived | Last ARC Full Narrative Appeared | IRP/MMRP Status Table References |
|--------------------------------------------|----------------|-------|-----------|----------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|
| Navy | | | | | | |
| Indianapolis Naval Air Warfare Center | IN517002349900 | IN | BRAC 1995 | The transfer of all land and offshore property was completed and no further cleanup is required by Navy. | FY2003 | J-3-15 |
| Kaho'olawe Island | N/A | HI | N/A | A narrative is not legally required. | FY2004 | |
| Midway Naval Air Facility | MQ917002758400 | MQ | BRAC 1993 | No further cleanup is required by Navy. | FY2004 | J-3-23 |
| Oakland Fleet and Industrial Supply Center | CA917002477600 | CA | BRAC 1995 | The transfer of all land and offshore property was completed and no further cleanup is required by Navy. | FY1999 | J-3-5 |
| Sabana Seca Naval Security Group Activity | PR217002753500 | PR | NPL | The installation was delisted from the NPL and no further action is required for any sites. | FY1999 | J-3-36 |

| | | | | | | |
|---------------------------------------|----------------|----|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| Air Force | | | | | | |
| Luke Air Force Base | AZ957152413300 | AZ | NPL | The installation was delisted from the NPL with only remedial action operations and long-term management. | FY2002 | J-2-3 |
| Minneapolis-St. Paul Air Reserve Base | MN557122427500 | MN | NPL | The installation was delisted from the NPL and no further action is required for any sites. | FY1999 | J-3-23 |
| Roslyn Air Guard Station | NY257282429600 | NY | BRAC 1995 | RC has been achieved for all sites and no long-term monitoring is required. The Air Force does not plan to spend additional restoration funds at this installation. | FY1997 | J-2-26 |

| | | | | | | |
|------------------------------|----------------|----|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------|
| FUDS | | | | | | |
| Avco Lycoming Superfund Site | PA39799F145100 | PA | NPL | A FUDS closeout report was submitted in FY1996, and the project has been closed. Avco Lycoming continued to operate a groundwater treatment system. No further action is required of DoD at this site. | FY1996 | J-3-35 |
| Kingsbury (Fisher-Calo) | IN59799F35700 | IN | NPL | No further action is required by DoD. EPA and the private potentially responsible parties (PRPs) are managing the site remediation. | FY1999 | J-1-132 |
| Malta Rocket Fuel Area | NY29799F128100 | NY | NPL | DoD has no remaining liability at this property. | FY1999 | J-3-29 |
| Marathon Battery Corporation | NY29799F114200 | NY | NPL | A settlement agreement was signed by the PRPs in FY1996. No further action was required of DoD. This installation was delisted from the NPL in October 1996. | FY1996 | J-3-29 |
| Middletown Air Field | PA39799F144500 | PA | NPL | In September 1996, EPA issued a final Record of Decision and began the process to delete the site from the NPL. This installation was delisted from the NPL in July 1997. | FY1996 | J-3-36 |
| San Fernando Valley (Area 1) | CA99799F530400 | CA | NPL | DoD has no remaining liability at this property. | FY2001 | J-3-6 |
| Strother Army Airfield | KS79799F031800 | KS | NPL | DoD has no remaining liability at this property. | FY2001 | J-2-17 |

**Table I-3
Appendix I Index**

| Installation Name | State | Status | Page |
|------------------------------------------------------------------|-------|----------|------|
| ARMY | | | |
| Aberdeen Proving Ground Edgewood Area and Michaelsville Landfill | MD | NPL | I-12 |
| Alabama Army Ammunition Plant | AL | NPL/BRAC | I-19 |
| Anniston Army Depot Southeast Industrial Area | AL | NPL | I-25 |
| Army Research Laboratory--Watertown | MA | NPL/BRAC | I-26 |
| Camp Bonneville | WA | BRAC | I-36 |
| Cornhusker Army Ammunition Plant | NE | NPL | I-47 |
| Fort Chaffee | AR | BRAC | I-70 |
| Fort Devens | MA | NPL/BRAC | I-72 |
| Fort Dix | NJ | NPL | I-73 |
| Fort Dix BRAC | NJ | BRAC | I-74 |
| Fort Eustis | VA | NPL | I-75 |
| Fort George G. Meade | MD | NPL/BRAC | I-76 |
| Fort Lewis Logistics Center | WA | NPL | I-77 |
| Fort McClellan | AL | BRAC | I-78 |
| Fort Monmouth | NJ | BRAC | I-79 |
| Fort Ord (Presidio of Monterey) | CA | NPL/BRAC | I-80 |

| Installation Name | State | Status | Page |
|--------------------------------------------------------------|-------|----------|-------|
| ARMY | | | |
| Fort Pickett | VA | BRAC | I-81 |
| Fort Richardson | AK | NPL | I-82 |
| Fort Riley | KS | NPL | I-83 |
| Fort Ritchie | MD | BRAC | I-84 |
| Fort Sheridan | IL | BRAC | I-85 |
| Fort Wainwright | AK | NPL | I-86 |
| Fort Wingate | NM | BRAC | I-87 |
| Hamilton Army Airfield | CA | BRAC | I-94 |
| Iowa Army Ammunition Plant | IA | NPL | I-101 |
| Jefferson Proving Ground | IN | BRAC | I-103 |
| Joliet Army Ammunition Plant LAP Area and Manufacturing Area | IL | NPL | I-105 |
| Lake City Army Ammunition Plant Northwest Lagoon | MO | NPL | I-109 |
| Letterkenny Army Depot | PA | NPL/BRAC | I-112 |
| Lexington Facility, Lexington-Blue Grass Army Depot | KY | BRAC | I-113 |
| Lone Star Army Ammunition Plant | TX | NPL | I-114 |
| Longhorn Army Ammunition Plant | TX | NPL | I-116 |

**Table I-3
Appendix I Index**

| Installation Name | State | Status | Page |
|---------------------------------|-------|--------------|-------|
| ARMY | | | |
| Louisiana Army Ammunition Plant | LA | NPL | I-118 |
| Milan Army Ammunition Plant | TN | NPL | I-130 |
| Oakland Army Base | CA | BRAC | I-153 |
| Pueblo Chemical Depot | CO | BRAC | I-166 |
| Red River Army Depot | TX | BRAC | I-168 |
| Redstone Arsenal | AL | NPL | I-169 |
| Riverbank Army Ammunition Plant | CA | NPL | I-173 |
| Rocky Mountain Arsenal | CO | NPL | I-175 |
| Sacramento Army Depot | CA | NPL/BRAC | I-176 |
| Savanna Army Depot | IL | NPL/BRAC | I-180 |
| Seneca Army Depot | NY | NPL/BRAC | I-181 |
| Sierra Army Depot | CA | BRAC | I-182 |
| Stratford Army Engine Plant | CT | BRAC | I-185 |
| Sunflower Army Ammunition Plant | KS | Proposed NPL | I-186 |
| Tobyhanna Army Depot | PA | NPL | I-188 |
| Tooele Army Depot | UT | NPL/BRAC | I-189 |

| Installation Name | State | Status | Page |
|-----------------------------------------------------------------------------------|-------|----------|-------|
| ARMY | | | |
| Twin Cities Army Ammunition Plant | MN | NPL | I-195 |
| U.S. Army Armament Research, Development and Engineering Center Picatinny Arsenal | NJ | NPL | I-197 |
| U.S. Army Soldiers Systems Center | MA | NPL | I-198 |
| Umatilla Chemical Depot | OR | NPL/BRAC | I-199 |
| Vint Hill Farms Station | VA | BRAC | I-200 |
| NAVY | | | |
| Adak Naval Air Facility | AK | NPL/BRAC | I-13 |
| Agana Naval Air Station | GU | BRAC | I-14 |
| Alameda Naval Air Station | CA | NPL/BRAC | I-20 |
| Albany Marine Corps Logistics Base | GA | NPL | I-21 |
| Allegany Ballistics Laboratory | WV | NPL | I-22 |
| Bangor Naval Submarine Base | WA | NPL | I-29 |
| Barbers Point Naval Air Station | HI | BRAC | I-30 |
| Barstow Marine Corps Logistics Base | CA | NPL | I-31 |
| Bedford Naval Weapons Industrial Reserve Plant | MA | NPL | I-32 |

**Table I-3
Appendix I Index**

| Installation Name | State | Status | Page |
|----------------------------------------------------|-------|----------|-------|
| NAVY | | | |
| Brunswick Naval Air Station | ME | NPL | I-35 |
| Camp Lejeune Marine Corps Base | NC | NPL | I-37 |
| Camp Pendleton Marine Corps Base | CA | NPL | I-38 |
| Cecil Field Naval Air Station | FL | NPL/BRAC | I-41 |
| Charleston Naval Shipyard and Naval Station | SC | BRAC | I-43 |
| Cherry Point Marine Corps Air Station | NC | NPL | I-44 |
| Concord Naval Weapons Station | CA | NPL | I-46 |
| Dallas Naval Air Station | TX | BRAC | I-48 |
| Davisville Naval Construction Battalion Center | RI | NPL/BRAC | I-49 |
| Driver Naval Radio Transmitting Facility | VA | BRAC | I-56 |
| Earle Naval Weapons Station | NJ | NPL | I-58 |
| El Toro Marine Corps Air Station | CA | NPL/BRAC | I-61 |
| Fridley Naval Industrial Reserve Ordnance Plant | MN | NPL | I-88 |
| Guam Apra Harbor Complex | GU | BRAC | I-93 |
| Hunter's Point Annex-Treasure Island Naval Station | CA | NPL/BRAC | I-99 |
| Indian Head Naval Surface Warfare Center | MD | NPL | I-100 |

| Installation Name | State | Status | Page |
|--------------------------------------------------------------------|-------|--------------|-------|
| NAVY | | | |
| Jacksonville Naval Air Station | FL | NPL | I-102 |
| Keyport Naval Undersea Warfare Center | WA | NPL | I-108 |
| Lakehurst Naval Air Engineering Station | NJ | NPL | I-110 |
| Long Beach Naval Complex | CA | BRAC | I-115 |
| Louisville Naval Surface Warfare Center | KY | BRAC | I-119 |
| Mare Island Naval Shipyard | CA | BRAC | I-122 |
| Marine Corps Base Quantico | VA | NPL | I-123 |
| Mechanicsburg Naval Inventory Control Point | PA | NPL | I-129 |
| Moffett Field Naval Air Station | CA | NPL/BRAC | I-131 |
| Naval Activity Puerto Rico | PR | BRAC | I-136 |
| Naval Amphibious Base Little Creek | VA | NPL | I-137 |
| Naval Auxiliary Landing Field Crows Landing | CA | BRAC | I-138 |
| Naval Computer and Telecommunications Area Master Station, Pacific | HI | NPL | I-139 |
| Naval Facilities on Vieques | PR | Proposed NPL | I-140 |
| Naval Fuel Depot, Point Molate | CA | BRAC | I-141 |
| Naval Magazine Indian Island | WA | NPL | I-142 |

**Table I-3
Appendix I Index**

| Installation Name | State | Status | Page |
|------------------------------------------------|-------|----------|-------|
| NAVY | | | |
| Naval Station Newport | RI | NPL | I-143 |
| Naval Support Facility, Dahlgren | VA | NPL | I-145 |
| New London Naval Submarine Base | CT | NPL | I-148 |
| Norfolk Naval Base Sewells Point Naval Complex | VA | NPL | I-150 |
| Norfolk Naval Shipyard | VA | NPL | I-151 |
| Orlando Naval Training Center | FL | BRAC | I-156 |
| Parris Island Marine Corps Recruit Depot | SC | NPL | I-158 |
| Patuxent River Naval Air Station | MD | NPL | I-159 |
| Pearl Harbor Naval Complex | HI | NPL | I-160 |
| Pensacola Naval Air Station | FL | NPL | I-162 |
| Philadelphia Naval Complex | PA | BRAC | I-163 |
| Portsmouth Naval Shipyard | ME | NPL | I-165 |
| Puget Sound Naval Shipyard | WA | NPL | I-167 |
| San Diego Naval Training Center | CA | BRAC | I-178 |
| South Weymouth Naval Air Station | MA | NPL/BRAC | I-183 |
| St. Juliens Creek Annex | VA | NPL | I-184 |

| Installation Name | State | Status | Page |
|-----------------------------------------------------------|-------|--------------|-------|
| NAVY | | | |
| Treasure Island Naval Station | CA | BRAC | I-191 |
| Trenton Naval Air Warfare Center Aircraft Division | NJ | BRAC | I-192 |
| Tustin Marine Corps Air Station | CA | BRAC | I-194 |
| Warminster Naval Air Warfare Center Aircraft Division | PA | NPL/BRAC | I-201 |
| Washington Navy Yard | DC | NPL | I-202 |
| Whidbey Island Naval Station Ault Field and Seaplane Base | WA | NPL | I-204 |
| White Oak Naval Surface Warfare Center | MD | BRAC | I-205 |
| Whiting Field Naval Air Station | FL | NPL | I-206 |
| Williamsburg FISC, Cheatham Annex | VA | NPL | I-208 |
| Willow Grove Naval Air Station Joint Reserve Base | PA | NPL | I-210 |
| Yorktown Naval Weapons Station | VA | NPL | I-213 |
| Yuma Marine Corps Air Station | AZ | NPL | I-214 |
| AIR FORCE | | | |
| Air Force Plant No. 4 | TX | NPL | I-15 |
| Air Force Plant No. 44 | AZ | NPL | I-16 |
| Air Force Plant No. 85 | OH | Proposed NPL | I-17 |

**Table I-3
Appendix I Index**

| Installation Name | State | Status | Page |
|---------------------------------------------------------------------------|-------|-------------------|------|
| AIR FORCE | | | |
| Air Force Plant PJKS | CO | NPL | I-18 |
| Andersen Air Force Base | GU | NPL | I-23 |
| Andrews Air Force Base | MD | NPL | I-24 |
| Arnold Engineering Development Center | TN | Proposed NPL | I-27 |
| Atlantic City Air National Guard Base Atlantic City International Airport | NJ | NPL | I-28 |
| Bergstrom Air Force Base | TX | BRAC | I-33 |
| Brandywine Defense Reutilization and Marketing Office | MD | NPL | I-34 |
| Carswell Air Force Base (Fort Worth JRB NAS) | TX | BRAC | I-39 |
| Castle Air Force Base | CA | NPL/BRAC | I-40 |
| Chanute Air Force Base | IL | Proposed NPL/BRAC | I-42 |
| Chicago O'Hare IAP Air Reserve Station | IL | BRAC | I-45 |
| Dover Air Force Base | DE | NPL | I-55 |
| Eaker Air Force Base | AR | BRAC | I-57 |
| Edwards Air Force Base | CA | NPL | I-59 |
| Eielson Air Force Base | AK | NPL | I-60 |

| Installation Name | State | Status | Page |
|---------------------------------------------------------------------|-------|----------|-------|
| AIR FORCE | | | |
| Ellsworth Air Force Base | SD | NPL | I-62 |
| Elmendorf Air Force Base | AK | NPL | I-63 |
| England Air Force Base | LA | BRAC | I-64 |
| F.E. Warren Air Force Base | WY | NPL | I-65 |
| Fairchild Air Force Base | WA | NPL | I-66 |
| Gentile Air Force Station Defense Electronics Supply Center, Dayton | OH | BRAC | I-89 |
| George Air Force Base | CA | NPL/BRAC | I-90 |
| Griffiss Air Force Base | NY | NPL/BRAC | I-91 |
| Grissom Air Force Base | IN | BRAC | I-92 |
| Hanscom Air Force Base | MA | NPL | I-95 |
| Hill Air Force Base | UT | NPL | I-97 |
| Homestead Air Force Base | FL | NPL/BRAC | I-98 |
| K.I. Sawyer Air Force Base | MI | BRAC | I-106 |
| Kelly Air Force Base | TX | BRAC | I-107 |
| Langley Air Force Base; including NASA Langley Research Center | VA | NPL | I-111 |

**Table I-3
Appendix I Index**

| Installation Name | State | Status | Page |
|--------------------------------------------------------------------------------------|-------|----------|-------|
| AIR FORCE | | | |
| Loring Air Force Base | ME | NPL/BRAC | I-117 |
| Lowry Air Force Base | CO | BRAC | I-120 |
| March Air Force Base | CA | NPL/BRAC | I-121 |
| Massachusetts Military Reservation Otis Air National Guard Base and Camp | MA | NPL | I-124 |
| Mather Air Force Base | CA | NPL/BRAC | I-125 |
| McChord Air Force Base Washrack/ Treatment Area and American Lake Garden Tract | WA | NPL | I-126 |
| McClellan Air Force Base | CA | NPL/BRAC | I-127 |
| McGuire Air Force Base | NJ | NPL | I-128 |
| Mountain Home Air Force Base | ID | NPL | I-133 |
| Myrtle Beach Air Force Base | SC | BRAC | I-134 |
| Newark Air Force Base | OH | BRAC | I-149 |
| Norton Air Force Base | CA | NPL/BRAC | I-152 |
| Pease Air Force Base | NH | NPL/BRAC | I-161 |
| Plattsburgh Air Force Base | NY | NPL/BRAC | I-164 |
| Reese Air Force Base | TX | BRAC | I-170 |

| Installation Name | State | Status | Page |
|------------------------------------------------------------|-------|----------------------|-------|
| AIR FORCE | | | |
| Richards-Gebaur Air Reserve Station | MO | BRAC | I-171 |
| Rickenbacker Air National Guard Base | OH | Proposed NPL/BRAC | I-172 |
| Robins Air Force Base | GA | NPL | I-174 |
| Tinker Air Force Base | OK | NPL | I-187 |
| Travis Air Force Base | CA | NPL | I-190 |
| Tucson International Airport | AZ | NPL | I-193 |
| Tyndall Air Force Base | FL | NPL | I-196 |
| Williams Air Force Base | AZ | NPL/BRAC | I-207 |
| Willow Grove Air Reserve Station | PA | NPL | I-209 |
| Wright-Patterson Air Force Base | OH | NPL | I-211 |
| Wurtsmith Air Force Base | MI | Proposed NPL/BRAC | I-212 |
| DLA | | | |
| Defense Distribution Depot Memphis | TN | NPL/BRAC | I-50 |
| Defense Distribution Depot San Joaquin, Sharpe Facility | CA | NPL | I-51 |
| Defense Distribution Depot San Joaquin, Tracey Facility | CA | NPL | I-52 |

**Table I-3
Appendix I Index**

| Installation Name | State | Status | Page |
|-----------------------------------------|-------|--------|-------|
| DLA | | | |
| Defense Supply Center Philadelphia | PA | BRAC | I-53 |
| Defense Supply Center Richmond | VA | NPL | I-54 |
| FUDS | | | |
| Fike-Artel Chemical | WV | NPL | I-67 |
| Former Nansemond Ordnance Depot | VA | NPL | I-68 |
| Former Weldon Spring Ordnance Works | MO | NPL | I-69 |
| Fort Crowder | MO | NPL | I-71 |
| Hastings Groundwater Contamination Site | NE | NPL | I-96 |
| Jet Propulsion Laboratory | CA | NPL | I-104 |
| Moses Lake Wellfield Contamination Site | WA | NPL | I-132 |
| National Presto Industries | WI | NPL | I-135 |
| Naval Station Todd-Tacoma | WA | NPL | I-144 |
| Nebraska Ordnance Plant | NE | NPL | I-146 |
| New Hanover County Airport | NC | NPL | I-147 |
| Old Navy Dump/Manchester Annex | WA | NPL | I-154 |

| Installation Name | State | Status | Page |
|----------------------------------------------------------------|-------|--------|-------|
| FUDS | | | |
| Ordnance Works Disposal Areas | WV | NPL | I-155 |
| Pantex Plant | TX | NPL | I-157 |
| San Bernardino Engineering Depot | CA | NPL | I-177 |
| Sangamo Electric Dump/Crab Orchard National Wildlife Refuge | IL | NPL | I-179 |
| West Virginia Ordnance Works | WV | NPL | I-203 |

| | | | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| FFID: | MD321382135500 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 72,516 acres | Funding to Date: | \$ 528.6 million |
| Mission: | Develop and test equipment and provide troop training | Estimated Cost to Completion (Completion Year): | \$ 370.3 million(FY 2039) |
| HRS Score: | 31.45 (Michaelsville Landfill); placed on NPL in October 1989 53.57 (Edgewood Area); placed on NPL in February 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2018 |
| IAG Status: | IAG signed in March 1990 | Five-Year Review Status: | Completed, planned, and underway |
| Contaminants: | VOCs, SVOCs, metals, PCBs, explosives, petroleum products, pesticides, radiation, CWM, UXO, potential biological warfare materiel | | |



Progress To Date

Studies have identified many areas of contamination at Aberdeen Proving Ground, 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 (UXO); closure of Nike missile silos, an adamsite vault, and pilot plant sumps; and cleanup of open dump sites. EPA placed two areas of Aberdeen on the NPL: one in October 1989, and one in February 1990. EPA and the Army signed an interagency agreement in 1990. During FY95, the installation converted its technical review committee to a Restoration Advisory Board. The Army completed 5-year reviews in FY99 and FY04.

The Army has signed 19 Records of Decision (RODs) to date. The cleanup progress at Aberdeen Proving Ground for FY01 through FY04 is detailed below.

In FY01, the Army completed the Western Boundary Study Area (WBSA) Operable Unit (OU) 1 treatment facility design and initiated a military construction project for the Canal Creek (CC) treatment facility. Groundwater contamination sampling was conducted at Graces Quarters. The installation signed decision documents (DDs) for two removal actions and prepared draft ecological risk assessments (ERAs) for the Westwood Study Area.

In FY02, the Army began construction of the CC groundwater treatment system. The installation submitted draft 5-year reviews for the Edgewood and Aberdeen Areas to EPA. The installation completed design and initiated construction of the shoreline stabilization for Carroll Island/Graces Quarters OU B. Construction began on the WBSA OU 1 groundwater treatment facility. The draft technical evaluation and proposed plan (PP) for Old O-Field (OU 1 and OU 2) were completed. The installation completed a time-critical removal action of munitions in D-Field (other Edgewood Areas).

In FY03, the installation continued removal actions at New O-Field. It used direct push technology to delineate the location of dense non-aqueous phase liquid (DNAPL) in J-Field and installed two DNAPL recovery wells. The ERA for the west branch of CC began. The installation completed construction and began operations at both the CC and WBSA OU 1 groundwater treatment facilities. The installation completed the chemical warfare materiel (CWM) Lauderick Creek removal action and delineated a perchlorate groundwater plume located in the WBSA. The installation signed two DDs: one for shoreline protection in D-Field and one to remove chemical waste from I-Field Japanese Bunker. The installation completed the technical evaluation and continued work towards the PP and ROD for Old O-Field (OU 1 and OU 2). The installation completed the Edgewood Area and the Aberdeen Area 5-year reviews. The Army conducted an inventory of closed, transferred, and transferring ranges and sites with UXO, discarded military munitions, or munitions constituents. It identified 19 Military Munitions Response Program (MMRP) sites at Aberdeen.

In FY04, EPA accepted the 5-year reviews for the Edgewood and Aberdeen Areas. The installation began DNAPL removal at J-Field and continued operations of the CC, Old O-Field, and WBSA OU 1 groundwater treatment facilities. The installation completed five draft feasibility studies (FSs) for Other Aberdeen Areas, one for the Westwood Area, and one for Cluster 13 groundwater in the Lauderick Creek Area. The installation conducted enhanced long-term monitoring at Watson Creek and revised the Michaelsville Landfill and WBSA monitoring plans to reduce monitoring. The Army closed out the Lauderick Creek CWM site. The Army signed RODs for the Cluster 5 blast slab and Other Lauderick Creek Clusters, and Graces Quarters Groundwater. The Army completed its Range Inventory Report/Preliminary Assessment for MMRP.

FY05 IRP Progress

The installation awarded performance-based contracts for Bush River Study Areas OU 2 and OU 3, Edgewood Area groundwater (Bush River, Lauderick Creek, Other Edgewood Areas Cluster 19) and the Westwood Study Area. The installation completed a ROD for Cluster 3 Bush River lead-contaminated soil. Additionally, the Army completed draft FSs for Bush River groundwater and land disposal units and

draft RIs for Other Edgewood Areas. The installation completed the final Rad Risk Assessment, RI/FS, and PP for Westwood. A draft ROD for Westwood was sent to EPA. The Army completed a draft ERA for Aberdeen Area, a human health risk assessment for Other Aberdeen Areas and Western Boundary, and a final Phase II RI for Other Aberdeen Areas.

The shoreline stabilization at both Carroll Island and Graces quarters were delayed due to the Army's need to utilize a range at Carroll Island and unusual high tides caused by northeast winds that restricted access to both sites.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete the RI/FSs for Bush River groundwater and land disposal units in FY06.
- Complete RODs for 32 Westwood sites, groundwater and sediment for the Other Aberdeen Area, and 13 selected sites in the Canal Creek Study Area in FY06.
- Complete construction of Carroll Island and Grace Quarters shoreline stabilization in FY06.
- Complete No Further Action DD for 31 sites in the Other Aberdeen Area in FY06.
- Complete interim removal action at the Hog Point Area in FY06.
- Complete the RI/FS and PP for the known distance and pistol ranges in the Other Aberdeen Area in FY06.

MMRP

- Initiate installationwide site inspection in FY06.

| | | | |
|------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | AK017002432300 | Funding to Date: | \$ 241.4 million |
| Size: | 76,800 acres | Estimated Cost to Completion (Completion Year): | \$ 52.0 million(FY 2016) |
| Mission: | Provided services and materials to support aviation activities and operating forces of the Navy | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2008 |
| HRS Score: | 51.37; placed on NPL in May 1994 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in November 1993 | | |
| Contaminants: | UXO, heavy metals, PCBs, VOCs, petroleum products | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

EPA placed the installation on the NPL in May 1994. In September 1995, the BRAC Commission recommended closure of Adak Naval Air Facility (NAF). Operational Naval forces departed the island on April 1, 1997. This time engineering Field Activity Northwest assumed command functions. The installation closed in September 1997. A study identified 32 sites at the installation, including landfills, unexploded ordnance (UXO) areas, and polychlorinated biphenyl (PCB) spill sites, which have contaminated groundwater, soil, surface water, and sediments. 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 under the federal facilities agreement, which the installation signed in 1993. The installation completed a community relations plan in FY90 and revised the plan in FY95 and FY99. In FY92, it formed a technical review committee, which was converted to a Restoration Advisory Board in FY96. In FY01, the installation completed a 5-year review.

Adak NAF has identified 97 sites. The installation has completed interim Records of Decision (RODs) for Operable Units (OUs) A and B-1, and two no further actions for SWMUs 4 and 27, and several sites originally included in OU B. In addition, the installation has completed a finding of suitability to transfer (FOST) and transferred approximately 47,000 acres for private reuse in FY04. The installation completed the environmental cleanup on an additional 24,300 acres that was transferred to the Department of the Interior (DOI) in FY04. The cleanup progress at Adak NAF for FY01 through FY04 is detailed below.

In FY01, the draft institutional control (IC) management plan was completed. Selection of a final remedy for petroleum contamination continued, including a focused feasibility study (FFS) and final remedial design. The Navy completed a draft 5-year review and a comprehensive monitoring plan. The Roberts Landfill was closed; however, a cell from the landfill remained open to accommodate disposal of the cabin demolition debris. The Navy completed the final remedial investigation and feasibility study (RI/FS), the draft ROD for OU B-1, and remedial actions (RAs) at the majority of the UXO sites in OU B-1.

In FY02, the installation completed fieldwork to support the RI/FS for OU B-2 Sites and the FOST for Parcel 1A. It also completed RAs for the remaining OU B-1 sites. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site has been identified at this installation. The installation completed RAs for all munitions and explosive of concern (MEC) contaminated sites in OU B-1 for transfer to private ownership (Parcels 1A and 1B) and DOI (Parcels 2 and 3).

In FY03, the installation completed the draft RI/FS report for OU B-2 and an amendment to the OU A ROD to accommodate the framework of the State remaining sites. The Navy began the NPL delisting process for OU A for all Alaska regulations. Adak NAF completed the draft evaluations for 6 of the 14 media other than groundwater. The installation finalized a FOST that documents the completion of all MMRP actions for real estate planned to be transferred to private reuse (Parcels 1A and 1B). The Navy inspected ICs and enhanced access restrictions for areas that are off limits due to potential ordnance contamination. MEC scrap that was generated from previous investigation and RAs was documented as free of explosives and transported off the island for recycling.

In FY04, the installation transferred approximately 47,000 acres of property for private reuse. In addition, it relinquished approximately 24,300 previously withdrawn acres back to DOI. The Navy has retained about 5,600 acres to complete UXO clearance. Fieldwork continued at Parcel 4 to cleanup OU B-1 sites that are within the boundary of Parcel 4. Recovery resumed at three of the 14 interim free-product remedy petroleum sites. The Navy, EPA, and the Alaska Department of Environmental Conservation continued to negotiate cleanup requirements for OU B-2 sites as part of the process of finalizing the OU B-2 ROD. Remediation of OU B-1 sites within Parcel 4 boundary continued.

FY05 IRP Progress

Adak NAF completed closure documentation for 19 petroleum release sites. The installation completed post-closure care restoration work (vegetative cap maintenance) at 2 landfills. The Navy initiated the second 5-year review. A decision document (DD) was executed memorializing remedies for 10 of the 14 free-product petroleum sites previously without a final

remedy from the OU-A ROD. The installation completed FSs for the four remaining sites. The Navy completed proposed plans (PPs) and began DDs for three of the remaining sites. The installation completed the FFS, PP, and DD for the remaining petroleum sites.

FY05 MMRP Progress

Regulatory issues delayed the OU-B2 RI/FS, PP, and ROD for ordnance-contaminated sites at Parcel 4.

Plan of Action

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

IRP

- Continue long-term management at 29 CERCLA and petroleum release sites with completion of partial deletion in FY06.
- Complete 5-year review in FY06.
- Complete DDs for four remaining free-product petroleum sites and complete investigation of potential new petroleum site in FY06.
- Complete RA construction for three of the four remaining free-product petroleum sites in FY06.

MMRP

- Prepare engineering evaluation/cost analysis and work plans for a non-time critical removal action to remove MEC from a 40mm rifle grenade range (RG-01) in FY06.
- Continue MEC remediation requirements for OU B-1 and OU B-2 sites in FY06.

| | | | |
|------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | GU917002755700 | Funding to Date: | \$ 62.3 million |
| Size: | 1,809 acres | Estimated Cost to Completion (Completion Year): | \$ 4.2 million(FY 2009) |
| Mission: | Provided services and material support for transition of aircraft and tenant commands | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Asbestos, paint, solvents, liquids and sludges, heavy metals | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

In July 1993, the BRAC Commission recommended closure of Agana Naval Air Station (NAS). The installation was closed on March 31, 1995. A community relations plan was published in FY92, and three information repositories were established. A BRAC cleanup team (BCT) and a Restoration Advisory Board (RAB) were established in FY93.

The installation identified 38 sites. Findings of suitability to lease were completed for three parcels, along with an interim lease and a joint use agreement with the Guam International Airport Authority (GIAA). In addition, 5 parcels of the NAS, totaling 1,179 acres, have been transferred to the Government of Guam (GovGuam) and GIAA. The cleanup progress at Agana NAS for FY01 through FY04 is detailed below.

In FY01, the installation initiated a non-time critical removal action for Site 1. The Navy consolidated soil contaminated with petroleum and metal debris into the landfill and conducted the final round of groundwater sampling. The responsibility for groundwater sampling was transferred to the GIAA. The BCT worked collaboratively on the early transfer of Agana NAS and two Guam land use plan properties. An environmental service agreement between the Navy and GovGuam on completing the groundwater investigation and remediation also concluded with the early transfer.

In FY02, an investigation found no contaminants at the abandoned drum sites. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, Agana NAS completed collecting and analyzing fish and sediment samples for polychlorinated biphenyls (PCBs) from a private residence fish pond located near the Agana Power Plant as requested at a RAB meeting. Regulators requested additional fish samples in the Agana Swamp to determine if PCB levels in fish have decreased. The installation negotiated with the BCT to install two additional monitoring wells at Site 37. One RAB meeting and three BCT meetings were held.

In FY04, the installation completed storm damage repairs at Site 1. NAS Agana conducted a dye trace test to confirm effectiveness of long-term monitoring wells at Site 1, which was inconclusive. Regulators re-evaluated the relative risk evaluation for 12 Operable Unit (OU) 2 sites requiring restricted reuse. Nine sites were revised from industrial to unrestricted land use. Historical risk data for fish in Agana Swamp was re-evaluated to support an additional round of required fish sampling to determine if PCB levels have decreased at Site 35. The installation completed planning documents for addition of two monitoring wells at Site 37. At the former NAS Agana Navy Exchange Service Station, Buildings 15-46a, the Guam Economic Development Authority cleaned up a petroleum substance rising from the ground. The parcel was turned over in an early transfer agreement to GovGuam, but the contamination was suspected to be from the former Navy service station operation of a 100-gallon waste oil underground storage tank, oil water separator and associated piping not reported in the Environmental Baseline Survey (EBS). During investigative site visits for development of sampling plans, regulators determined that the source was the sewer system connected to the service station drains, oil water separator drum and piping. The draft site investigation (SI) work plans were completed under site basewide EBS. One RAB and two BCT meetings were held.

FY05 IRP Progress

Agana NAS completed the dye trace study for Site 1 and began an evaluation with regulators to determine landfill monitoring network design. The installation completed proposed plans (PPs) and draft decision documents (DDs) for Site 1, Site 38, and 28 OU 2 sites. Site 37 monitoring well installation and two rounds of sampling were completed. The installation completed the SI fieldwork sampling and analysis to determine further response actions required at Building 15-46A. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Regulatory issues delayed the DDs for all OU 2 sites with reconstructed reuse. Site 35 fish sampling and risk evaluation was postponed.

Three public meetings and two BCT meetings were held. The BCT performed a review of the PP and both EPA and Guam EPA attended Navy public meetings providing cooperative regulator support.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete DDs/remedial action work plans for Site 1, Site 38, and OU 2 (28 sites) in FY06.
- Complete monitoring well network installation at Site 1 in FY06.
- Complete PCB removal action at Agana Power Plant Site 37 and incorporate in remedial investigation report in FY06.
- Complete resolution for long-term fish monitoring at the Agana Swamp with regulators in FY06.
- Complete Building 15-46A SI report and determination of further action requirement in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| FFID: | TX657172460500 | Contaminants: | Solvents, paint residues, spent process chemicals, PCBs, waste oils and fuels, heavy metals, VOCs, cyanide, DNAPL and TCE |
| Size: | 706 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Manufacture aircraft (F-16, partial F-22, and the F-35 Joint Strike Fighter), and associated equipment; testing of electronics | Funding to Date: | \$ 64.1 million |
| HRS Score: | 39.92; placed on NPL in August 1990 | Estimated Cost to Completion (Completion Year): | \$ 15.5 million(FY 2013) |
| IAG Status: | IAG signed in FY90 | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| | | Five-Year Review Status: | Completed |



Progress To Date

Air Force Plant No. 4 (AFP 4) has been a primary manufacturer of military aircraft and related equipment since 1942. In August 1990, EPA placed the installation on the NPL. The Air Force signed an interagency agreement in FY90. Studies have confirmed groundwater, surface water, and soil contamination. Specifically, trichloroethylene (TCE) was found in groundwater underneath six spill sites and four landfills. In FY95, AFP 4 converted its technical review committee to a Restoration Advisory Board (RAB).

Thirty sites have been identified at the installation. To date, Records of Decision (RODs) have been completed for all sites. The cleanup progress at AFP 4 for FY01 through FY04 is detailed below.

In FY01, the installation completed Lake Worth sediment sampling, finding elevated polychlorinated biphenyls (PCBs) levels in areas adjacent to the plant. The installation obtained additional funding, completed construction, and began operating the East Parking Lot groundwater system. Characterization of the west side fractured bedrock dense nonaqueous phase liquid (DNAPL) was completed, resulting in removal of 1,500 pounds of DNAPL. The six-phase heating pilot test was deemed successful and full-scale remedial action implementation was approved by the peer review team. A remedial process optimization study at the Landfill 3 (LF 3) treatment system was conducted. An off-site well adjacent to Carswell Air Force Base (AFB) was monitored, and contaminant levels were just above the maximum acceptable limits.

In FY02, the installation completed the construction of a three-phase heating array for the soil and groundwater below Building 181 and the heating continued for over 20 weeks. The Air Force drafted and reviewed the 5-year review report. A radioisotope study of TCE along the groundwater flow path to Carswell AFB was conducted. AFP 4 and Carswell AFB maintained a close partnership with regulators, Air Force Center for Environmental Excellence (AFCEE), and BRAC personnel, to include partial funding for the permeable reactive barrier wall, which shut down the LF 4/5 treatment system. The RAB met quarterly.

In FY03, the installation submitted the 5-year review and is awaiting comments from regulators. Characterization of the Northeast Parking Lot plume was completed and no source areas were found. AFCEE conducted "Veg Oil Injection" on the north lobe of the plume.

In FY04, the EPA provided written concurrence on the first 5-year review. The installation turned off the Building 181 soil vapor extraction system in order to measure "rebound" concentrations of TCE in the area treated the previous year by "Electrical Resistance Heating." The installation conducted two long-term monitoring rounds, including monitoring wells on Carswell AFB, and determined that all treatment systems were working properly; however, a water line break caused damage to some equipment causing the East Parking Lot groundwater system to be off-line for two months. AFP 4 continued to partner with AFCEE and the Air Force Real Property Agency (AFRPA) on the proposed Carswell golf course transfer and plume management.

FY05 IRP Progress

The installation continued operations, maintenance, and long-term monitoring of treatment systems. The Air Force completed Phase III fieldwork on DNAPL/PCB near the creek, landfills, and Lake Worth. The Air Force submitted the final focused feasibility study (FFS) to regulators. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The DNAPL/PCB fieldwork delayed the Preliminary Closeout Report (PCOR). No ROD modifications were undertaken due to delays in the FFS work on former Carswell AFB.

The Air Force continued partnering with the North Central Texas Council of Governments for Lake Worth restoration. The installation hosted a site tour with the Texas Commission on Environmental Quality (TCEQ) Total Maximum Daily Load (TMDL) officials, showcasing the aggressive, proactive work the Air Force has led concerning Lake Worth sediment and sewer sampling at AFP 4.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Continue operations and maintenance and long-term monitoring of treatment systems in FY06.
- Work to decrease treatment system costs in FY06.
- Partner with TCEQ on the TMDL implementation plan for Lake Worth in FY06.
- Complete PCOR and ROD modifications necessary for Carswell Golf Course transfer via AFRPA activities in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | AZ957172462900 | Funding to Date: | \$ 74.2 million |
| Size: | 1,374 acres | Estimated Cost to Completion (Completion Year): | \$ 44.2 million(FY 2030) |
| Mission: | Research, design, and manufacture missiles | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 57.86 placed on NPL in 1983 | Five-Year Review Status: | Completed |
| IAG Status: | Agreement negotiation underway. | | |
| Contaminants: | Machine coolants and lubricants, paint sludges and thinners, heavy metals, Solvents | | |
| Media Affected: | Soil and groundwater | | |



Progress To Date

Air Force Plant No. 44 (AFP 44), located adjacent to Tucson International Airport, was constructed in 1951 to manufacture Falcon air-to-air missiles. Over the years, industrial facilities were constructed to support several other missile systems. EPA placed the entire Tucson International Airport Area, including AFP 44, on the NPL in 1983. Contaminants identified at the installation include solvents, machine coolants and lubricants, paint sludges and thinners, and heavy metals. The installation formed a Restoration Advisory Board, which was later converted to a Unified Community Advisory Board (UCAB). The installation conducted a 5-year review for six soil sites in FY04.

AFP 44 occupies approximately 27.5 acres of the Tucson International Airport, which totals 1,374 acres. To date, Records of Decision (RODs) have been signed for three soil vapor extraction (SVE) sites, three soil excavation sites, and one groundwater remediation site. A no further action (NFA) ROD was signed for four sites. The cleanup progress at AFP 44 for FY01 through FY04 is detailed below.

In FY01, the installation completed closeout for Site 6, historic drainage channels and trenches. The dual-phase extraction (DPE) system at Site 5 was expanded to include three additional extraction wells. A portable treatment system was added to the DPE to remove high levels of chromium from the extracted groundwater.

In FY02, the installation completed the closeout of the Site 2 system and determined that the remaining trace concentrations of trichloroethylene (TCE) would not adversely affect groundwater quality. Operation and maintenance (O&M) of the groundwater reclamation system, SVE systems, and DPE systems continued. The installation analyzed groundwater samples for the presence of 1,4-dioxane. A draft of the 5-year review was completed and the installation awaited stakeholder comments on the document before finalizing it. Several actions of the remedial process optimization Phase III were implemented. The installation maintained an active role in the joint UCAB that represents parties responsible for the Tucson International Airport Area Superfund Site (TIAASS). The Air Force issued an updated draft community relations plan (CRP), and updated a workshop and notebook that summarizes information about TIAASS.

In FY03, the installation conducted an expanded in situ pilot project at Site 2 using potassium permanganate. EPA Region 9 submitted a limited draft risk assessment for 1,4-dioxane. O&M of the groundwater reclamation system, SVE systems, and DPE systems continued. The installation submitted the draft final Site 2 closure report to regulators for review and concurrence. Comments were received from the regulators on the draft final 5-year review, which was under revision.

In FY04, AFP 44 conducted an expanded in situ pilot project at Site 3 and submitted a work plan. The installation also completed the SVE at Sites 3 and 5 and monitored soil gas for 1 year. In addition, the installation completed the 1,4-dioxane risk assessment and determined the necessary future actions. The Air Force submitted the findings to regulators and is awaiting comments. AFP 44 continued O&M of the groundwater reclamation system, SVE systems, and DPE systems. The installation continued the Site 2 in situ pilot, resulting in most of the Site 2 wells being below drinking water standards. Regulators approved the Site 2 closure report. Sites 3 and 5 were shut off and soil gas will be monitored to verify that the act of removing contamination in the vadose posed no threat to the groundwater. AFP 44 completed the 5-year review for six soil sites. The installation updated and finalized the AFP 44 CRP.

FY05 IRP Progress

AFP 44 completed the Site 3 permanganate injection and future monitoring results will determine the effectiveness of the permanganate injections. The installation conducted soil gas monitoring for Sites 3 and 5. The results indicate most of the wells are non-detect. AFP 44 continued O&M of groundwater reclamation system and the DPE was eliminated because the source areas have been addressed. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Complete the closure reports for Sites 3 and 5 in FY06.
- Reduce the mass of source areas for Sites 2 and 3 by permanganate injection in FY06.
- Continue O&M of groundwater reclamation system in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | OH557172887000 | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2000) |
| Size: | 420 acres | IRP/MMRP Sites Final RIP/RC: | FY 2000/None |
| Mission: | Produced aircraft and aircraft missile components | Five-Year Review Status: | Planned |
| HRS Score: | 50.00; proposed for NPL in January 1994 | | |
| IAG Status: | None | | |
| Contaminants: | PCBs, petroleum hydrocarbons, VOCs, metals | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 3.8 million | | |



Progress To Date

Air Force Plant No. 85 (AFP 85) produced aircraft and aircraft missile components. EPA proposed the installation for the NPL in January 1994. Historical operations at the installation involved the use of solvents and petroleum products. Contaminants include polychlorinated biphenyls (PCBs), metals, petroleum hydrocarbons, and volatile organic compounds (VOCs), which have affected groundwater, surface water, sediment, and soil. In FY98, AFP 85 property was sold. In FY99, investigations resulted in closure of a coal pile site and an acid spill site. Ohio EPA provided preliminary concurrence on these designations. The installation formed a Restoration Advisory Board in FY95, which adjourned in FY97.

Environmental studies since FY86 have identified 11 sites and 1 area of concern (AOC) at AFP 85. Decision documents have been prepared for 9 of the 11 sites. In FY96, the AOC was closed and in FY05, the Building 3 Transformer Pad Drain site was closed. The cleanup progress at AFP 85 for FY01 through FY04 is detailed below.

In FY01, the installation obtained Ohio EPA concurrence on the remedial action (RA) for the fire training area. Site investigations were completed at five remaining open sites. No further action (NFA) was necessary at three of these sites; RA was initiated at the two remaining sites. EPA concurrence was obtained on all NFA and RA determinations. The installation continued to use the Defense and State Memorandum of Agreement/Cooperative Agreement (DSMOA/CA) process to maintain Ohio EPA coordination of, and concurrence with, its cleanup program.

In FY02, the installation completed RAs at the two remaining open sites. Sediments that were contaminated above site-specific risk-based standards were removed from the stream beds. Ohio EPA concurrence was obtained for the RAs. The installation detected surface water contamination at one site. The contamination, which was believed to be associated with a nearby Environmental Compliance Program (ECP) site, was investigated under the ECP. The installation continued to use the DSMOA/CA process to maintain Ohio EPA coordination of and concurrence with its cleanup program.

In FY03, long-term monitoring remained ongoing under the Installation Restoration Program (IRP).

In FY04, the installation conducted a supplemental remedial investigation and risk assessment in and around a storm sewer that spread contamination at the final open IRP site.

FY05 IRP Progress

AFP 85 completed the investigation of the Building 271 Storm Sewer, identified soil contaminated above the Ohio Voluntary Action Program (VAP) standard for removal, and initiated plans for replacement of the appropriate sections. The Air Force characterized the source area of solvent contamination at Building 10 that leaked from former Underground Storage Tanks 10-146 and 10-147 using direct push investigation. Over 400 gallons of dense non-aqueous phase liquid has been recovered from 2 product recovery wells. The installation installed additional wells to characterize the down gradient extent of the dissolved plume. The Air Force initiated contracting actions to expand the recovery zone at the source. The installation conducted additional soil characterization work to support the risk assessment addendum at IRP Site 3. The Air Force sealed the drain pipe to support closeout actions at the Building 3 Transformer Pad Drain and closed the site with NFA required. Since all sites have been closed out, this is the last narrative for this installation.

Additional investigation delayed removal of the Building 271 storm sewer and associated soil considered to be the source of VOC contamination.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

Plan of action items for Air Force Plant No. 85 are grouped below according to program category.

IRP

There are no IRP actions scheduled for FY06 or FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

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|------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CO857172553700 | Funding to Date: | \$ 32.3 million |
| Size: | 464 acres | Estimated Cost to Completion (Completion Year): | \$ 37.0 million(FY 2018) |
| Mission: | Research, develop, and assemble missiles and missile components; test engines | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2005 |
| HRS Score: | 42.93; placed on NPL in November 1989 | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Chlorinated organic solvents, VOCs, nitrate, fuel, and hydrazine | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Former Air Force Plant (AFP) PJKS supports the military by researching, developing, and assembling missiles, missile components, and engines. EPA placed the installation on the NPL in November 1989. In FY01, AFP PJKS was sold to Lockheed Martin Corporation, the operator of the facility. Past operations have contaminated groundwater beneath the installation with trichloroethylene (TCE), TCE degradation products (dichloroethene and vinyl chloride), benzene, other volatile organic compounds (VOCs), and n-nitrosodimethylamine (NDMA). The installation formed a Restoration Advisory Board (RAB) in FY96, and signed a RAB charter in FY97.

Studies have identified 61 sites, which were grouped into 6 operable units (OUs). Twelve of 14 underground storage tanks have been removed from the installation and closures were completed at 2 sites. The cleanup progress at AFP PJKS from FY01 through FY04 is detailed below.

In FY01, the installation received regulatory comments requiring an additional investigation for one site in the supplemental remedial investigation (RI) report. A work plan was developed and regulatory approval was obtained. A closure plan received regulatory approval and the closure was completed. The installation completed a removal action to address contaminated soil at two sites.

In FY02, the installation obtained regulatory approval of the supplemental RI for six sites requiring no further action (NFA). A closure plan at one site was implemented, and regulatory approval of the closure was obtained. Periodic groundwater monitoring was performed. The installation received regulatory comments on the supplemental RI for three OUs and developed work plans to address the comments. The installation continued to use the Defense and State Memorandum of Agreement/Cooperative Agreement process to maintain Colorado Department of Public Health and Environment coordination and concurrence with its cleanup program. Quarterly RAB meetings were held.

In FY03, regulators granted NFA determinations for 12 sites. By accepting the OU 5 addendum and granting approval for the OU 4 additional investigation, regulators indicated that the

installation can proceed into the corrective measures stage for both groundwater OUs. The installation received approval for a bedrock groundwater pilot study. The installation conducted two investigations, one at OU 1 and one at OU 3, and two rounds of groundwater monitoring. RAB meetings were held quarterly.

In FY04, the installation conducted bedrock pilot studies in three locations to evaluate bioremediation techniques to treat TCE and the treatment was successful in one location. The installation also prepared a work plan and negotiated an approach for an alluvial pilot study designed to evaluate bioremediation technologies to treat TCE and NDMA in an alluvial aquifer. The Air Force submitted the work plan for regulatory approval. The installation completed investigations at the remaining soil areas as part of the combined soils additional investigation. The installation also conducted two rounds of groundwater monitoring and submitted the 2003 Annual Groundwater Monitoring Report to regulators.

FY05 IRP Progress

The installation conducted two rounds of groundwater monitoring and submitted the 2004 Annual Groundwater Monitoring Report to regulators. The installation completed the alluvial groundwater bench scale study. AFP PJKS prepared an engineering evaluation/cost analysis to convert the successful bedrock pilot study location into an interim corrective measure (ICM) and received regulatory approval. The combined soils additional investigation report was approved by regulators. As part of this report, the installation received regulatory approval of NFA requests for 13 sites. Along with this report, the combined soils ICM study and implementation work plan were approved. The installation prepared a work plan detailing additional activities to be conducted as part of the bedrock pilot study. The D-1 Landfill Area interim measure work plan was approved by regulators. The Air Force conducted a NDMA study to evaluate the NDMA distribution using an experimental analytical method with a lower detection limit than the currently accepted method. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Quarterly RAB meetings were held.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Complete combined soils ICM in FY06.
- Draft Record of Decision for soils sites in FY06.
- Implement ICM for groundwater at two sites in FY06.
- Continue sitewide groundwater monitoring in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | AL421382000800 | Funding to Date: | \$ 62.0 million |
| Size: | 2,235 acres | Estimated Cost to Completion (Completion Year): | \$ 4.8 million(FY 2036) |
| Mission: | Manufactured explosives | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| HRS Score: | 36.83; placed on NPL in July 1987 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement signed in December 1989 | | |
| Contaminants: | Nitroaromatic compounds, heavy metals, munitions-related wastes | | |
| Media Affected: | Surface water, sediment, soil, groundwater | | |



Progress To Date

Studies conducted at Alabama Army Ammunition Plant since FY83 identified various sites as potential sources of contaminants. 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 installation contains six operable units in Area A and Area B. The groundwater, surface water, sediment, and soil are contaminated with nitroaromatic compounds, heavy metals, and explosives waste. EPA placed the installation on the NPL in July 1987, and the installation signed a federal facilities agreement in December 1989. In FY94, the Army formed a BRAC cleanup team. During FY95, the Army attempted to establish a Restoration Advisory Board (RAB), but received no applications for RAB membership.

The Army has signed three Records of Decision (RODs) to date. The installation closed 35 groundwater monitoring wells in FY99. The Army completed the early transfer of property to the City of Childersburg in FY03. The cleanup progress at Alabama AAP for FY01 through FY04 is detailed below.

In FY01, the installation completed soil investigations in Area B and found no additional sources of explosives contamination. It did, however, find lead contamination in the soil at the Old South Georgia Road dump. The groundwater investigation of Area B continued, and sampling of off-site wells indicated that contamination has migrated off post to the south and southeast of Area B.

In FY02, the installation submitted the draft final soil feasibility study (FS) for regulatory review and the groundwater remedial investigation (RI) work continued. Final fieldwork, to include an off-site potable well survey, was underway. The process for early transfer of the remaining property to the City of Childersburg continued. The installation completed the finding of suitability for early transfer for Area B and closed groundwater monitoring wells in Area A. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY03, the installation completed the early transfer of property to the City of Childersburg. The installation completed a potable well survey and groundwater RI fieldwork. The Army completed the CTT ranges and sites inventory that identified no Military Munitions Response Program (MMRP) sites at this installation. The technical review committee discussed the soil and groundwater past actions, as well as future documented actions.

In FY04, the installation submitted the draft groundwater RI for regulatory review, along with further site sampling of the South Georgia Road site. The installation completed the soil FS.

FY05 IRP Progress

The installation completed the soils ROD. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed the groundwater RI/FS.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete the groundwater RI/FS and ROD in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

FFID: CA917002323600
Size: 2,675 acres
Mission: Maintained and operated facilities and provided services and material support for naval aviation activities and operating forces
HRS Score: 50.0; placed on NPL July 22, 1999
IAG Status: Federal facility agreement signed in FY01

Contaminants: BTEX, chlorinated solvents, radium, heavy metals, herbicides, pesticides, petroleum hydrocarbons, PAHs, PCBs, VOCs, SVOCs
Media Affected: Groundwater, surface water, sediment, soil
Funding to Date: \$ 205.2 million
Estimated Cost to Completion (Completion Year): \$ 182.9 million(FY 2015)
IRP/MMRP Sites Final RIP/RC: FY 2010/None
Five-Year Review Status: Planned



Progress To Date

In September 1993, the BRAC Commission recommended closure of Alameda Naval Air Station (NAS). Prominent site types are landfills, offshore sediment areas, plating and cleaning shops, pesticide control areas, transformer storage areas, and a former oil refinery. A BRAC cleanup team (BCT) was formed in FY93. The installation formed a technical review committee in FY90 and converted it to a Restoration Advisory Board (RAB) in FY93. A BRAC cleanup plan was completed in FY94. In addition, a community land reuse plan was approved in FY96. The installation closed in 1997. In FY98, the first technical assistance for public participation (TAPP) grant in the United States was issued to the RAB to help with the Operable Unit (OU) 1 remedial investigation (RI) review. EPA placed the installation on the NPL in July 1999 and the installation signed a federal facilities agreement (FFA) in FY01. The Navy awarded the installation a subsequent TAPP grant in FY03 in response to the OU 1 RI review. The installation also completed the initial community relations plan (CRP), which was revised in FY03 to reflect community interests and concerns.

Alameda NAS has identified 35 sites. The installation prepared a Record of Decision (ROD) for Marsh Crust in FY00 and a No Further Action (NFA) ROD for Site 29 in FY05. The cleanup progress at Alameda NAS for FY01 through FY04 is detailed below.

In FY01, the installation completed the majority of the basewide sampling. The installation completed the petroleum corrective action plans and began cleanup. The installation completed the first Site 25 removal action and initiated documentation for removals at the other sites. The installation completed closure of three RCRA-permitted sites. Regulatory concurrence was received on one site. The RI and feasibility study (FS) for OU 3 were separated so that data gap sampling, cumulative risk assessment, and geotechnical/ordnance and explosives waste investigation were incorporated into the RI. The Navy and EPA signed the FFA. The draft RI for OU 4A was completed.

In FY02, the installation completed removal actions at Sites 5, 14, and 25, and 40 percent of the petroleum cleanup and the RI for OU 5 soil. Polycyclic aromatic hydrocarbon (PAH) fieldwork concluded in the non-CERCLA sites and the site investigation progressed. The Navy completed an inventory of all Military

Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed removal actions at Sites 4, 5 groundwater, 9, 11, 16, and 21, and the RI/FSs for Sites 14 and 15. The Navy completed a time-critical removal action (TCRA) for PAHs in the West Housing area, and a non-TCRA for lead discussed in the soil, and for the water and antennae towers. The Navy completed petroleum removal actions at CAA 6 and Building 397. It also used six-phase heating to treat the dense non-aqueous phase liquid and dissolve phase chlorinated solvents. The Navy used chemical oxidation to treat dissolved phase chlorinated solvents, and dual vacuum extraction and bio-sparging to treat petroleum contaminants. The CRP for the installation was revised to reflect community interests and concerns. The Navy awarded a TAPP to review the groundwater RI/FS for OU 5. The Navy also produced a comprehensive newsletter updating all site activities for all interested parties.

In FY04, the installation completed an action memo (AM) and TCRA for Site 13 and prepared an AM for a TCRA memorandum for Site 9 to supplement the previous AM. The Navy initiated the RI for Site 30, the Miller school and child care facility, earlier than planned. The installation began planning a TCRA for containment of PAH contaminated soil at Site 30. The Navy completed RIs for OU 4B (Site 17) and OU 6 (Site 26). The installation completed the RI for OU 4C (Site 29) and determined that the FS was not needed for this NFA site. The Alameda Point RAB held 12 meetings, and reviewed numerous environmental documents. The RAB received a TAPP grant for the review of the draft groundwater RI/FS for OU 5. The BCT met once a month, and focused on technical issues related to Installation Restoration Program (IRP) documents and strategies for reaching closure at the sites.

FY05 IRP Progress

Alameda NAS signed a NFA ROD for Site 29 (Skeet Range). The Navy conducted a removal action at Site 30 to address a potential risk caused by PAH in the soil. The installation initiated a removal action at Site 9 to remove floating hydrocarbon to safely initiate the planned removal action of chemical-oxidation. Additionally, the Navy completed an innovative technology removal action on a portion of Site 5,

which was the largest full scale deployment of true six-phase heating to date. Alameda NAS initiated the first 5-year review report. The Navy quickly removed a subsurface vault containing petroleum hydrocarbons from the Least Tern area. The installation also completed the RI/FS for OU 1 (Sites 6, 7, 8, and 16). In addition, the installation completed a removal action at Site 16 and one area at Site 5. It also completed FSs for OU 4B (Site 17) and OU 6 (Site 28). The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The Alameda Point RAB held 12 meetings, and reviewed numerous environmental documents. The RAB's Installation Co-chair (BRAC Environmental Coordinator) conducted a tour of the northwestern area. The RAB held several technical subcommittee meetings to review technical documents. The BCT met once a month, and focused on technical issues related to IRP documents and strategies for reaching closure at the sites.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete RODs for Sites 14, 15, 17, and 26 in FY06.
- Complete the proposed plan for OU 1 (Sites 6, 7, 8, and 16) in FY06.
- Complete FSs for Site 30 and OUs 2A and 2B in FY06.
- Complete RIs for Site 24 of OU 4B and Site 20 of OU 4C following the data-gap sampling effort in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------|
| FFID: | GA417302369400 | Media Affected: | Groundwater, soil, sediment |
| Size: | 3,579 acres | Funding to Date: | \$ 40.6 million |
| Mission: | 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 | Estimated Cost to Completion (Completion Year): | \$ 4.1 million(FY 2014) |
| HRS Score: | 44.65; placed on NPL in December 1989 | IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| IAG Status: | Federal facility agreement signed in July 1991 | Five-Year Review Status: | Completed and planned |
| Contaminants: | VOCs, PCBs, heavy metals, pesticides, PAHs | | |



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 basewide groundwater (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. EPA placed the installation on the NPL in December 1989 and the installation signed a federal facility agreement in July 1991. The installation formed a technical review committee. In FY92, Albany MCLB completed a community relations plan. In FY01, the installation completed a 5-year review.

The installation has identified 32 sites. A No Further Action Record of Decision (ROD) at OU 2 was signed. Final RODs for four sites at OU 1, two sites at OUs 3, 4, 5, and 6 have been completed. In addition, the installation has signed an interim ROD at solid waste management unit (SWMU) 3. The cleanup progress at Albany MCLB for FY01 through FY04 is detailed below.

In FY01, the installation completed the final ROD for OU 6, which specified enhanced bioremediation for groundwater and capping for source control. The installation received certificate of closure for SWMU 30, and a no further remedial action planned letter from the Georgia Environmental Protection Division. Albany MCLB completed the 5-year review.

In FY02, the installation completed an enhanced bioremediation pilot study. Innovative technologies of hydraulic and pneumatic fracturing were utilized to increase the effective treatment zone. The installation began the remedial design (RD) for source control. A zero-valent iron (ZVI) and potassium permanganate pilot study for groundwater remediation was initiated. Preliminary results of the evapotranspiration (ET) cap pilot study, comparing an ET cap (hybrid poplar tree cap) with a compacted clay cap, favored the ET cap. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, Albany completed the ZVI and potassium permanganate pilot studies. The installation planned to repaint the water tower over one of the SWMUs, and included both SWMUs as part of one contract action. Albany MCLB completed the ET cap pilot study and initiated the RD for groundwater.

In FY04, the installation began delineation sampling and investigation of the SWMUs.

FY05 IRP Progress

Albany MCLB implemented the groundwater remedy. The installation completed remediation of the two SWMUs and completed an explanation of significant differences to the OU 6 ROD. Additionally, the installation completed the RD for source areas and awarded the contract for the construction of the cap.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete groundwater remedy in FY06.
- Complete 5-year review in FY06.
- Complete source control remedy in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | WV317002369100 | Funding to Date: | \$ 29.6 million |
| Size: | 1,628 acres | Estimated Cost to Completion (Completion Year): | \$ 42.1 million(FY 2046) |
| Mission: | Research, develop, and produce solid propellant rocket motors for DoD and NASA | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed January 1998 | | |
| Contaminants: | VOCs, RDX, HMX, perchlorate, silver | | |
| Media Affected: | Groundwater and 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. EPA placed the installation on the NPL in May 1994 and the installation signed a federal facility agreement in January 1998. The Navy established a technical review committee in FY89 and converted it to a Restoration Advisory Board in FY95. In FY94, the installation established an administrative record and two information repositories. In FY99, the installation issued a draft community relations plan. In FY03, the installation completed a 5-year review.

The installation has identified 37 sites. Environmental studies in FY83 identified 11 sites at this government-owned, contractor-operated installation. A confirmation study recommended further investigation at eight of these sites. A later study identified 119 solid waste management units (SWMUs) and 12 areas of concern (AOCs), with 61 recommended for further action. The installation has completed Records of Decision (RODs) for Sites 1, 5, and 10. In addition, a No Further Action (NFA) ROD was signed for Site 7. The cleanup progress at Allegany Ballistics Laboratory for FY01 through FY04 is detailed below.

In FY01, the final NFA ROD for Site 7 was signed. The installation completed the final closeout reports for SWMUs 21, 37C (groundwater), 37G, 37S, and AOC O. The installation conducted aquifer testing utilizing groundwater flow modeling at Sites 1 and 10 in order to optimize well locations and pumping rates. It also conducted a groundwater treatment plant optimization study and implemented the recommendations from the study, reducing plant outages and operating costs. The installation completed remedial actions (RAs) at SWMUs 24R, 26, 37A, 37B, 37BB, 37N, 37V, and 37X, and the condensate collection tank. The SWMU/AOC investigations were completed. A 5-year ROD review for Site 5 soil progressed.

In FY02, the installation received regulatory concurrence to conduct a Site 4B x-ray fluorescence pilot study in lieu of an engineering evaluation and cost analysis (EE/CA) and RA to expedite closure. Remedial investigation (RI) continued on AOC N and SWMUs 27A and 37V. The installation discovered

significant solvent contamination of groundwater at AOC N. The RIs for Sites 5 and 11 continued. The installation issued two human health risk assessments (HHRAs) for comment to regulators. Additionally, the installation selected a final remedy for Site 10 and issued a proposed RA plan (PRAP). It also performed a 5-year review for Site 5. The installation performed CCT closure for Installation Restoration Site 6, SWMUs 24E, 24R, 26, 37A, 37BB, 37C, 37F, 37G, 37J, 37S, 37T, 40 AOC H, 58, and issued final closeout documents. It also issued an investigation work plan for Phase III SWMUs and AOCs, the 2002 Site Management Plan, and the Construction, Excavation and Groundwater Use Restriction Plan. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation developed background levels for inorganic contaminants and completed draft risk assessments for Site 1, and RIs for Sites 5 and 11. The installation also commenced RIs for SWMUs 27A, 37E, 37V, and Site 12. The installation continued to make progress on the RI for AOC N, and SWMUs 27A and 37V. The installation issued a draft risk assessment for Sites 1, 2, 3, and 10.

In FY04, Allegany Ballistics Laboratory initiated work to fill in data gaps for Site 1 soils, and the HHRA and ecological risk assessments (ERA) for Site 1. The installation completed the review of the RI/feasibility study (FS) for Site 5. The installation presented the finalized ROD for Site 10 to the Navy and EPA and finalized work plan changes for further investigations at SWMUs 27A and 37V. The installation completed an EE/CA for removal action at Site 12. The installation completed the RI/FS for Sites 3, 10, and 12, and the RI for AOC N (Site 12).

FY05 IRP Progress

Allegany Ballistic Laboratory completed sampling work for Site 1 soils, and began work on the RI and the associated HHRA and ERA. The RI/FSs were completed for Sites 2 and 5. The installation documented that NFA is needed at Site 3 as the PRAP is final. The installation completed a soil removal action for Site 12. In addition, the installation signed the ROD for Site 10.

Technical issues delayed NFA documentation for Site 12.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Conduct a non-time critical removal action within Site 1 in FY06.
- Complete an optimization study of the pump-and-treat system serving Sites 1 and 5 groundwater in FY06.
- Finalize the RI for Site 1 soils in FY06.
- Construct a permeable reactive barrier wall at Site 5 to treat groundwater at the Site 5 landfill in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|----------------------------------------------------------|-------------------------------------|--------------------------|
| FFID: | GU957309951900 | Estimated Cost to Completion | \$ 60.0 million(FY 2014) |
| Size: | 15,000 acres | (Completion Year): | |
| Mission: | Provide troops, equipment, and facilities in the Pacific | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2013 |
| HRS Score: | 50.00; placed on NPL in October 1992 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in March 1993 | | |
| Contaminants: | VOCs, metals, asphalt, dioxins, PCBs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 88.0 million | | |



Progress To Date

The mission of Andersen Air Force Base (AFB) is to provide troops, equipment, and facilities in the Pacific. EPA placed the installation on the NPL in October 1992 and the Air Force signed a federal facility agreement in March 1993. Preliminary assessments (PAs) have identified landfills, waste piles, fire training areas, hazardous waste storage areas, and spill sites. In 1995, the technical review committee was converted to a Restoration Advisory Board (RAB). The base community relations plan was updated in FY98. A 5-year review was initiated in FY03.

The 50 sites identified at Andersen AFB were consolidated into 39 sites and grouped into 6 operable units (OUs). To date, Guam EPA and EPA Region 9 have signed Records of Decision (RODs) for the Marianas Bonins (MARBO) OU, the Harmon OU, and the Urunao OU. The cleanup progress at Andersen AFB for FY01 through FY04 is detailed below.

In FY01, the Air Force signed the MARBO ROD amendment. Remediation was completed at Landfill 29 (LF 29). Engineering evaluation and cost analysis (EE/CA) reports for LF 10, LF 13, LFs 17-19, and the Ritidian Dump were reviewed by regulators and finalized. No further remedial action planned (NFRAP) documents for LF 6, LF 22, Site WP 4, Site CSA 1, and Site FTA 1 were signed by Guam EPA. The remedial investigation and feasibility study (RI/FS), the proposed plan and the ROD for the Harmon OU were finalized. The Urunao Dump, which was in the FS phase, was added as a new OU and Installation Restoration Program (IRP) site. The interim remedial action (IRA) project for LF 7 was completed. During the remediation of Site WP 6, additional contaminated soil was identified, which required a follow-on project. IRAs for Site CSA 4, LF 14, LF 21, and the polychlorinated biphenyl (PCB) Storage Area were initiated.

In FY02, the installation submitted EE/CA reports for Site FTA 2 and LF 8 for review by regulators. Groundwater monitoring continued at the installation. The Harmon OU ROD was approved and signed by EPA Region 9 and awaited signature by the Guam EPA and the Air Force.

In FY03, the installation continued long-term operations for LF 2 and Site FTA 2, as well as groundwater monitoring for MARBO

and the Main Base OUs. Negotiations with regulators resulted in reducing the required number of wells, frequency of sampling, and number of analytes. The base finalized two EE/CA reports for LF 8, LF 17, and Site FTA 2, the NFRAP report for Site CSA 1, two remediation verification reports for the PCB Storage Area and LF 2, and converted three areas of concerns (AOCs) to IRP sites. Additionally, 23 AOCs were added to the IRP. The installation initiated the MARBO 5-year review. RAB activities continued and the installation maintained good communication with regulators.

In FY04, Andersen AFB initiated the design of the Urunao dump site remediation. The installation completed the RA for WP 6 and obtained regulatory inspection and approval. The IRA involving the fence installation land use control for LF 10 was completed. The installation finalized Site WP 6 and LF 10 Remediation Verification Reports. Groundwater sampling was conducted as scheduled for MARBO and the Main Base. The installation finalized the 5-year review for final coordination and signatures.

FY05 IRP Progress

Andersen AFB began EE/CA investigations for former AOC Sites DA 52, 53, and 54, completed fieldwork for 13 of 23 former AOCs (NE sites), and began drafting PA/site investigation (SI) reports. The installation converted 33 areas of concern (NE sites) to IRP sites in FY05, bringing the total site count to 76. The Urunao ROD has been signed by all three parties. The remedial design (RD) for the Urunao Dump site is near completion at 95 percent. In addition, the no action ROD for the Harmon OU was signed by the Air Force. The installation continued Main Base and MARBO groundwater monitoring and completed two new borings in MARBO and one new boring at Site FTA 2. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Project fieldwork for the LF 14, LF 19, LF 20, and the Ritidian Dump site IRA work was initiated and is near completion. Regulator requests for additional site characterization data delayed the completion of PA/SI reports for 13 AOCs and the Urunao Dump RD report. Contractual issues delayed the PA/SI for 10 of the 23 former AOCs.

FY05 MMRP Progress

The Air Force began the PAs for all identified sites.

Plan of Action

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

IRP

- Complete the IRA and remediation verification report for Ritidian Dump site in FY06.
- Initiate the RA for Urunao Dump site and LF 8, LF 13, and LF 17 in FY06.
- Complete the IRA for LF 14, LF 19, and LF 20 in FY06.
- Complete RI/FS investigation for former AOC Sites DA 52, 53, and 54 and FTA 2 in FY06.
- Finalize PA/SI for 33 former AOCs in FY06.
- Write and finalize ROD for Main Base Sites: FTA 2, WP 1, WP 2, LF 14, LF 19, and LF 20 in FY06.
- Write and finalize remedial investigation/FS and a no action ROD for NW Field OU in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|-------------------------|---------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MD357182400000 | Estimated Cost to Completion (Completion Year): | \$ 62.8 million(FY 2020) |
| Size: | 4,300 acres | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2016 |
| Mission: | Provide Presidential airlift support | Five-Year Review Status: | Planned |
| HRS Score: | 50.00; placed on NPL in June 1999 | | |
| IAG Status: | Agreement negotiation underway. | | |
| Contaminants: | Metals, SVOCs, VOCs, PAHs, PCBs, pesticides | | |
| Media Affected: | Surface water | | |
| Funding to Date: | \$ 4.4 million | | |



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, 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. EPA identified five source areas at Andrews AFB. Source 1 (Site FT 02) and Source 2 (Site FT 03) are former fire training areas where fuel and waste oil were burned. Source 3 (Site SD 23) involved waste treatment plant sludge placement on the airfield. Source 4 Landfill 05 (LF 05) is a former landfill used for disposal of general refuse, construction rubble, and fly ash. Source 5 consists of two landfills (LF 06 and LF 07) used primarily for disposal of construction wastes. Small quantities of household waste and shop wastes (oils, paint thinner, and cleaning solvents) were also disposed of in Source 5. In June 1999, the base was placed on the NPL. In FY00, an administrative record and an information repository were created on CD-ROM.

To date, 27 Installation Restoration Program (IRP) sites and 6 areas of concern (AOCs) have been identified. Four sites have been closed under the RCRA petroleum program and one Record of Decision (ROD) has been signed. The cleanup progress at Andrews AFB for FY01 through FY04 is detailed below.

In FY01, the installation completed the remedial investigation (RI) work plans for Source 4. Over-excavation was implemented as an interim remedial action at Site SS 22 (Hangar 13). A building demolition project at Site SS 21 was re-scoped to include removal of contaminated soil in the source area.

In FY02, the installation began RI fieldwork at LF 05 and signed a memorandum of agreement with the Maryland Department of the Environment (MDE) to conduct RI work on adjacent private property affected by LF 05. A basewide background study was initiated, and work plans for a basewide ecological risk assessment (ERA) were developed. The RI at Site ST 14 continued. The Air Force Medical Operation Agency issued approval to release AOC 23 (a former low level radioactive

burial site) for unrestricted use after review of the removal activities performed in 1999. The MDE Oil Control program issued case closure letters for Sites SS 12 and SS 13.

In FY03, the installation submitted the draft basewide background study for review. Fieldwork commenced for the basewide ERA and RIs at Sites FT 04, LF 06/07, and ST 10. Andrews AFB awarded a performance-based contract (PBC) for closure of the Site ST 17 Army and Air Force Exchange Service gas station plume. The installation also received regulatory closure for Sites ST 18 and ST 20 petroleum sites.

In FY04, the installation submitted draft RIs at LF 05, Site ST 14, Site ST 10, and Site FT 04 to the partnering group which consisted of representatives from EPA, MDE, and Prince George's County Health Department. In addition, the installation initiated feasibility studies (FSs) at both LF 05 and Site ST 14. The installation also completed RI work plans and began field work for Source 1, Source 2, Source 3, and Site SS 22. The installation conducted interim actions at the Site SS 11 fuel spill site and a removal action at the AOC 24 former gas station, which included the removal of seven underground storage tanks. The installation also conducted a groundwater treatability study (TS) at Site FT 04, and a soil removal and groundwater treatment at Site ST 17 using a PBC mechanism.

FY05 IRP Progress

Andrews AFB completed RIs at Sites FT 04 and ST 10, and submitted draft FSs to the regulatory partnering team for LF 05 and Site ST 14. The installation completed RODs for Sites SS 12/13 and FT 04, and signed a ROD at Site ST 10. A no further response action planned (NFRAP) document for Site SS 13 was completed. NFRAP documents for Site SS 12 and ST 20 were sent for review and signature. The installation submitted a draft proposed plan for Site FT 04 for legal review. The ST at FT 04 continued to address the groundwater plume. The installation completed a soil management plan to support the Air Sovereignty Alert beddown at this site. The installation successfully completed a PBC with the regulatory closure of Site ST 17 (AAFES station) and also awarded a PBC to obtain remedy in place plus three years of operation at Sites ST 14 and SS 22. The Air Force submitted draft RIs to the regulatory team for Sites LF 05, ST 14, and LF 06/07. The installation began a risk assessment at Site FT 03. The cost of completing

environmental restoration at this installation has changed significantly due to estimating criteria issues.

RIs for Site SS 22 and Sources 1 and 2 were delayed due to the identification of additional requirements at these locations. FSs for Sites ST 14, LF 05, LF 06, and LF 07 were delayed because of a lengthy risk assessment review process. The ROD for Site ST 20 was delayed because of the legal review.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Complete RIs at LF 05/06/07, Site ST 14, Site FT 02, and Site FT 03 in FY06.
- Finalize FS at LF 05, Site ST 14, and Site SS 01 in FY06.
- Initiate FS at LF 06/07, Sites FT 02, and Site FT 03 in FY06.
- Complete RODs at LF 05, Site SS 01, Site ST 14, and Site ST 20 in FY06.
- Initiate PCB removal at Site SS 01 in FY06.
- Initiate Triad RI at Sites WP 16 and SS 27 in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|------------------------|------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | AL421382002700 | Funding to Date: | \$ 60.8 million |
| Size: | 600 acres | Estimated Cost to Completion (Completion Year): | \$ 28.7 million(FY 2037) |
| Mission: | Maintain combat vehicles | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2014 |
| HRS Score: | 51.91; placed on NPL in March 1989 | Five-Year Review Status: | Completed |
| IAG Status: | IAG signed in June 1990 | | |
| Contaminants: | VOCs, heavy metals, phenols, petroleum products, acids, caustics | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Since 1948, the Army has repaired, rebuilt, and modified combat vehicles and artillery equipment at the Anniston Army Depot Southeast Industrial Area (SIA). Painting, degreasing, and plating operations at the installation generate wastes containing volatile organic compounds (VOCs), phenols, heavy metals, and petroleum distillates. EPA placed the installation on the NPL in March 1989, and the Army and EPA signed an interagency agreement in 1990. Prior to FY01, the Army cleanup activities included pumping waste from an unlined lagoon into a lined lagoon, removing sludge and contaminated soil at RCRA corrective action sites, installing groundwater interception and treatment systems to remove VOCs and phenols, and sampling off-post private wells and springs surrounding the installation. The latter addressed community concerns regarding residential groundwater wells. During FY98, the installation formed a Restoration Advisory Board (RAB) and updated the community relations plan. The installation completed 5-year reviews in FY99 and FY04.

Studies at the installation revealed soil and groundwater contamination at 47 sites. To date, one interim Record of Decision (ROD) has been completed by the installation. The cleanup progress at Anniston for FY01 through FY04 is detailed below.

In FY01, the Army completed the Phase I remedial investigation (RI) and began the Phase II off-post RI. Remedial design (RD) for sediment and surface water at Solid Waste Management Unit (SWMU) 44 continued. The installation completed the SWMU 12 emergency removal and groundwater treatment reports. Operation of the new centralized groundwater treatment facility began. The installation sampled 66 off-post private drinking water wells; all were below the detection limits for VOCs.

In FY02, the installation completed the Alabama risk-based corrective action for SWMU 46. The Army completed the Ammunition Storage Area (ASA) RI/feasibility study (FS), proposed plan, and draft ROD. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents under the Military Munitions Response Program (MMRP).

In FY03, the installation drafted Alabama risk-based corrective actions for SWMU 45 and SWMU 46 (Building 6) and submitted them to the Alabama Department of Environmental Management (ADEM) for review. The installation completed the draft Phase II of the combined groundwater RI and submitted it to regulatory agencies for review. The installation used a preliminary groundwater flow-and-transport model to generate a prioritized list of sample locations for monitoring points and wells. The Anniston Water Works and Sewer Board (AWWSB) and the Army completed an agreement for the installation of treatment equipment necessary to remove trichloroethylene (TCE) from Coldwater Spring, which is the source of water for AWWSB. As part of the agreement, the Army funded air stripping equipment at the Coldwater Spring Treatment Plant. Anniston identified two sites during the MMRP inventory. Anniston continued to provide public education through the RAB on the health effects of TCE. The installation formed two tiers of partnering teams with the U.S. Army Corps of Engineers, the U.S. Army Environmental Center, ADEM, EPA, and selected contractors.

In FY04, the installation submitted the draft final SIA Soil Operable Unit (OU) ROD and the draft final ASA OU ROD. The Army submitted the draft final 5-year review to the regulators and awarded the technical impracticability evaluation contract. The installation completed the site inspection (SI) for the two sites identified in the MMRP inventory.

FY05 IRP Progress

The installation completed Phase III comprehensive groundwater RI and submitted it to regulatory agencies for comment. The installation initiated the FS for OU 1. The installation initiated the RDs and remedial actions (RAs) for SIA Soil OU and ASA OU, including excavation of contaminated soil and installation of land use controls (LUCs) that provide gravel caps to reduce exposure.

Regulatory issues delayed the shallow groundwater interim ROD, the SIA Soil OU ROD, and the ASA OU ROD. Discussions with regulatory agencies over LUC language continues.

The installation developed a partnership with Jacksonville State

University to compile and analyze data relevant to TCE concentrations in Coldwater Spring.

FY05 MMRP Progress

The installation identified an additional MMRP site (former buffer zone for open burning operation). The installation submitted an SI report for the three MMRP sites.

Plan of Action

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

IRP

- Complete the groundwater interim ROD, the SIA Soil OU ROD, and the ASA OU ROD in FY06.
- Complete technical impracticability waiver evaluation report and FS for OU 1 in FY06.
- Complete the comprehensive groundwater RI in FY06.
- Complete RDs and RAs for SIA Soil OU and ASA OU in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | MA121382093900 | Funding to Date: | \$ 100.9 million |
| Size: | 48 acres | Estimated Cost to Completion (Completion Year): | \$ 0.6 million(FY 2005) |
| Mission: | Conduct materials research and development | IRP/MMRP Sites Final RIP/RC: | FY 2005/None |
| HRS Score: | 48.60; placed on NPL in May 1994 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in July 1995 | | |
| Contaminants: | Radionuclides, heavy metals, petroleum products, solvents, pesticides, PCBs | | |
| Media Affected: | Soil and surface water | | |



Progress To Date

In December 1988, the BRAC Commission recommended closure of the Army Materials Technology Laboratory [Army Research Laboratory (ARL)], Watertown. The Army has moved the installation's mission activity to a combined laboratory at Aberdeen Proving Ground, Maryland. The installation closed as scheduled on September 30, 1995. Studies at the installation revealed soil contaminated with petroleum products, pesticides, and polychlorinated biphenyls (PCBs). Similar chemical and metal contaminants were present in several laboratories and machine shops. EPA placed the installation on the NPL in 1994. The Army and EPA signed an interagency agreement in July 1995. The installation divided its remedial investigation and feasibility study activities into three areas (Indoor, Outdoor, and Charles River). Interim actions have included asbestos abatement, removal of all known aboveground and underground storage tanks, remediation of petroleum-contaminated soil, decommissioning of the central heavy-oil-fired power plant, retrofitting and disposal of PCB-containing transformers, closing of cooling water discharge systems and decommissioning the inactive reactor. The installation formed a BRAC cleanup team and a Restoration Advisory Board (RAB) in FY94. EPA published in the Federal Register a notice of partial deletion from the NPL of the 37-acre parcel in FY99 and deleted the parcel from the NPL in FY00. The Army completed a 5-year review in FY02.

To date, the installation has completed two Records of Decision (RODs), and the Army transferred the aforementioned 37-acre parcel to Watertown. The cleanup progress at ARL Watertown for FY01 through FY04 is detailed below.

In FY01, work continued on the Charles River operable unit (OU) ecological risk assessment (ERA). The installation completed the draft screening-level risk assessment. The Army completed remedial work at the River Park to include the riverbank areas and drafted 11-acre River Park parcel transfer documents.

In FY02, the Army completed the first 5-year review of the 37-acre parcel. The development of the environmental baseline for the Charles River OU continued. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions,

or munitions constituents. The inventory identified no Military Munitions Response Program (MMRP) sites.

In FY03, the installation collected sediment samples from the Charles River for the ERA. All institutional controls are in place for River Park. The Army completed the Environmental Baseline Survey, finding of suitability to transfer, and additional transfer documents. The RAB continued to review documents and make site visits.

In FY04, the installation completed the baseline ERA and awaited final regulatory concurrence. The Army transferred 10 acres to the Commonwealth of Massachusetts. The installation completed the sixth annual review of land use controls and concluded that controls remained successfully in place.

FY05 IRP Progress

The installation completed the baseline ERA for Charles River OU. EPA concurred with the ERA and signed a No Further Action ROD for the Charles River OU 2. The installation began the 5-year review process and found that it should stabilize the banks along the Charles River to prevent contaminants from migrating into the river. ARL Watertown completed a seventh annual review of land use controls and concluded that controls remained successfully in place.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Army Research Laboratory-Watertown are grouped below according to program category.

IRP

- Complete bank stabilization project along the Charles River in FY06.
- Complete second 5-year review in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | TN457172404400 | Funding to Date: | \$ 84.8 million |
| Size: | 40,000 acres | Estimated Cost to Completion (Completion Year): | \$ 69.2 million(FY 2032) |
| Mission: | Simulate flight conditions | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2015 |
| HRS Score: | 50.00; proposed for NPL in August 1994 | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | VOCs, solvents, PCBs, heavy metals, acids, oleum hydrocarbons and asbestos containing material | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Arnold Engineering Development Center (AEDC) is an advanced aerospace ground test, evaluation, and simulation facility. EPA proposed the installation for the NPL in August 1994. AEDC conducts tests, engineering analyses, and technical evaluations for research, system development, and operational programs that simulate operational conditions. Sites at the installation include a landfill, a chemical treatment plant, AEDC's main testing area, a leaching pit, a leachate burn area, and a fire training area. Chlorinated solvents are the primary contaminants. The installation converted its technical review committee to a Restoration Advisory Board (RAB) in FY95.

The cleanup progress at AEDC for FY01 through FY04 is detailed below.

In FY01, the installation completed the draft RCRA facility investigation (RFI) Number 3 report and began preparation of the corrective measure study (CMS) work plan. The CMS report for Site WP 6 was initiated. Construction of the interior methane gas collection trenches at Site Landfill 3 (LF 3) was completed. The draft RFI report for Site LF 3 was completed and the CMS work plan was being prepared. Fieldwork was underway at Sites WP 2, WP 8, WP 11, and SS 19. Preparation of the RFI work plan for Site LF 1 began. Regulatory approval was received for RFIs for Sites SS 22, FT 10, and WP 12.

In FY02, the installation completed fieldwork and data analysis for the RFIs for Sites WP 2, WP 8, and WP 11 and initiated fieldwork for LF 1 RFI. The installation conducted a site tour for the CAB. CAB members also participated in the installation action plan meetings. The installation volunteered to participate in a new process initiated by the state to streamline the investigation and cleanup processes for hazardous waste sites.

In FY03, the installation completed the CMS for LF 3. LF 3 also achieved remedy in place (RIP) during the fourth quarter. The interim measure (IM) upgrade for Sites WP 6 and WP 8 was completed and an IM for installing access controls at Site SS 19 was initiated. Site WP 20 achieved RIP and response complete (RC). Risk at Site WP 8 was reduced from high to medium. Risk at Sites WP 6, SD 4, and SD 9 was reduced from medium to low. RFIs for Site SS 25 and SS 26 began. The IM for SS 22 was deleted with regulatory acceptance. AEDC achieved a

"Yes" for both of the EPA's Government Performance and Results Act environmental indicators. Human Exposures Under Control and Migration of Contaminated Groundwater Under Control were achieved.

In FY04, AEDC completed RFIs for Sites LF 1 and SS 19. The installation completed CMSs for Sites LF 1, WP 2, WP 6, WP 11, and WP 12. Sites SD 4 and SD 9 achieved RIP and RC. The installation also designed and initiated construction of an IM for contaminate mass removal associated with SS 22 chlorinated solvent plume.

FY05 IRP Progress

AEDC completed draft statements of basis describing RIPs and RCs for Sites WP 02, WP 11, and FT 10, as well as completed a RFI for Site SS 26. The Air Force also completed a CMS for Site LF 03 and Bench-scale treatability studies of in situ treatment using zero-valent iron (ZVI), chemical oxidation, and enhanced bioremediation were completed for Site WP 6. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

AEDC initiated an IM at Site SS 22 but construction issues delayed completion. The installation completed a treatability study for ZVI at Site WP 12 and has awarded the IM project for in situ reductive dechlorination using ZVI at Site WP 12. AEDC completed draft statements of basis for Sites WP 2, WP 11, and FT 10; however, review issues have delayed RIP/RC.

The installation hosted two site tours, one for RAB members and one for students from a local university.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Complete IM and reduce risk at Site SS 22 to

low risk in FY06.

- Complete RIP and RC for Sites WP 20, WP 11, FT 14, and FT 10 in FY06.
- Complete in situ reductive dechlorination IM for Site WP 12 using ZVI in FY06.
- Complete RFI for SS 25 in FY06.
- Complete CMS at Sites LF 1, WP 2, WP 6, WP 8, and WP 11 in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|-------------------------|------------------------------------------------|-------------------------------------|-------------------------|
| FFID: | NJ257282844900 | Estimated Cost to Completion | \$ 3.4 million(FY 2013) |
| Size: | 280 acres | (Completion Year): | |
| Mission: | Provide Air National Guard training | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | 39.65; placed on NPL in August 1991 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement signed in July 1993 | | |
| Contaminants: | VOCs, SVOCs, lead, copper, pesticides | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 2.1 million | | |



Progress To Date

Atlantic City International Airport is a Federal Aviation Administration (FAA) facility. It houses the New Jersey Air National Guard (ANG) Base, whose mission is to maintain fighter aircraft on continuous peacetime air defense alert to preserve U.S. air sovereignty. The installation was placed on the NPL in 1991 and signed a federal facility agreement in July 1993. Volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), lead, copper, and pesticides were detected on site. The installation was placed on the NPL 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. Sites located at the facility are the FAA salvage yard, the FAA jet fuel farm, the FAA fire training facility, and the FAA's old landfill.

To date, four sites have been identified at the installation. The cleanup progress at the ANG Base for FY01 through FY04 is detailed below.

In FY01, ANG, FAA, and EPA met to discuss the next course of action. The FAA initiated responses to EPA comments on the site inspection (SI) addendum and conducted additional field investigations to fill data gaps.

In FY02, the FAA initiated additional field investigations in response to EPA comments on the SI addendum.

In FY03, the installation completed field investigations in response to EPA comments on the SI addendum and ANG assumed lead agency control of site investigations.

In FY04, the installation initiated a remedial investigation (RI).

FY05 IRP Progress

Atlantic City International Airport ANG Base continued RI. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Continue RI in FY06.
- Initiate feasibility study in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | WA017002729100 | Media Affected: | Groundwater and soil |
| Size: | 7,201 acres | Funding to Date: | \$ 83.4 million |
| Mission: | Provide support base for Trident submarines | Estimated Cost to Completion (Completion Year): | \$ 38.5 million(FY 2035) |
| HRS Score: | 30.42 (Bangor Ordnance Disposal); placed on NPL in July 1987, 55.91 (Bangor Naval Submarine Base); placed on NPL in August 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2001/FY 2009 |
| IAG Status: | Federal facility agreement signed in January 1990 | Five-Year Review Status: | Completed and planned |
| Contaminants: | Residual TNT, RDX, Otto fuel, VOCs | | |



Progress To Date

From the early 1940s until it was commissioned as a submarine base in 1977, Bangor Naval Submarine Base was used to store, process, and ship munitions. Past chemical releases at the installation are primarily related to the detonation, demilitarization, and disposal of explosive ordnance and associated activities. The Navy conducted an initial assessment study in FY83 to identify sites requiring further investigation because of suspected soil and groundwater contamination. EPA placed the Bangor Ordnance Disposal area on the NPL in July 1987 and the Bangor Naval Submarine Base in August 1990. In January 1990, the Navy, EPA, and the State of Washington signed a federal facility agreement for the installation. The installation completed 5-year reviews in FY00 and FY05.

Forty-three sites have been identified at this installation. These sites were grouped into eight operable units (OUs). The installation has completed eight Records of Decision and performed five expedited response actions. Construction completion documents for OUs 1, 2, and 7 were submitted to EPA and the Washington Department of Ecology. The cleanup progress for Bangor Naval Submarine Base for FY01 through FY04 is detailed below.

In FY01, long-term management (LTM) and land use controls (LUCs) were instituted at Site A. The installation continued to evaluate ordnance natural attenuation (NA) continued to be evaluated. Remedial design and construction for the OU 8 monitored NA (MNA) and free-product recovery were completed; the remedy was effective and operated as predicted. The installation developed and implemented a basewide institutional control (IC)/LUC management plan.

In FY02, the installation submitted a proposal for partial delisting from the NPL for all media with the exception of groundwater for OUs 1 and 2. Ordnance MNA and downgradient aquifer conditions were evaluated at OU 1. The installation continued long-term operations (LTO) and LTM at OUs 1, 2, and 8 and implemented and maintained LUCs. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation collected additional data to

demonstrate that the site treatment system could be shut down. The installation continued LTO and LTM at OUs 1, 2, and 8. LUCs and ICs were implemented and maintained. MNA was demonstrated as a viable alternative remedy at OU 1.

In FY04, the installation collected more data to demonstrate that the pump-and-treat system at OU 1/Site 200 could be shut down. The Navy began the second basewide 5-year review. The installation continued LTM and LTO at OUs 1, 2, and 8 and began optimization studies at Sites 200 and 204. The installation initiated a cleanup level study for Pogy Road. The installation implemented and maintained LUCs and ICs.

FY05 IRP Progress

Bangor Naval Submarine Base conducted an optimization study completed at OUs 1, 2, and 8, and presented an alternate remedy and systems shutdown to the regulators. The Navy completed a second 5-year review. The installation completed the Pogy Road cleanup and discontinued product recovery at OU 8.

FY05 MMRP Progress

The installation initiated a preliminary study at Site EO300.

Plan of Action

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

IRP

- Repair Site 201's shoreline and discontinue sampling at Site 26 in FY06.
- Begin perchlorate sampling at OUs 1, 2, and 7 in FY06.
- Implement optimization study recommendations in FY06.
- Evaluate exposure pathways at OU 8 and initiate partial NPL delisting for soils at OUs 1 and 2 in FY07.

MMRP

- Conduct site investigation at Site EO300 in FY06.

| | | | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | HI917002432600 | Media Affected: | Groundwater and soil |
| Size: | 3,816 acres | Funding to Date: | \$ 60.7 million |
| Mission: | Maintain and operate facilities and provide services and material support to aviation activities and units of the operating forces | Estimated Cost to Completion (Completion Year): | \$ 2.4 million(FY 2011) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| IAG Status: | None | Five-Year Review Status: | Planned |
| Contaminants: | PCBs, heavy metals, petroleum hydrocarbons, pesticides, solvents, asbestos | | |



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 and formed a Restoration Advisory Board and a BRAC cleanup team. A preliminary assessment identified nine sites at the installations; however, after an expanded site inspection, it was determined that only one site required further investigation. In FY97, the latest version of the BRAC cleanup plan was completed, along with a land reuse plan.

The installation signed Records of Decision for Sites 1, 8, 13, 15, 19, and 20. The installation closed Sites 5, 8 through 13, and 19 in FY99. Site 1 was transferred in FY02. The cleanup progress for Barbers Point NAS for FY01 through FY04 is detailed below.

In FY01, a remedial investigation (RI) was completed for Site 14. The installation completed interim remedial actions (IRAs) for Sites 15, 22, and 23, and closed out the sites. Annual long-term management (LTM) continued at Site 19. The installation completed a site investigation (SI) of Navy retained property, recommending further action (NFA) at Sites 6, 7, 17, 27, 29, and 31. The SI also recommended NFA at Sites 26, 28, and 30. The installation initiated the IRAs at Sites 6, 7, 17, 27, 29, and 31, and the draft engineering evaluation and cost analysis (EE/CA).

In FY02, the installation completed an RI at Site 2. LTM continued for Site 19 groundwater. An IRA was completed at Site 1 and the site was transferred. The IRA at Site 18 was completed. Archeological sites containing lead contamination were preserved with berms and fences. The installation completed the investigation for the IRA at Site 20. The Navy completed an inventory of all Military Munitions Response Program (MMRP) site. No MMRP sites were identified at this installation.

In FY03, Barbers Point NAS continued the ecological risk assessment (ERA) for non-BRAC Sites 6, 7, 17, and 26 through 31. The installation continued removal actions on Site 18 firing ranges. The installation performed a human health risk assessment for Site 2. In addition, the IRA and conservation

plan at Northern Trap and Skeet Range (Site 18) were negotiated with the U.S. Fish and Wildlife Service (USFWS) to ensure the protection of the endangered Ewa Plains akoko plant.

In FY04, the Hawaii Department of Health and USFWS identified an additional larger wetland area at Ordy Pond (Site 2), which required additional sampling to determine if further action was necessary. The results were included in the ERA for Ordy Pond (Site 2). The installation completed the additional removal actions required on the Site 18 firing ranges and the Site 20 transformers.

FY05 IRP Progress

Barbers Point NAS completed the ERA 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. Decision documents for non-BRAC Sites 6, 7, and 27 were completed. The installation completed additional sampling of Ordy Pond and the ERA. Barbers Point NAS completed the cap for the consolidation unit. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete site closeout for the Northern and Southern Trap and Skeet Range BRAC Site 18 in FY06.
- Complete site closeout for Ordy Pond BRAC Site 2 in FY06.
- Complete site closeout for the consolidation unit (non-BRAC) site in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA917302426100 | Funding to Date: | \$ 103.3 million |
| Size: | 5,688 acres | Estimated Cost to Completion (Completion Year): | \$ 27.9 million(FY 2029) |
| Mission: | Maintain, repair, rebuild, store, and distribute supplies and equipment; formerly conducted industrial operations | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 37.93; placed on NPL in November 1989 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in October 1990 | | |
| Contaminants: | Heavy metals, PCBs, petroleum hydrocarbons, pesticides, herbicides, MTBE, VOCs | | |
| Media Affected: | 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. The 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. EPA placed the installation on the NPL in November 1989 after high concentrations of trichloroethylene (TCE) were detected in groundwater monitoring wells. The installation signed a federal facility agreement in October 1990. The installation formed a technical review committee, prepared a community relations plan (CRP), and established an information repository and administrative record in FY91. Public meetings are held annually, however, no interest exists in forming a Restoration Advisory Board. In FY03, the installation completed a 5-year review.

To date, 39 CERCLA and 3 UST regulation sites have been identified at this installation. The installation has completed Records of Decision (RODs) for Operable Units (OUs) 1, 2, 3, 4, 5, and 6. The installation closed OUs 3 and 4 in FY00. The cleanup progress at Barstow MCLB for FY01 through FY04 is detailed below.

In FY01, the installation replaced dry monitoring wells at OU 1 and closed out six tanks. Remedial action (RA) was completed at CERCLA Area of Concern (CAOC) 35, OU 5. The remedial investigation and feasibility study (RI/FS) for Site CAOC 39, OU 7, and the treatability study (TS) for CAOC 38, OU 2 Nebo North were awarded. The construction of an air sampling/soil vapor extraction (AS/SVE) system for the Phase II pilot study at Site CAOC 38, Nebo South, was completed.

In FY02, the installation completed closeout of OUs 5 and 6. The extended RCRA facility assessment report for CAOC 39 was finalized. The CRP was revised. A 5-year review and an explanation of significant differences (ESDs) to not install the OUs 1 and 2 off-base groundwater extraction system began. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed a 5-year review. The OU 7 RI and OU 2 Nebo North AS/SVE TS fieldwork was completed. The system at OU 2 Nebo South was expanded. The installation tracked the methyl tertiary-butyl ether (MTBE) plume that has commingled with the base volatile organic compound (VOC) plume and determined that a private entity was the source.

In FY04, the installation completed the OU 2 Nebo North AS/SVE report. RA operations (RA-O) and long-term maintenance continued at CAOCs 37 and 38, and landfill caps. The installation worked with Regional Water Quality Control Board and the private entity to manage the MTBE plume. The installation requested compensation from the private entity. The installation submitted the draft OU 7 RI report. Technical memorandums in support of an ESD for OUs 1 and 2 were completed.

FY05 IRP Progress

The installation completed repairs at CAOC 7. RA-O at CAOCs 37 and 38, and landfill cap long-term maintenance continued. The OUs 1 and 2 optimization studies were completed and preparation of ESDs was started. The installation continued working with the Navy's Office of the General Council (OGC) to recapture funds related to the MTBE plume. The Navy obtained closures from the State for 44 USTs.

Regulatory issues delayed the ecological risk assessment (ERA), RI, FS, and ROD for OU 7. Weather issues delayed the design sampling and remedial investigation (RD)/RA work plan for Nebo North. Regulatory issues delayed the ESDs for OUs 1 and 2.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Conduct ERA and finalize RI, FS, and ROD for OU 7 in FY06-FY07.
- Complete OUs 1 and 2 ESDs, RD/RA work plan, and design sampling for Nebo North in FY06.
- Continue RA-O for CAOCs 37, 38 and long-term management for landfills in FY06.
- Continue working with OGC to recapture funds in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | MA117002357000 | Funding to Date: | \$ 19.6 million |
| Size: | 46 acres | Estimated Cost to Completion (Completion Year): | \$ 31.8 million(FY 2030) |
| Mission: | Design, fabricate, and test prototype weapons and equipment | IRP/MMRP Sites Final RIP/RC: | FY 2013/None |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | Federal facility agreement signed in September 1999 | | |
| Contaminants: | Acids, BTEX, incinerator ash, industrial wastes, paints, POLs, photographic wastes, solvents and VOCs | | |
| Media Affected: | Groundwater | | |



Progress To Date

The Bedford Naval Weapons Industrial Reserve Plant (NWIRP), a former government-owned, contractor-operated plant produced and tested prototype weapons and equipment, such as 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). A community relations plan was developed in FY89 and updated in FY92. EPA placed the installation on the NPL in May 1994, and the installation signed a federal facilities agreement in September 1999. The installation established a technical review committee in FY89 and converted it to a Restoration Advisory Board in FY95. An information repository is maintained. The facility was declared excess and closed as a non-BRAC closure on December 31, 2000.

Four sites have been identified at the installation: Site 1: incinerator ash disposal areas (potential soil contamination with ash and heavy metals); Site 2: components-laboratory fuel oil tank (potential soil contamination with low levels of POLs); Site 3: northwest groundwater plume (groundwater plume contaminated with VOCs); and Site 4: former fuel pump/tank BTEX area (soil and groundwater contaminated with BTEX). The installation has completed a no further action Record of Decision (ROD) for Sites 1 and 2. In addition, the installation has initiated a ROD for Site 4. The cleanup progress at Bedford NWIRP for FY01 through FY04 is detailed below.

In FY01, the installation completed the annual site management plan (SMP) update. Additionally, the installation successfully implemented the Site 4 accelerated remedial action (RA) and continued monthly monitoring of the Site 3 groundwater treatment facility and semiannual monitoring of the extraction and monitoring wells.

In FY02, the installation updated the SMP with revised schedules and summary milestones that have been met. The installation completed the Site 4 RA (in situ chemical oxidation process), which included three injection periods, each followed by confirmatory sampling. The installation completed the Site 4 feasibility study (FS) and the draft FS for Site 3, while continuing the monitoring of the Site 3 groundwater treatment

facility and semiannual monitoring of the extraction and monitoring wells. The proposed plans for Sites 3 and 4 were initiated. Two pilot studies for Site 3 groundwater contamination were considered. Thermal treatment was determined to hold a great potential for success and work plans began. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation continued monitoring the Site 3 groundwater treatment facility and semiannual monitoring of the extraction and monitoring wells. The installation continued the Site 4 RA and began the Site 3 pilot study field implementation. An innovative technology called 'thermal treatment' was evaluated for groundwater remediation at Sites 3 and 4. The installation commenced the Site 3 pilot study, with technology at Site 4 being applied as a continuation of the CERCLA removal action.

In FY04, the installation completed the heating portion of the CERCLA removal action. The installation completed the thermal treatment at Sites 3 and 4, and cool-down for Site 4. The installation also initiated the ROD for Site 4. The monthly monitoring of the Site 3 groundwater treatment facility and semiannual monitoring of the extraction and monitoring wells continued.

FY05 IRP Progress

Bedford NWIRP initiated a ROD for Site 4. The installation initiated the monitored natural attenuation work plan and field program at Site 4 and continued cool-down of the innovative technology pilot study at Site 3. The installation also initiated the follow-up source area/bedrock well sampling at Site 3. The installation continued monthly monitoring of the Site 3 groundwater treatment facility and semiannual monitoring of the extraction and monitoring wells.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete Site 4 ROD in FY06.
- Complete the innovative technology pilot study and FS at Site 3 in FY06.
- Complete the Site 4 removal action plan closeout in FY06.
- Continue monthly monitoring of the Site 3 groundwater treatment facility and semiannual monitoring of the extraction and monitoring wells in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | TX657002418800 | Media Affected: | Groundwater and soil |
| Size: | 3,197 acres | Funding to Date: | \$ 48.3 million |
| Mission: | Housed the 67th Reconnaissance Wing, 12th Air Force Headquarters, 12th Tactical Intelligence Squadron, 712th Air Support Operations Center, 10th Air Force Reserve | Estimated Cost to Completion (Completion Year): | \$ 2.8 million(FY 2013) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 1999/FY 2006 |
| IAG Status: | None | Five-Year Review Status: | Underway and planned |
| Contaminants: | VOCs, pesticides, petroleum hydrocarbons, metals, TCE, low-level radioactive waste | | |



Progress To Date

Bergstrom Air Force Base (AFB) began operations in 1942, maintaining troop carrier units. In July 1991, the BRAC Commission recommended closure of the installation and retirement of the assigned RF-4 aircraft. The installation closed in late FY93, and the local redevelopment authority (LRA) began to convert the installation to a civilian airport. Site types identified at the base include underground storage tanks (USTs), landfills, fuel spill areas, a pesticide evaporation pit, firing ranges, a sludge weathering pit, aboveground storage tanks (ASTs), a fire training area, and a radioactive waste disposal area. Interim remedial actions have included removal of 106 USTs, removal of contaminated soil and low-level radioactive wastes, and closure of 45 ASTs. A BRAC Cleanup Team (BCT) and a Restoration Advisory Board were formed in FY94. The RAB was disbanded in FY97 because of the successful remediation efforts at the installation. Also in FY97, the latest Environmental Baseline Survey (EBS) was completed. The installation continued preparing the first 5-year review in FY05.

Environmental studies since FY83 previously identified 30 CERCLA sites and 454 RCRA areas of concern (AOCs). To date, 478 out of a total of 484 sites and AOCs have been designated for No Further Action (NFA) and all 3,197 acres have been transferred to the LRA. The cleanup progress at Bergstrom AFB for FY01 through FY04 is detailed below.

In FY01, the installation obtained concurrence from the regulators on the closure of seven AOCs, raising the number designated for NFA to 478 out of a total of 484 sites and AOCs. The installation continued coordination with the City of Austin, the Texas Natural Resource Conservation Commission, and EPA on closure of the remaining sites. An additional 1,500 acres were transferred to the LRA through the finding of suitability to transfer (FOST) process.

In FY02, the installation submitted a deed certification for Solid Waste Management Unit (SWMU) 216 to regulatory agencies for approval. The installation also submitted a FOST and supplemental EBS (SEBS) for five sites and incorporated regulator comments. The pump and treat, air sparging, and soil vapor extraction (SVE) systems for the trichloroethylene (TCE) groundwater plume operated throughout the year, which

lowered TCE plume levels from an average of 230 parts per billion (ppb) to an average of 35 ppb. The semiannual long-term monitoring of the combined Southeast Landfills (LFs) 3 through 7 (56 acres) was completed and included cutting the grass, repairing erosion as necessary, and inspecting the RCRA landfill caps to ensure their integrity was maintained. The BCT met to determine a cleanup strategy based upon the TCE plume remediation systems results. An Explosive Ordnance Disposal (EOD) Remedial Action (RA) project was conducted to clear 200 anomalies that were identified during the investigative project. A draft final report for the EOD RA project was submitted for review and comments.

In FY03, the Air Force began processing the FOST/SEBS for the SWMU 76 Area 2 TCE Plume (SS032). Operation of the existing pump and treat, air sparging, and SVE remediation systems continued for the SWMU 76 Area 1 TCE Plume (SS031). Long-term management (LTM) continued for the combined Southeast LFs 3 through 7 and documentation was developed to achieve Operating Properly and Successfully (OPS) for the five sites. The EOD area (56 acres) Residential Clearance Certification was submitted to the Air Force Safety Center for processing and to the DoD Explosive Safety Board (DDESB) for their review and approval. The DDESB safety clearance was approved, allowing transfer of the EOD area.

In FY04, 161 acres were transferred. A SEBS, FOST and deed were produced for the EOD area of 56 acres and the SWMU 76 Area 2 TCE Plume of 59 acres. Both properties were transferred to the City of Austin. FOST and OPS documents were prepared for the combined Southeast LFs 3 through 7 and the SWMU 76 Area 1 TCE Plume. Operation and maintenance (O&M) and LTM were conducted for the combined Southeast LFs 3 through 7 and the Area 1 TCE plume. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

EPA approval of the FOST and OPS documents for the SWMU 76 Area 1 TCE Plume and the combined Southeast LFs 3 through 7 was obtained. The Air Force transferred the remaining two parcels (361 acres), and deactivated the SWMU 76 Area 1 SVE systems. O&M and LTM for the combined

Southeast LFs 3 through 7 and the Area 1 TCE plume continued under a fixed-price remediation contract. The Community Relations Plan was updated to indicate the status of remediation efforts and identify ongoing opportunities for community involvement. The draft of the first 5-year review was completed and submitted for signature. The cost of completing environmental restoration at this installation has changed significantly due to regulatory issues.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Award performance-based contract to continue LTM and O&M of the combined Southeast LFs 3 through 7 and the SWMU 76 Area 1 TCE Plume in FY06.
- Deactivate the SWMU 76 Area 1 Air Sparging system in FY06.
- Finalize the 5-year review in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|-------------------------|-----------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MD357182400000 | Estimated Cost to Completion (Completion Year): | \$ 10.3 million(FY 2020) |
| Size: | 8 acres | IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| Mission: | None (inactive) | Five-Year Review Status: | Planned |
| HRS Score: | 50.15; placed on NPL in June 1999 | | |
| IAG Status: | None | | |
| Contaminants: | PCBs and solvents (including TCE) | | |
| Media Affected: | Sediment and groundwater | | |
| Funding to Date: | \$ 4.4 million | | |



Progress To Date

The Brandywine facility is an inactive 8-acre former Defense Reutilization and Marketing Office (DRMO) site located approximately 8 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, this facility temporarily accumulated wastes from other area DoD facilities. No hazardous materials have been stored on site since 1980. The primary contaminants of concern are polychlorinated biphenyls (PCBs) and solvents, including trichloroethylene (TCE). The surface water migration pathway for the facility includes wetlands, Timothy Branch, and Mattawoman Creek. No personnel currently occupy the site. To prevent access to the property, a locked chain-link fence was constructed around the site perimeter. The Air Force has performed 3 PCBs removal actions, removing a total of 17,000 cubic yards of contaminated soil; the most recent PCBs removal action was in 1994. Brandywine was placed on the NPL in June 1999.

The cleanup progress at Brandywine DRMO for FY01 through FY04 is detailed below.

In FY01, the installation continued operation of the interim remedial action (IRA) pump and treat system, and began remedial investigation (RI) fieldwork.

In FY02, Andrews AFB completed Phase I of RI and continued to operate the IRA pump and treat system. Approximately 2.7 million gallons of TCE contaminated water have been remediated to date. A well survey and sampling has shown that no immediate risks are posed to private drinking water.

In FY03, the treatment system continued to operate as permissible during lulls in RI field efforts.

In FY04, the installation initiated the feasibility study (FS) and submitted the draft RI report to the partnering group, which consisted of members from EPA, Maryland Department of the Environment, and Prince George's County Health Department.

FY05 IRP Progress

Brandywine DRMO finalized an RI and prepared the draft focused FS. The installation began a treatability study (TS) for the off-site groundwater plume. Brandywine DRMO began development of the engineering evaluation/cost analysis for off-site PCBs. Approximately 6.6 million gallons of TCE contaminated groundwater have been remediated as of September 2005.

Technical issues delayed FS, proposed plan (PP), and Record of Decision (ROD) completion.

The installation sent an inaugural newsletter to the local community on the progress and schedule at the site, and gave a presentation to the Brandywine and North Keys Civic Association on site activities.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Finalize focused FS in FY06.
- Complete TS for off-site groundwater plume in FY06.
- Issue PP and ROD in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | ME117002201800 | Funding to Date: | \$ 64.2 million |
| Size: | 7,259 acres | Estimated Cost to Completion (Completion Year): | \$ 15.6 million(FY 2031) |
| Mission: | Provide facilities, services, materials, and aircraft for submarine warfare | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2012 |
| HRS Score: | 43.38; placed on NPL in July 1987 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in 1989; revised in 1990 to include the State of Maine | | |
| Contaminants: | DDT, PCBs, PAHs, VOCs, metals | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

The Brunswick Naval Air Station (NAS) supports activities for submarine warfare. Site types include landfills, a groundwater plume contaminated with volatile organic compounds (VOCs), and two underground storage tank (UST) sites. 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. Onsite landfills were used to dispose of wastewater treatment sludge, paints, solvents, medical supplies, pesticides, petroleum products, and photographic and industrial chemicals. EPA placed the installation on the NPL in July 1987 because some sites were used to store or dispose of hazardous waste. The installation signed a federal facility agreement in FY89, which was revised in FY90 to include the State of Maine. The installation established an administrative record and an information repository in FY87. During FY88, the community relations plan was completed. A technical review committee was formed in FY88 and converted to a Restoration Advisory Board in FY95. The installation conducted 5-year reviews in FY01 and FY05.

Studies conducted at the installation have identified 21 sites. The installation completed a Record of Decision (ROD) to address the eastern groundwater plume, three USTs, and a waste pit. In addition, the installation has signed a ROD for Sites 4, 7, 9, 11, and 13 and a ROD for the eastern groundwater plume treatment plant. The installation has completed no further action (NFA) documentation for Sites 14, 15, 16, and 18. The cleanup progress at Brunswick NAS for FY01 through FY04 is detailed below.

In FY01, the installation completed a remedial action (RA) for UST 1 and began an RA for UST 2. Modifications of the eastern plume treatment plant, surface water discharge, and extraction well installation were completed. The installation completed NFA documentation for Sites 14, 15, 16, and 18. The decommissioning and closeout of monitoring wells, recommended by EPA and the Maine Department of Environmental Protection, were completed. The installation completed a 5-year review.

In FY02, the installation worked with regulators to develop and implement an exit strategy for Building 95. The Navy and the

regulators agreed that a consensus statement would be used to document the exit strategy. The installation evaluated initial diffusion sampling results; the results were similar to traditional techniques. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the Navy monitored sampling results for Building 95, eliminating maleic hydrazide from the long-term management plan (LTMP). The installation continued to develop an exit strategy for Building 95. The Navy conducted an additional investigation at Site 12 for possible perchlorate contamination and prepared a sampling plan for this effort. Diffusion sampling was accepted as an alternative to low flow sampling, resulting in cost and time savings. The installation initiated the LTMP for Site 7.

In FY04, the Navy continued to monitor sampling results for Building 95 as the exit strategy. The installation completed the LTMP and initiated sampling for Site 7. The Navy also initiated monitored natural attenuation for Sites 1 and 3 and the eastern plume. The Navy began optimization of the eastern plume remedy, contracted to install two new extraction wells to improve system effectiveness. In addition, the Navy planned to expand its investigation of Site 2. The Navy prepared and distributed the draft 5-year review.

FY05 IRP Progress

Brunswick NAS completed its 5-year review and continued to monitor sampling results at all sites. The installation demolished barracks at Site 9 and prepared an engineering evaluation and cost analysis to address underlying contaminated soil. The Navy found that extraction wells in the eastern plume were not necessary at the time. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

Brunswick NAS completed a draft preliminary assessment (PA), and are presently addressing regulatory issues.

Plan of Action

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

IRP

- Develop institutional control boundaries for the Installation Restoration Program (IRP) Sites in FY06.
- Investigate the area north of Site 2 in FY06.
- Investigate extent of remaining soil contamination at Building 95 in FY06.
- Develop and implement work plan for 1,4 dioxane study, including upgradient investigation in FY06.
- Develop and execute a closeout plan for Site 12 during FY06-FY07.

MMRP

- Finalize PA in FY06.

| | | | |
|-------------------------|--------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | WA021402011200 | Estimated Cost to Completion (Completion Year): | \$ 26.3 million(FY 2012) |
| Size: | 3,020 acres | IRP/MMRP Sites Final RIP/RC: | FY 2002/FY 2012 |
| Mission: | Conducted training of active and reserve DoD personnel | Five-Year Review Status: | The installation has not completed a 5-year review. |
| HRS Score: | N/A | | |
| IAG Status: | None | | |
| Contaminants: | POLs, solvents, UXO | | |
| Media Affected: | Soil | | |
| Funding to Date: | \$ 15.2 million | | |



Progress To Date

In July 1995, the BRAC Commission recommended closure of Camp Bonneville. Prior to its closure, DoD personnel training was conducted at the installation. The Army identified 14 areas of concern (AOCs): a leaking underground storage tank (UST) site, 3 landfills, a burn site, a drum burial site, a paint and solvent burial site, 2 wash racks, a maintenance pit, grease pits, a pesticide storage facility, and an old sewage lagoon site. The Army initiated site investigation work at the leaking petroleum UST. In FY99, the installation also worked with regulators and the community to develop an unexploded ordnance (UXO) management plan.

To date, the installation has completed UXO clearance of 23 acres. The cleanup progress at Camp Bonneville for FY01 through FY04 is detailed below.

In FY01, the installation continued a groundwater investigation to determine whether training activities have impacted groundwater. The Army began characterization of lead contamination from small-arms ranges. It initiated removal actions at the suspected drum burial area and completed removal actions at the Pesticide Building (#4126) and Ammunition Bunkers (#2950, #2951, and #2953).

In FY02, the installation installed additional groundwater monitoring wells to continue monitoring the landfill for Demo 1. The Army initiated the partial transfer of the property. The Army conducted an instrument-aided site reconnaissance of over 70 UXO AOCs. Investigations to evaluate if past military training and the presence of UXO have adversely affected the groundwater began. Work continued towards developing a UXO engineering evaluation and cost analysis for Camp Bonneville. The installation continued characterization work at three open burning and open detonation (OB/OD) sites. The Army initiated an inventory of closed, transferred, and transferring ranges and sites with UXO, discarded military munitions, or munitions constituents. The Restoration Advisory Board (RAB) held monthly meetings and planned an open house.

In FY03, the installation installed and sampled 17 additional wells as part of the installationwide groundwater investigations. The Army awarded a guaranteed fixed price contract for the

removal action at Landfill 4, which is intended to remove any possible source of groundwater contamination. The Army completed characterization of the soil at all of the small arms ranges and two additional OB/OD sites. The installation conducted soils investigation for lead at small arms ranges, and residual explosives at two demolition sites. The Army completed the second phase of the UXO site reconnaissance, investigating more than 1,300 acres for signs of UXO or ordnance related activities.

In FY04, Camp Bonneville completed public review and regulatory closeout for 20 hazardous and toxic waste (HTW) sites, and continued quarterly monitoring of all 21 wells. The installation installed two additional wells as sentry wells for Landfill 4. The interim remedial action (IRA) for Landfill 4 underwent public review and comment. The installation completed the remedial investigation and feasibility study (RI/FS) for small-arms ranges under the Military Munitions Response Program (MMRP). The installation also completed the HTW investigation of Demolition Areas 2 and 3, and determined that neither posed a threat to human health or the environment.

FY05 IRP Progress

The installation continued quarterly groundwater monitoring of 27 wells. Results indicated contamination in groundwater near Landfill 4 only. The installation submitted the draft IRA report to regulators and removed contaminated soil from Landfill 4. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The RAB conducted monthly meetings.

FY05 MMRP Progress

The Army submitted a draft RI/FS for RA Unit 3 to regulators.

Plan of Action

Plan of action items for Camp Bonneville are grouped below according to program category.

IRP

- Continue groundwater monitoring in FY06.
- Complete IRA at Landfill 4 in FY06.
- Complete RI/FS for the groundwater plume at Landfill 4 in FY06.
- Continue early transfer process in FY06-FY07.

MMRP

- Complete soil sampling at the central impact target areas and artillery firing points in FY06.
- Complete remedial action at the small-arms ranges in FY06.

| | | | |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------|
| FFID: | NC417302258000 | Contaminants: | Battery acid, fuels and used oils, paints and thinners, PCBs, pesticides, metals, solvents |
| Size: | 151,000 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Provide housing, training facilities, logistical support, and administrative supplies for Fleet Marine Force units and other assigned units; conduct specialized schools and other training as directed | Funding to Date: | \$ 134.6 million |
| HRS Score: | 36.84; placed on NPL in October 1989 | Estimated Cost to Completion (Completion Year): | \$ 161.3 million(FY 2057) |
| IAG Status: | Federal facility agreement signed in February 1991 | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2013 |
| | | Five-Year Review Status: | Completed |



Progress To Date

Camp Lejeune Marine Corps Base provides housing, training facilities, logistical support, and administrative supplies for Fleet Marine Force units and other assigned units. The installation also provided 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 installation formed a technical review committee in FY88 and converted it to a Restoration Advisory Board in FY95. A community relations plan was completed in FY90. In February 1991, a federal facility agreement (FFA) was signed. The installation was placed on the NPL in October 1999. The installation placed its administrative record on the Web in FY00. The installation signed 5-year reviews in FY99 and FY05.

Investigations at Camp Lejeune have identified 176 sites, including 86 leaking underground storage tank sites. Since signing the FFA, 18 operable units (OUs), comprising 42 of the 91 Installation Restoration Program (IRP) sites, have been identified as requiring additional investigation or remediation. To date, the installation has completed 32 Records of Decision (RODs). In addition, Camp Lejeune has completed an interim final ROD for Site 69. The installation has requested closure with no further action at 26 sites. The cleanup progress at Camp Lejeune for FY01 through FY04 is detailed below.

In FY01, the installation completed the time critical removal action (TCRA) at Site 89. No further remedial action (RA) documents for Sites 10, 75, 76, 85, and 87 were finalized. The RODs for OU 9 and OU 17 were completed, as were a supplemental field investigation for Site 10 and a remedial investigation/feasibility study (RI/FS) project plan for Site 84. The final site management plan was completed and additional sampling was conducted at Sites 35, 78, 82, 84, 86, and 89.

In FY02, the installation performed an interim RA (IRA) for Site 84, polychlorinated biphenyls (PCBs) at Building 45. The natural attenuation (NA) study for Site 73 was completed. The IRA for Site 89 was awarded and the environmental engineering and cost analysis was underway. Fieldwork for the focused NA study for the Site 35 wetland area continued. Removal actions moved forward for OU 6 and OU 19. The Navy completed an inventory of all Military Munitions Response

Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed technology evaluations and treatability study (TS) work plans for Sites 35, 73, 78, and 86. RIs were awarded and work plans completed to address the dissolved phase in groundwater for Sites 88 and 89. Pilot studies were initiated at Site 78 and work plans were completed for pilot studies at Sites 35, 73, and 86. Field work was initiated at Sites 88 and 89.

In FY04, the installation initiated field pilot scale TSs at Sites 35, 73, and 86. Camp Lejeune also completed the Phase II removal action for spills at Site 84 as scheduled. The installation completed the Site 94 preliminary assessment and found evidence that further investigation was needed. The installation completed a 5-year review and submitted it for regulatory approval.

FY05 IRP Progress

Camp Lejeune Marine Corps Base completed pilot scale TSs at Sites 35, 73, 78 and 86. The installation completed and approved the OU 4 final closeout report. The Navy also signed the OU 6 ROD. The installation also completed a non-TCRA source removal at Site 88, the former base dry cleaners. The installation completed an RI/FS for Site 94. The Navy finalized the 5-year review. The cost of completing environmental restoration at this installation has changed significantly due to regulatory issues.

FY05 MMRP Progress

The Navy identified MMRP sites at this installation and loaded the sites into the normalization of environmental data systems NORM database. They are listed as unexploded ordnance sites 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, and 13, and cover 1,049 acres.

Plan of Action

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

IRP

- Complete RI/FS/proposed RA plan for Sites 35, 69, 73, 86, 88, 89, 93, and 94 in FY06.
- Complete RODs for Sites 69, 84, 86, 89, 93, and 94 in FY06.
- Complete the RA at Site 93 in FY06.

MMRP

- Initiate all MMRP site investigations in FY06-FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | CA917302353300 | Funding to Date: | \$ 156.5 million |
| Size: | 125,000 acres | Estimated Cost to Completion (Completion Year): | \$ 115.7 million(FY 2015) |
| Mission: | Provide housing, training facilities, logistics support, and administrative support to Fleet Marine Force Units | IRP/MMRP Sites Final RIP/RC: | FY 2014/None |
| HRS Score: | 33.79; placed on NPL in November 1989 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in October 1990 | | |
| Contaminants: | Pesticides, herbicides, heavy metals, PCBs, VOCs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Camp Pendleton Marine Corps Base provides housing, training facilities, logistics support, and administrative support to Fleet Marine Force Units. Environmental contamination at the installation resulted from maintenance of vehicles, 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 installation was placed on the NPL in November 1989 after the herbicide 2,4,5-TP (Silvex) was detected in two groundwater wells used for drinking water. A federal facility agreement (FFA) was signed in October 1990. The installation formed a technical review committee (TRC) in FY91 and prepared a community relations plan in FY92, which was updated in FY01. The installation completed the 5-year review for Operable Unit (OU) 1 in FY02 and the 5-year review for OU 3 in FY04.

Of the 208 sites identified at the installation, 64 are CERCLA sites, 114 are RCRA sites, and 30 are UST program sites. The installation has completed three Records of Decision (RODs) since environmental restoration activities began. The cleanup progress at Camp Pendleton for FY01 through FY04 is detailed below.

In FY01, the installation began construction of the evapotranspiration cover at Site 7 (Box Canyon Landfill). An air quality and noise-monitoring program was developed and implemented to ensure the safety of community members. The installation finalized the OU 4 work plans for the supplemental feasibility study (FS) and fieldwork neared completion. The work plans for the OU 5 remedial investigation (RI) were finalized. The installation installed remediation systems for nine UST sites. The installation obtained closure of one UST in Area 61 and approval of the corrective action plan (CAP) for a UST in Area 26. CAPs were submitted for regulatory review for USTs in Areas 14, 22, 31, and 43. The draft 5-year review of OU 1 sites was completed.

In FY02, the installation completed the evapotranspiration cover at OU 3. CAPs for USTs in Areas 13, 16, 17, 22, and 53 were completed. Operation and maintenance (O&M) for remediation systems at nine sites and groundwater monitoring at UST sites

in Areas 13, 21, 22, 24, 26, 43, and 53 continued. The installation received closure for UST Site 2404 and 40 UST sites in Area 62 that had been submitted in FY00 for regulatory review. The installation completed the 5-year review. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed CAPs for the Area 13 and Area 22 gas stations and implemented an interim remedial action for the Area 62 gas station. The O&M for remediation systems at nine sites and groundwater monitoring at UST sites in Areas 13, 21, 22, 24, 26, 43, and 53 continued. The installation closed out Sites 1E, 1F, and 2A. The installation held a two-day partnering session with parties of the FFA, including the EPA, California Regional Water Quality Control Board (RWQCB), and the California Department of Toxic Substances Control. The installation also conducted CERCLA training for the FFA team.

In FY04, the installation completed the OU 4 draft final FS for Sites 1D, 1E1, 1H, and 30 and obtained agency concurrence. The installation successfully completed the OU 5 draft final RI for Sites 1A1, 6A, 21, 1111, and Area 12 (Site 13), and obtained agency concurrence. The 5-year review for OU 1 and OU 3 was completed and the remedies remain protective. The installation, using innovative technology, conducted an accelerated site inspection for Site 1114 using the EPA Triad approach. The installation achieved no further action status for Site 6A. A Navy Tiger Team conducted an optimization review of OU 4 and OU 5 sites to confirm validity of technical approaches. The installation used innovative techniques to develop OU 5 ecological risk assessment Tier 1 and human health risk assessment protocols. The installation also completed site assessments for USTs in Areas 11 and 21. Closure was achieved for 17 UST sites from RWQCB. The installation closed out Site 7 and finalized the cap closure report.

FY05 IRP Progress

Camp Pendleton Marine Corps Base completed and obtained agency concurrence on the OU 4 proposed plan (PP) for Sites 1D, 1E1, and 30, documenting the remedial alternatives selected in the FS. The installation completed and obtained

agency concurrence on the OU 5 FS for Sites 1A1, 6A, 1111, and Area 12 (Site 13). The installation completed the annual groundwater monitoring report and a conceptual site model for aqueous geochemistry for Site 7. The installation continued O&M for remediation systems at UST sites. Additionally, the installation received closure for 18 UST sites.

Regulatory issues delayed the site activity plans for Site 33 and Area 22/23 groundwater, and the RI work plan for the Area 13 Fleet Service Support Group (FSSG) lot.

The installation held a TRC meeting to update the expanded regulatory community on the Site 9 explanation of significant differences, OU 4 PP, and general program status.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete PP for Site 1H, ROD for OU 4 sites, and PP and ROD for OU 5 sites in FY06.
- Conduct fieldwork at Sites 19, 33, Areas 13 (FSSG lot), and 22/23 in FY06.
- Continue O&M at UST sites in FY06.
- Reduce groundwater analyte monitoring and frequency for Site 7 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | TX657002404200 | Funding to Date: | \$ 47.9 million |
| Size: | 1,900 acres | Estimated Cost to Completion (Completion Year): | \$ 10.0 million(FY 2013) |
| Mission: | Housed the 7th Bombardment Wing, 436th Training Squadron and Detachment 1, and the 1365th Audiovisual Squadron | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Underway and planned |
| IAG Status: | None | | |
| Contaminants: | Waste oils, POLs, JP-4 jet fuel, solvents, TCE cleaners, low-level radioactive material | | |
| Media Affected: | Groundwater, surface water, sediment, and soil | | |



Progress To Date

Carswell Air Force Base (AFB) housed the 7th Bombardment Wing, 436th Training Squadron and Detachment 1, and the 1365th Audiovisual Squadron. In July 1991, the BRAC Commission recommended closure of Carswell AFB. The installation closed in FY93, but approximately 1,900 acres was reactivated in FY94 after the BRAC Commission recommended its realignment as a Joint Reserve Base (JRB). The Air Force Real Property Agency (AFRPA) is responsible for restoration activities on the BRAC property, and the Air Force Center for Environmental Excellence is responsible for restoration activities on the JRB property. Studies have identified the following site types at the installation: underground storage tanks, landfills, fire training areas, waste burial areas, contaminated groundwater plumes, 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. The installation uses both BRAC and Environmental Restoration Account (ERA) funds to reach cleanup goals. The installation formed a BRAC cleanup team (BCT) and a Restoration Advisory Board (RAB) in FY94.

To date, the maintenance yard and pesticide rinse area at the golf course and the recreational vehicle family camping site have received no further action (NFA) approval letters and some sites located within the active base were transferred to the ERA program. Approximately 195 acres have been transferred to the local redevelopment authority (LRA) to date. The cleanup progress at Carswell AFB for FY01 through FY04 is detailed below.

In FY01, the installation continued transferring sites located within the active base to the ERA program. It also received concurrence from regulatory agencies for NFA at seven BRAC sites. As of FY01, no BRAC sites remained open. The sewer investigation was completed, with some additional removal necessary. A hazardous waste permit modification to change the status of BRAC sites was completed. The horse stables area was transferred to the LRA. Long-term management began at several sites. The decision document in support of attainment of the land reuse implementation plan milestone was completed.

In FY02, a permeable reactive barrier was installed in order to reduce or eliminate contaminated groundwater flow onto BRAC property. The focused feasibility study (FFS) for the remediation of the TCE plume was completed and submitted for review. The final draft RCRA/Hazardous and Solid Waste Amendment permit renewal was approved and modified to include closure of all BRAC sites. The installation initiated a project to convert the clearance certification for the off-base weapons storage area (WSA) explosive ordnance disposal (EOD) area from agricultural to residential.

In FY03, the final draft finding of suitability to transfer and supplemental environmental baseline survey for transfer of the WSA was completed.

In FY04, AFRPA reviewed current remedies installed to address the nearby Air Force Plant (AFP) No. 4 TCE plume and found those remedies sufficient to meet goals. The installation began remedial action (RA) on the sanitary sewer system. A geophysical clearance survey of the WSA EOD range identified areas that could contain ordnance items; ordnance items were visually identified along a creek bed adjacent to the EOD range area. Additionally, the preliminary assessment and site inspection indicated elevated radiation levels at a former weapons storage bunker at the off-base WSA. AFRPA conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified on the BRAC portion of the installation.

FY05 IRP Progress

AFRPA investigated the radioactive contamination in the bunker at the off-base WSA. AFRPA also transferred approximately 37 acres to the LRA. In addition, completion of the FFS for the AFP No. 4 TCE plume was coordinated with the federal and state regulators. The regulators agreed to consider an explanation of significant differences to the AFP No. 4 ROD for the remedies proposed in the FFS, to support an operating properly and successfully (OPS) determination and transfer of the property to the LRA. The installation discussed finalizing the completion of property transfer with the Navy. The installation completed the RA on the sanitary sewer system. Additionally, the installation awarded a contract for clearance of potential munitions and explosives of concern (MEC) located within the WSA property. The cost of completing environmental

restoration at this installation has changed significantly due to technical and estimating criteria issues.

Property transfer documents were not prepared because three sites on the RCRA permit were not closed out.

The RAB and BCT each met three times.

FY05 MMRP Progress

AFRPA began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Complete MEC clearance activities within the WSA property boundaries in FY06.
- Complete OPS determination for the AFP No. 4 TCE Plume in FY06.
- Complete transfer of the golf course, approximately 187 acres, in FY06.
- Complete transfer of property to the Navy in FY06.
- Complete investigation of radioactive contamination in the bunker at the off-base WSA in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|----------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA957002455100 | Funding to Date: | \$ 159.7 million |
| Size: | 2,777 acres | Estimated Cost to Completion (Completion Year): | \$ 56.4 million(FY 2038) |
| Mission: | Trained tanker crews and serviced KC-135 stratotanker | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2006 |
| HRS Score: | 27.93; placed on NPL in July 1987 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in 1989 and 2004 | | |
| Contaminants: | Spent solvents, PCBs, POLs, pesticides, cyanide, cadmium, VOCs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1991, the BRAC Commission recommended closure of Castle Air Force Base (AFB), which formerly supported B-52 bomber and KC-135 tanker training and operations, and in September 1995 the installation was closed. EPA placed the installation on the NPL in July 1987 and the Air Force signed an interagency agreement in 1989 and 2004. The Air Force has identified landfills (LFs), underground storage tanks (USTs), discharge areas, chemical disposal pits, fire training areas, fuel spill areas, and polychlorinated biphenyl (PCB) spill areas at the installation. Interim actions have included removing contaminated soil from the PCB spill areas, installing potable-water supply wells with filtration systems to remove trichloroethylene (TCE) from groundwater, and removing USTs. An Environmental Baseline Survey was completed in FY93. A Restoration Advisory Board (RAB) and a BRAC Cleanup Team (BCT) were formed. The first 5-year review for the installation was completed in FY99 and a second in FY04.

Sites found at the installation were grouped into three operable units (OUs): OU 1 (groundwater), OU 2 (groundwater), and the source control OU (SCOU). The Air Force has completed a comprehensive basewide (CB) Part 1 Record of Decision (ROD) for groundwater, which combined previous work done for OUs 1 and 2 and Castle Vista, and RODs 1, 2, and 3 for all SCOU sites. The cleanup progress at Castle AFB for FY01 through FY04 is detailed below.

In FY01, the SCOU proposed plan (PP) was completed, and the SCOU ROD 2 was undergoing regulatory review. Regulatory review also began for the CB Part 2 remedial investigation and feasibility study (RI/FS) and consolidation of the groundwater RI/FS and the SCOU RI/FS. Long-term operation of groundwater treatment systems, intrinsic remediation sites, bioventing sites, and soil vapor extraction (SVE) sites continued. Five SVE systems, which address ten TCE-contaminated SCOU sites, were constructed. The installation also received approval on closure reports for nine SCOU sites. The Castle BCT created a new process for closing chlorinated volatile organic compound (VOC)-contaminated SCOU sites.

In FY02, the SCOU ROD 1 was completed. Design was completed for the conversion of four SCOU intrinsic remediation sites to SVE sites and construction commenced. Remedial actions (RAs) for petroleum-only and other remaining sites were initiated. The RAB met quarterly.

In FY03, the installation completed both the SCOU ROD 2 and CB Part 2 RI/FS. The installation issued a draft PP for the remaining SCOU sites. The draft 5-year review was submitted.

In FY04, the installation received operating properly and successfully concurrence from EPA. The installation also completed the 5-year review and obtained EPA and State approval. Additionally, the installation shut down the Castle Vista groundwater treatment system. One remaining well exceeding the maximum contaminant level was converted to wellhead treatment. An interagency agreement was signed for deed transfer of approximately 1,330 acres for aviation use. All remaining SVE sites were closed out, except one. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed the SCOU ROD 3. RA began on the SCOU ROD 3 sites. Groundwater extraction and treatment systems continued to be effective. The installation conducted investigations at the weapons storage area. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Regulatory issues delayed the transfer of property. The installation did not close the SVE site, as it may be converted to a biovent system to remove TCE from contaminated soil.

RAB activities continued.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Complete CB ROD Part 2 in FY06.
- Complete 100-percent property transfer in FY06.
- Close remaining SVE site in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | FL417002247400 | Funding to Date: | \$ 54.7 million |
| Size: | 30,895 acres | Estimated Cost to Completion (Completion Year): | \$ 12.8 million(FY 2018) |
| Mission: | Provide facilities, services, and material support for maintenance of Naval weapons and aircraft | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2005 |
| HRS Score: | 31.99; placed on NPL in November 1989 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in November 1990 | | |
| Contaminants: | Waste fuel oil, solvents, heavy metals, halogenated aliphatics, phthalate esters, SVOCs, lead | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

The Naval Air Station (NAS) Cecil Field supports the maintenance of Naval weapons and aircraft. 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 NAS Jacksonville, reducing the BRAC footprint to 17,225 acres. Operations that caused contamination include equipment maintenance, storage and disposal of fuel and oil, fire training, and training on target ranges. Investigations have identified 25 CERCLA sites; 10 major underground storage tank (UST) sites; 235 USTs; 250 BRAC grey sites and 1 RCRA site. EPA placed the installation on the NPL in November 1989 and signed a federal facility agreement in November 1990. In FY94, the technical review committee was converted to a Restoration Advisory Board (RAB) in FY95. A BRAC cleanup team was formed in FY94. The installation completed 5-year reviews in FY00 and FY05.

To date, the installation has signed 22 Records of Decision (RODs) and 12 findings of suitability to transfer (FOSTs), totaling 16,827 transferred acres, and delisted approximately 16,584 acres from the NPL. The cleanup progress at NAS Cecil Field for FY01 through FY04 is detailed below.

In FY01, the installation completed RODs for Sites 36 and 37. Remedial assessments were implemented at Buildings 9 and 46, and 11 grey sites. A FOST covering 29 acres was completed. A remedial investigation and feasibility study (RI/FS) was completed at Site 45 and an RI was initiated at Sites 57 and 58.

In FY02, the installation implemented a remedial action (RA) at Site 36/37. The RI/FS was completed for Sites 21 and 25. RODs for Sites 42, 44, and the old golf course were completed. The parks and recreation Phase II FOST (12 acres) was completed. The engineering evaluation and cost analysis for Sites 32 and 49 was completed. No further action (NFA) was achieved for Potential Source of Contamination 39, Sites 42 and 44, Tanks 367, 428, and Site 824 OW, and Building 610. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, NAS Cecil Field completed the RI/FS for Site 57/58. The installation implemented RAs at Sites 21, 25, 32, 45, and 57/58 (without signed RODs), the jet engine test cell, and Tank 271. The installation completed 2 FOSTs for 18.2 acres. The installation achieved the groundwater cleanup criteria at Sites 7, 11, and Building 610, and regulators approved the NFA. The installation delisted 16,584 acres from the NPL. Additionally, Site 15 was placed in the MMRP.

In FY04, the installation signed RODs for Sites 25, 32, and 45, and completed land use control (LUC) remedial designs (RDs) for Site 45. NAS Cecil Field also completed operating properly and successfully (OP&S) at Sites 1, 2, 3, 8, 16, and 17. The installation also initiated the RA at North Fuel Farm and Day Tank 1 and completed RAs at Sites 49 and 58. The Navy installed and began operating air sparging systems at Building 271 and JETC. NAS Cecil Field completed the preliminary assessment and site investigation for Site 59 and initiated the RI. The installation transferred 224 acres. Florida Department of Environmental Protection issued a Hazardous and Solid Waste Amendments Corrective Action Permit to the installation.

FY05 IRP Progress

Cecil Field completed the second 5-year review for all sites and completed RODs for Sites 21, 57, and 58. In addition, the facility signed 1 FOST that transferred 120.4 acres and issued LUC RDs and OP&S documentation for Sites 1, 2, 3, 8, 16, and 17. The installation submitted draft OP&S documentation and draft LUC RDs for Sites 5, 21, 25, 32, 57, and 58 to regulators. Also, the facility completed Site 59 RI fieldwork and completed the Site 15 FS and proposed plan. The installation installed the North Fuel Farm air sparging system and continued long-term operations and long-term management(LTO/LTM) at 36 groundwater sites. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Regulatory issues delayed the NFA ROD for Site 49.

The installation celebrated the 10-year anniversary of the RAB.

FY05 MMRP Progress

The facility completed munitions and explosives of concern (MEC) investigation, and detonated found MEC, at the 20 acre North Apron Expansion site.

Plan of Action

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

IRP

- Continue LTO/LTM at 36 sites in FY06.
- Implement RAs at Sites 15 and 49 in FY06.
- Sign RODs at Sites 15 and 49 in FY06 and Site 59 in FY07.
- Sign FOST to transfer 216.2 acres in FY06.
- Sign two FOSTs to transfer remaining 181.6 acres in FY07.

MMRP

- Complete MEC investigation and removal at Hangar 860 and two additional acres at the North Apron Expansion site in FY06.

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|-------------------------|-------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | IL57002475700 | Estimated Cost to Completion (Completion Year): | \$ 43.9 million(FY 2035) |
| Size: | 2,174 acres | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2006 |
| Mission: | Served as technical training center and airport | Five-Year Review Status: | Underway and planned |
| HRS Score: | Pending | | |
| IAG Status: | IAG signed in 1990 | | |
| Contaminants: | POs, chlorinated solvents, metals and UXO | | |
| Media Affected: | Groundwater, soil, sediment | | |
| Funding to Date: | \$ 108.3 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. In 1988, the installation was recommended 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. Sites identified at the facility include landfills (LFs), fire training areas, oil/water separators, a petroleum sludge disposal pit, jet engine test cells, and underground storage tanks (USTs). Interim actions have included removal of USTs, pipelines, and contaminated soil at UST sites; removal of sludge and contaminated soil at a sludge pit; and removal of oil-water separators. The installation was proposed for the NPL in FY01 and formed both a BRAC cleanup team and a Restoration Advisory Board (RAB) in FY94.

Currently, the installation is addressing a total of 75 sites and 14 areas of concern (AOCs). To date, an interim Record of Decision (ROD) has been signed for the construction of LF caps. The cleanup progress at Chanute AFB for FY01 through FY04 is detailed below.

In FY01, an interim ROD for the construction of four LF caps was signed. Installation of RCRA-equivalent caps was 50 percent complete at LF 2 (LF017) and LF 3 (LF018) and 60 percent complete at LF 1 (LF016). Unused aboveground storage tanks (ASTs) throughout the facility and underground fuel piping at Building 950 were removed. A work plan was completed for the closeout of 84 AST, UST, and oil/water separator sites, and field activities were initiated. A groundwater assessment was initiated at 15 UST and petroleum/oil/lubricants (POL) sites. Chanute AFB was proposed for the NPL. The Agency for Toxic Substances and Disease Registry initiated a public health assessment for the installation.

In FY02, construction of the caps at LFs 1 and 3 was completed, and construction of the cap at LF 2 continued. Through a cooperative agreement, excavation of soil for cap construction resulted in a stormwater detention basin for the Village of Rantoul. Documents summarizing investigations at

the LFs and Heritage Lake (SI034) were completed. The DoD Explosive Safety Board approved an explosive safety submission, and the unexploded ordnance removal action, encompassing 27 acres of the installation, was completed.

In FY03, the installation completed remedial investigation (RI) planning documents for Operable Units (OUs) 1 and 2, including the basewide sampling and analysis plans, quality assurance project plans, and investigation work plans. RI field work began for OUs 1 and 2. Cap construction at LF 2 continued. The Illinois EPA (IEPA) approved closure of 111 former fuel storage tank sites. Background studies were conducted for soils, groundwater, surface water, and sediments. An operational history was prepared. An outfalls investigation was initiated to determine the source of contamination entering Salt Fork Creek (SD032), and a hydrogeologic conceptual site model supporting the groundwater investigation was developed.

In FY04, the installation completed the initial investigation of Salt Fork Creek and the initial RI field activities at OUs 1 and 2. The investigations discovered contamination at 43 new sites. Cap construction at LF 2 was completed. Operation and maintenance for LFs 1, 2, and 3 began. A treatability study of the leachate collection system at LFs 1, 2, and 3 was initiated. RI reports were initiated for multiple sites within OUs 1 and 2. The IEPA approved closure of 25 additional fuel storage tank sites. Planning documents and initial fieldwork were completed for the Water Towers and basewide polychlorinated biphenyl (PCB) investigation. Actions at multiple non-CERCLA sites progressed. The Community Relations Plan was updated to indicate the status of remediation efforts and identify ongoing opportunities for community involvement. The Air Force conducted a site inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation continued the non-CERCLA PCB investigation and closure actions at multiple fuel storage tank sites. RI field activities identifying widespread soil contamination and localized groundwater impacts were substantially completed with limited sampling remaining in OU 2. Eleven AOCs and 7 Installation Restoration Program sites achieved regulatory

approved closure. The installation initiated 16 RI reports for sites in OUs 1 and 2 and submitted 9 for regulatory review. The cost of completing environmental restoration at this installation has changed significantly due to technical and regulatory issues.

Funding and technical issues delayed preparation of feasibility studies (FSs), proposed plans (PPs), and RODs.

The installation expanded community outreach efforts and completed an effort to increase the visibility of the RAB, which resulted in a campaign to solicit new members and elect a community co-chair.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Continue RI field activities for OU 2 in FY06.
- Continue RI report preparation and comment resolution, and initiate FSs, PPs, RODs and remedial actions for sites in OUs 1 and 2 in FY06.
- Continue investigation and closure actions at remaining non-CERCLA sites in FY06.
- Complete closure requirements at remaining environmental compliance-closure related sites in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

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|----------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------|
| FFID: | SC417002434300, SC417002757100, SC417002267000, SC417002425800, SC417002256000 | Media Affected: | Groundwater, sediment, soil |
| Size: | 2,922 acres | Funding to Date: | \$ 55.5 million |
| Mission: | Repaired, maintained, and overhauled Navy ships | Estimated Cost to Completion (Completion Year): | \$ 3.3 million(FY 2012) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2003/FY 2012 |
| IAG Status: | None | Five-Year Review Status: | Planned |
| Contaminants: | Asbestos, cyanide, decontaminating agents, heavy metals, paints, PCBs, pesticides, POLs, solvents, petroleum hydrocarbons | | |



Progress To Date

The Charleston Naval Complex (CNC) housed five major naval commands (the Naval Shipyard, the Naval Station, the Naval Fleet and Industrial Supply Center, the Fleet and Mine Warfare Training Center, and the Naval Reserve Center) as well as several small organizations. In July 1993, the Base Realignment and Closure (BRAC) Commission recommended closure of the property and the majority of the commands. The installation subsequently converted its technical review committee to a Restoration Advisory Board and formed a BRAC cleanup team (BCT) in 1994. Concurrently, the State of South Carolina formed a local redevelopment agency. Operational closure of the CNC occurred on April 1, 1996. A community relations plan was updated in FY01.

To date, the Navy has identified 133 RCRA solid waste management units (SWMUs) and areas of concern (AOCs) that required some remedial action (RA). The BCT has completed 81 no further action (NFA) determinations, and 23 sites have received approval from the South Carolina Department of Health and Environmental Control (DHEC) for no further investigation (NFI) with land use controls (LUCs). The remaining 29 sites require long term monitoring (LTM). The BCT has also identified 84 under- and above-ground storage tanks, of which 66 have received NFA concurrence. The Department of the Navy (DoN) divided transfer of the CNC's 2,922 acres into four phases, and all transfers are complete. The Navy completed the final EDC 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 1677 acres to other federal entities. The cleanup progress at CNC for FY01 though FY04 is detailed below.

In FY01, the BCT closed nine Installation Restoration Program (IRP) sites and implemented remedies for groundwater contamination at five others. The BCT also completed lead-based paint abatement in CNC housing, accomplished asbestos surveys at EDC Phase II buildings, and initiated asbestos abatement at EDC Phase III buildings. Additionally, the BCT completed the EDC Phase II finding of suitability for transfer (FOST) and environmental baseline survey for transfer (EBST) as well as updated the installation community relations plan.

In FY02, the BCT submitted the corrective measures study (CMS) report for the SWMU 9 landfill to the South Carolina DHEC, implemented RAs at SWMU 166, completed asbestos surveys at EDC Phase III buildings, and accomplished most of the EDC Phase IV asbestos surveys. The BCT also completed the Phase III FOST and EBST. Additionally, the DoN inventoried suspected Military Munitions Response Program (MMRP) sites.

In FY03, the BCT submitted reports for SWMUs 9, 25, and 70 to DHEC, initiated a CMS for AOC 607, and completed the EDC Phase IV EBST. Additionally, the Navy submitted the Phase IV finding of suitability for early transfer (FOSET) to South Carolina.

In FY04, the DoN sold the 24 acres of the Chicora Tank Farm to a private entity. Additionally, the BCT submitted an interim measure work plan for interim LUCs at Phase IV land parcels and implemented corrective actions for SWMU 196 and AOC 607.

FY05 IRP Progress

The Navy received DHEC concurrence on the SWMU 9 presumptive remedy of LUCs. In addition, the BCT completed two modifications to the RCRA Part B permit. The first modification designated the presumptive remedy for SWMU 9, and the second modification updated the status of 124 sites at the CNC. The Navy transferred the final 436 acres to the LRA. The BCT performed a pilot study injection of lactate solution and submitted a work plan for full-scale operation at AOC 607. The BCT also energized a biosparge/soil vapor extraction (SVE) system at SWMU 196. The BCT implemented lactate injection system for source area treatment at SWMU 39. The Navy received monitored natural attenuation (MNA) concurrence from DHEC on SWMUs 25 and 70. The BCT submitted a pilot study work plan for SWMU 166 with the recommendation to perform injections of lactate and emulsified oil substrate. The BCT also submitted a CMS for SWMU 17 with the recommendation to perform air sparging, SVE, biosparging, and passive recovery. Additionally, the BCT submitted CMSs recommending MNA and lactate infection for AOCs 722 and 723, respectively. The cost of completing environmental restoration at this installation has changed

significantly due to technical issues.

FY05 MMRP Progress

There was no work scheduled on the MMRP sites at this installation in FY05. However, four UXO sites exist for which no weapons or remnants of ordnance were found during the FY02 investigations. The DoN has not received concurrence from DHEC that NFA is required.

Plan of Action

Plan of action items for Charleston Naval Shipyard and Naval Station are grouped below according to program category.

IRP

- Submit CMS for SWMUs 163 and 166 in FY06.
- Continue MNA and long-term monitoring at 37 sites in FY06.
- Continue RAs at SWMUs 25, 39, 166 and 196, and AOCs 607 and 723 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

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|------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | NC417302726100 | Funding to Date: | \$ 73.4 million |
| Size: | 29,139 acres | Estimated Cost to Completion (Completion Year): | \$ 69.4 million(FY 2035) |
| Mission: | Maintain and operate support facilities; provide services and materials for marine aircraft | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2015 |
| HRS Score: | 70.71; placed on NPL in December 1994 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in 2005 | | |
| Contaminants: | PCBs, petroleum hydrocarbons, solvents | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

The Cherry Point Marine Corps Air Station (MCAS) provides services and materials for marine aircraft. The installation conducted an initial assessment study in FY83, which identified 32 sites. A RCRA facility assessment performed in FY88 identified 114 solid waste management units. The Navy and EPA agreed to perform additional investigations at 32 of the 114 sites. A technical review committee was established in FY91 and two information repositories were established in FY93. EPA placed the installation on the NPL in December 1994. The installation established a Restoration Advisory Board and completed a community relations plan in FY95. The Navy signed a federal facilities agreement (FFA) in FY05. In FY03, the installation finalized the 5-year review.

To date, Cherry Point MCAS has identified 100 sites, including 22 underground storage tanks (USTs). The installation has completed six Records of Decision (RODs) to date, including two in FY05. The cleanup progress at Cherry Point MCAS for FY01 through FY04 is detailed below.

In FY01, the final site screening assessment work plan was approved for Site 85. The treatability study (TS) was initiated at Operable Unit (OU) 1. The OU 2 and OU 3 remedial design (RD), and remedial actions (RAs) for groundwater were approved and signed by the State. The OU 5 and OU 14 remedial investigations (RIs) were initiated and the draft work plans were submitted for review. The 5-year review began.

In FY02, the OU 1 RI report was submitted. An ecological risk assessment (ERA) and feasibility study (FS) were initiated for OU 1. The OU 2 and OU 3 long-term management work plans for groundwater were approved. OU 4 and OU 13 RI reports were finalized. The installation submitted the FS for OUs 4 and 13 recommending no further action (NFA). The OU 5 work plan and investigation were finalized. The OU 14 RI work plan was approved and fieldwork began. An NFA ROD for OU 15 was initiated. Site 7 continued to be assessed for possible system shutdown. An RA operations optimization study was initiated for four remedial systems. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

In FY03, the installation finalized the OU 1 RI report, 5-year review, Site 85 site specific plan, and RA operation optimization study. Shutdown of the OU 3, Site 7 AS, OU 2, and Site 10 soil vapor extraction systems was completed as recommended by the study. The installation submitted the Step 3A portion of OU 1 ERA and Phase I portion of the OU 14 RI to EPA and the State. The groundwater portion of the OU 1 FS progressed. The OU 1 FS portion focusing on ecological issues will be developed when the ERA for OU 1 is complete. The Navy completed the hydrogen release compound pilot study at OU 1, Site 47. The OU 15 NFA ROD was completed and signed by all parties. The State and EPA concurred that contaminants at OU 7 were UST-related and that further investigation as an installation restoration site was not warranted. The State approved the Site 29 corrective action plan (CAP). The installation commenced the long-term groundwater monitoring at OUs 2 and 3.

In FY04, the installation obtained concurrence for the NFA decision documents at Sites 35a and 85, completed the non-time critical soil removal at Site 29, and initiated groundwater monitoring in accordance with the Site 29 CAP. The installation finalized the FSs and initiated the RODs for OUs 4 and 13, and initiated the FS for OU 5. Cherry Point MCAS completed the Phase II RI at OU 14. An update to the community involvement plan (CIP) was drafted and submitted for review. The installation initiated a comprehensive voluntary groundwater monitoring program at OUs 1, 4, 5, and 13.

FY05 IRP Progress

Cherry Point MCAS finalized the FFA. The Navy finalized the OU 4 and OU 13 RODs and the OU 1 ERA. The installation finalized the OU 5 and OU 6 RIs and initiated the FSs. The installation completed the OU 14 Phase III RI fieldwork. An enhanced bioremediation TS within OU 1 was conducted to test treatment technologies for chlorinated volatile organic compounds in groundwater. The cost of completing environmental restoration at this installation has changed significantly due to regulatory issues.

Technical issues delayed the OU 14 FS.

Cherry Point MCAS finalized the CIP.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Initiate OU 14 FS in FY06.
- Finalize FS, proposed RA plan, and ROD for OUs 5 and 6 in FY06.
- Initiate OU 1 FS in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

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|------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | IL557122427200 | Funding to Date: | \$ 9.7 million |
| Size: | 274 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2006) |
| Mission: | Housed 126th Air Refueling Wing (Illinois National Guard) and 928th Airlift Wing (Air Force Reserve) | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | VOCs, SVOCs, PNAs, petroleum hydrocarbons, POLs, TCE, heavy metals | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Chicago O'Hare International Airport Air Reserve Station (ARS) began operations as an aircraft assembly plant and later housed the Air Force Reserve and the Air National Guard. Environmental cleanup studies at the installation began in 1983. In 1993, the BRAC Commission recommended closure of the station. This decision was modified by the 1995 BRAC round. In late 1996, the Air Force and the City of Chicago signed a purchase agreement. The city paid for replacement facilities at Scott Air Force Base, Illinois, in exchange for the Chicago O'Hare ARS land. Site types identified at the installation include underground storage tanks (USTs), landfills (LFs), fuel spills, aboveground storage tanks, a fire training area, and a low-level radioactive waste disposal area. Primary contaminants are petroleum hydrocarbons, metals, polynuclear aromatic hydrocarbons, volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs), which have been released into soil and groundwater. Interim remedial actions (RAs) have included removal of 19 USTs, contaminated soil, and low-level radioactive waste. In FY97, a stationwide Environmental Baseline Survey (EBS) was completed and parcel-specific EBSs were completed for Parcels 2, 3, and 3A in FY98. The installation formed a Base Closure and Transition Team and a BRAC cleanup team (BCT).

Environmental cleanup studies have identified 19 Installation Restoration Program (IRP) sites and 23 areas of concern. To date, a basewide Record of Decision (ROD) and the LF 1 (LF001) ROD have been signed and all property has been transferred. The cleanup progress at Chicago O'Hare ARS for FY01 through FY04 is detailed below.

In FY01, the installation successfully implemented the review and approval process for all pending documents. The installation completed the sanitary sewer investigation and the time-critical RA for site SS019. The installation completed soil removals at sites SA017, IN018, and ST015. The installation developed a feasibility study (FS) to support closure of all sites.

In FY02, the installation submitted the basewide ROD, and a draft institutional control management plan (ICMP) was developed.

In FY03, the basewide ROD was approved, which resulted in a finding of suitability to transfer (FOST) and subsequent deed for 99 percent of the installation. The BCT developed a risk assessment for LF001 and the installation implemented the ICMP.

In FY04, the installation completed a human health risk assessment and drafted an FS and proposed plan for LF001 in preparation for the final ROD. The installation completed an EBS for the remaining property. The installation selected a remedy for LF001. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed the ROD for LF001. The installation also completed the FOST for the remaining four acres and transferred the property to the City of Chicago. The installation attained the last remedy-in-place milestone. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

BCT activities continued in FY05.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

Plan of action items for Chicago O'Hare IAP Air Reserve Station are grouped below according to program category.

IRP

- Continue oversight of land use controls/institutional controls in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

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|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------|
| FFID: | CA917002452800 | Media Affected: | Groundwater, surface water, sediment |
| Size: | 13,023 acres | Funding to Date: | \$ 60.3 million |
| Mission: | Ship, receive, inspect, and classify munitions (tidal area); serve as munitions storage and weapons maintenance, inspection, and testing facility (inland area) | Estimated Cost to Completion (Completion Year): | \$ 85.0 million(FY 2035) |
| HRS Score: | 50.00; placed on NPL in December 1994 | IRP/MMRP Sites Final RIP/RC: | FY 2014/FY 2014 |
| IAG Status: | Federal facility agreement signed in June 2001 (EPA and Navy) | Five-Year Review Status: | Completed and underway |
| Contaminants: | Heavy metals and petroleum hydrocarbons | | |



Progress To Date

Naval Weapons Station Beach Detachment Concord (Detachment Concord) ships, receives, inspects, and classifies munitions. It also serves as a munitions storage and weapons maintenance, inspection, and testing facility. Past operations, such as disposal of paints and solvents, spent ordnance, treated wood, and household and industrial waste; open burning of munitions; and spills or leaks from fuel storage tanks, have contributed to contamination. EPA placed the installation on the NPL in 1994, primarily because of surface water and sediment contamination at tidal and litigation-area sites. The Navy and EPA signed a federal facility agreement (FFA) in June 2001. These sites include sensitive habitat for threatened and endangered species and are interconnected to Suisun Bay. In FY90, the installation formed a technical review committee and converted it to a Restoration Advisory Board (RAB) in FY95. The RAB received a technical assistance for public participation (TAPP) award in FY03. The installation updated its community relations plan (CRP) in FY96 and again in FY03. In FY03, the installation finalized the 5-year review for the seven litigation area sites.

Detachment Concord has identified 57 sites to date. The installation has completed 14 Records of Decision (RODs) since the beginning of environmental restoration activities. In addition, it has recommended 20 sites for no further action (NFA). The cleanup progress at Detachment Concord for FY01 through FY04 is detailed below.

In FY01, the installation completed the 5-year review and assessment report for seven litigation-area sites and submitted it to regulators. An FFA was signed with EPA Region 9, and the public comment period began. The ecological risk assessment component of the tidal area remedial investigation (RI) was updated to current technical standards, and the RI update was initiated.

In FY02, the installation updated the site management plan (SMP), completed the Area of Concern (AOC) 1 (Site 31) removal action design and initiated the removal action. The Navy completed an inventory of Military Munitions Response Program (MMRP) sites. Eight MMRP sites were initially identified at this installation.

In FY03, the installation finalized the 5-year periodic review assessment report for the seven litigation-area sites and concluded that the remedy was not protective in certain areas. Three sites within the litigation area were recommended for supplemental feasibility study (FS). A revised draft final RI report was issued for the three tidal area sites, but comments received were not in agreement with the NFA and required additional characterization. The AOC 1 time-critical removal action (TCRA) was completed and the final TCRA summary report issued. EPA approved the draft final annual amendment to the SMP. Additionally, eight MMRP sites were identified for preliminary assessments (PAs) at Detachment Concord. The CRP was updated and finalized, with significant input from the RAB and regulators. The RAB received an award under the Navy's TAPP program and began work. RAB meetings included training on various technical topics.

In FY04, the installation resolved the dispute with the Site 1 ROD, which was signed by the Navy, EPA, and the State. The Navy initiated the sampling plan for investigating groundwater at Site 1, as well as the remedial design (RD). RAB membership increased to nine and the monthly meetings continued to be an excellent forum for information exchange and input from the community.

FY05 IRP Progress

The installation completed the RD for the Site 1 landfill cap and remedial action initiated. The installation completed a work plan and performed a treatability study within the litigation areas for the supplemental FS. The Navy performed sampling at Sites 2, 9, and 11 to address data gaps, with a finding that some additional work is required to bound contamination in surface soil. Also as planned, the installation completed an engineering evaluation and cost analysis for Site 30 for a non-TCRA. The Navy issued a draft action memo for agency review. The installation also prepared a non-TCRA memo for the Taylor Boulevard Bridge. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The Navy conducted the PA for the eight MMRP sites and issued a draft report for review.

Plan of Action

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

IRP

- Finalize a NFA ROD for Site 17 in FY06.
- Transition environmental cleanup for Tidal Area sites to the Army in FY06.
- Issue final action memo for Site 30 and initiate preparation of design in FY06.
- Construct low permeability cap on Site 1 in FY06.

MMRP

- Complete MMRP PA in FY06.
- Award contract and initiate site inspection in FY06.

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|-------------------------|------------------------------------------------|
| FFID: | NE721382023400 |
| Size: | 4,020 acres |
| Mission: | Manufactured ammunition |
| HRS Score: | 51.3; placed on NPL in July 1987 |
| IAG Status: | Federal facility agreement signed in July 1990 |
| Contaminants: | Explosives and heavy metals |
| Media Affected: | Groundwater and soil |
| Funding to Date: | \$ 56.1 million |

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|--------------------------------------------------------|--------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 23.2 million(FY 2028) |
| IRP/MMRP Sites Final RIP/RC: | FY 2004/FY 2009 |
| Five-Year Review Status: | Completed |



Progress To Date

Cornhusker Army Ammunition Plant (AAP) is a former ammunition manufacturing facility. EPA placed the installation on the NPL in July 1987 because of explosive liquid waste contaminants released during the manufacturing process to sumps, cesspools, and leaching pits and disposal of solid waste in landfills and burning areas. The Army and EPA signed a federal facility agreement in July 1990. In FY83, the Army identified an explosives-contaminated groundwater plume migrating off site. The off-site contamination affected more than 250 private residences in Grand Island. In FY95, the Army extended the Grand Island municipal water distribution system to all affected residences. In FY86, the Army removed and incinerated 40,000 tons of explosives-contaminated soil from sumps and leaching pits. In FY94, the Army performed an interim remedial action, removing an additional 5,000 tons of explosives-contaminated soil. The community formed a local redevelopment authority in FY89. The Army completed a 5-year review in FY04.

An initial assessment study completed in FY80 identified 65 contaminant sources at the installation. In FY99, the results of long-term groundwater monitoring of the off-post contamination provided data to support monitored natural attenuation (MNA) of the explosive contaminants. To date, the installation has completed five Records of Decision (RODs). The cleanup progress at Cornhusker AAP for FY01 through FY04 is detailed below.

In FY01, the Army signed an amendment to the Operable Unit (OU) 1 ROD to not require off-post treatment and included MNA due to a diminishing explosive groundwater plume and the implementation of institutional controls/land use controls. The Army completed the transfer of disposal responsibility for Cornhusker AAP from the Army Materiel Command to the U.S. Army Corps of Engineers (USACE). USACE initiated explosive safety actions to restore Load Lines 1 through 5 and a portion of the OU 5 open burning grounds for public disposal.

In FY02, the Army completed the draft 5-year CERCLA review. Long-term operations (LTO) and long-term management (LTM) continued at OU 1 and the solvent-contaminated plume. Explosive safety actions continued. The remediation of former

underground storage tanks and aboveground storage tanks (ASTs), initiated in FY96, reached final closure with the state.

In FY03, USACE began remedial investigations and remedial actions (RAs) for ASTs in the shop area. LTO and LTM continued at OU 1 and the OU 3 solvent-contaminated plume. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents that identified Military Munitions Response Program (MMRP) sites at Cornhusker. Explosive safety actions included the flashing of Load Line 2. The Army discovered explosives contamination in the Nitrate Area buildings and reprioritized the explosives safety removal schedule to accelerate real estate disposal.

In FY04, the installation completed RA for the AST site in the shop area and continued remedial action-operation (RA-O) of the explosives-contaminated groundwater plume at OU 1. The installation submitted the final CERCLA 5-year review. The Army discovered additional MMRP sites during the clean certification process. The Army transferred the former Burning Grounds and six additional areas involved with static testing, fuse destruction, and ammonium nitrate burning to the MMRP. Explosive safety actions included the flashing of Load Line 3 and demolition of boiler houses at Load Lines 2 and 3.

FY05 IRP Progress

The installation continued RA-O at OU 1. The Army negotiated a performance-based LTM contract. A contract was also awarded for the chemical characterization of asbestos-contaminated debris pits and residual explosives-contaminated soils beneath former concrete floor slabs and ramps in Load Lines 1 and 2. The installation received explosive safety funds for the demolition of Load Line 4. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The installation initiated an installationwide site inspection (SI).

Plan of Action

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

IRP

- Continue RA-O of the OU 1 groundwater explosives plume and LTM at OU 3 and OU 5 in FY06.
- Perform chemical characterization and removal of contaminant soils at Load Lines 1 and 2 in FY06.
- Initiate explosives safety submission for six additional areas in FY06.
- Perform chemical characterization and removal of contaminant soils at Load Line 3 in FY06-FY07.

MMRP

- Complete the installationwide SI in FY06.

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|-------------------------|--------------------------------------------|
| FFID: | TX617002278600 |
| Size: | 832 acres |
| Mission: | Served as a pilot training center |
| HRS Score: | N/A |
| IAG Status: | N/A |
| Contaminants: | POs, solvents, asbestos, heavy metals |
| Media Affected: | sediment, soil, surface water, Groundwater |
| Funding to Date: | \$ 79.4 million |

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|--------------------------------------------------------|-------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 7.2 million(FY 2017) |
| IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2010 |
| Five-Year Review Status: | Planned |



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 September 30, 1998. After the base was closed, operations were transferred to Fort Worth NAS. A number of the industrial operations that supported the installation’s military mission contributed to contamination. For investigation of environmental conditions, the installation was divided into six areas, Categories A through F, based on operations and property ownership. The installation completed a RCRA facility assessment, which identified 139 solid waste management units (SWMUs) and 44 areas of concern. In FY94, a BRAC cleanup team (BCT) was formed, and a BRAC cleanup plan was completed. The installation formed a Restoration Advisory Board (RAB), which was adjourned in FY05, and established an information repository. A local redevelopment authority was established and adopted a land reuse plan. During FY96, the installation completed a community relations plan.

To date, 47 sites have been identified at this installation requiring further action. The cleanup progress at Dallas NAS for FY01 through FY04 is detailed below.

In FY01, the installation completed pilot studies to address groundwater contamination at two sites. A statement of suitability to transfer was prepared for the remaining Navy-owned property. Negotiations were ongoing with the City of Dallas regarding cleanup standards, and long-term operations (LTO), long-term management (LTM), for remaining sites.

In FY02, the installation continued monitoring and one pilot study to address compounds in groundwater. Negotiations with the City of Dallas regarding cleanup standards and activities were settled. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. Two MMRP sites were identified at this installation. One site was determined to require no further action (NFA) through the RCRA facility investigation process.

In FY03, interim actions at one groundwater site continued. The rubble landfill and the Texas Air National Guard pond sediments were excavated and disposed of at an off-site

landfill. The installation excavated soil across the installation that exceeded state closure criteria and disposed of it off-site as part of the source removal actions. The installation continued LTM of the remedy for the main fuel farm and conducted negotiations with the regulatory agencies to accept monitored natural attenuation (MNA) as the preferred remedy for groundwater contaminants. A RCRA permit renewal and compliance plan application were completed for the remaining groundwater plumes. The second MMRP site was remediated in conjunction with the excavation and disposal activity at the Rubble Landfill. The BCT conducted team meetings and various site visits of ongoing remediation.

In FY04, the installation completed soil remediation, and continued MNA on groundwater plumes. Dallas NAS initiated the development of BCT review closure documents and final regulatory approval. The installation also implemented enhanced MNA pilot studies.

FY05 IRP Progress

This installation continued investigation and MNA on the groundwater plumes. The installation submitted final response action plans. In addition, the installation completed response action completion reports for 84 soil sites and submitted them for review. LMO/LTM continued for the remaining sites. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Regulatory issues delayed completion of the site restoration; however, it was initiated.

The RAB adjourned, due to the specified environmental cleanup standards and funding provided for it in the settlement agreement between the City of Dallas and Navy.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete site restoration in FY06.
- Complete groundwater remediation at SWMUs 18 and 85 by engineering maintenance and control in FY06.
- Continue LTO/LTM in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

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|------------------------|--------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | RI117002203600 | Funding to Date: | \$ 54.5 million |
| Size: | 1,285 acres | Estimated Cost to Completion (Completion Year): | \$ 12.2 million(FY 2010) |
| Mission: | Provided mobilization support to Naval Construction Forces | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 34.52; placed on NPL in November 1989 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in March 1992 | | |
| Contaminants: | Heavy metals, PCBs, pesticides, petroleum hydrocarbons, POLs, VOCs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

The Davisville Naval Construction Battalion Center 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 installation established an administrative record and an information repository in FY89. EPA placed the installation on the NPL in November 1989. In July 1991, the BRAC Commission recommended closure of the installation. Construction battalion training and mobilization activities were transferred to the Naval Construction Battalion Center, Gulfport, Mississippi, and to Naval Construction Battalion Center, Port Hueneme, California. The Navy signed a federal facility agreement in March 1992. The installation was closed in April 1994. In FY94, the installation's technical review committee was converted to a Restoration Advisory Board and a BRAC cleanup team (BCT) was formed. In FY95, a BRAC cleanup plan was completed, and in FY96 and FY97, respectively, the BCT prepared BRAC business plans and a community relations plan. In FY03, the installation completed a 5-year review.

To date, studies conducted at the installation have identified 25 sites. The installation has completed three Records of Decision (RODs). In addition, there have been five no further action RODs completed by the installation. The cleanup progress at Davisville Naval Construction Battalion Center for FY01 through FY04 is detailed below.

In FY01, the installation implemented long-term management (LTM) for Sites 3, 7, and 9 and an Environmental Baseline Survey (EBS) for Site 21. The draft Phase I remedial investigation (RI) for Site 16 was completed.

In FY02, the installation completed the Site 16 RI. The installation completed the work plan, and fieldwork was completed for the Phase II RI. Additionally, the installation completed LTM at Sites 3, 7, 9, and EBS Site 21. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed the draft Site 16 Phase II RI. LTM continued at Sites 3, 7, 9, and the EBS Site 21. The installation completed the 5-year review.

In FY04, the installation issued a finding of suitability to transfer for Site 21 (Parcel 3) and initiated pilot study fieldwork and Phase II RI fieldwork at Site 16. The Navy completed screening level ecological risk assessments for Site 16. LTM continued at Sites 3, 7, 9, and EBS Site 21.

FY05 IRP Progress

Davisville Naval Construction Battalion Center continued LTM at Site 3, 7, 9, and the EBS Site 21. The installation also continued supplemental Phase II RI fieldwork at Site 16.

Funding issues delayed the pilot study fieldwork at Site 16.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Continue LTM at Site 3, 7, 9, and EBS Site 21 in FY06.
- Initiate Phase III RI work plan at Site 16 in FY06.
- Perform pilot study fieldwork at Site 16 in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | TN497152057000 | Funding to Date: | \$ 48.1 million |
| Size: | 642 acres | Estimated Cost to Completion (Completion Year): | \$ 25.4 million(FY 2018) |
| Mission: | Store and distribute clothing, food, medical supplies, electronic equipment, petroleum products, and industrial chemicals | IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| HRS Score: | 58.06; placed on NPL in October 1992 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in March 1995 | | |
| Contaminants: | PCP, PCBs, chlorinated solvents, POLs, pesticides, heavy metals, chemical warfare agents | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Defense Distribution Depot (DDD) Memphis is approximately 642 acres divided into two areas: the Main Installation (MI) and Dunn Field (DF). The installation divided all CERCLA sites and the remaining underground storage tanks (USTs) into four operable units. EPA placed DDD Memphis on the NPL in October 1992. In FY93, the installation formed a Restoration Advisory Board (RAB). DDD Memphis, EPA, and Tennessee Department of Environment and Conservation (TDEC) signed a federal facility agreement in March 1995. In September 1995, the BRAC Commission recommended closure of DDD Memphis. In FY96, DLA completed a BRAC cleanup plan (BCP), which has been updated annually. Mission activities ceased at DDD Memphis in FY97. All USTs were removed or closed in place. In FY98, DDD Memphis developed a community relations plan. In FY01, the RAB received a technical assistance for public participation (TAPP) grant. In FY03, the installation completed a 5-year review.

Site studies beginning in FY81 have identified approximately 93 sites, including a pentachlorophenol (PCP) wood preservative treatment vat and UST, and areas of contaminated soil and groundwater. The PCP vat and UST were removed in FY85. An interim remedial action (IRA) Record of Decision (ROD) for DF groundwater was signed in FY96. RODs for MI and DF were signed in FY01 and FY04, respectively. The cleanup progress at DDD Memphis for FY01 through FY04 is detailed below.

In FY01, DLA, EPA, and TDEC signed the MI ROD. DDD Memphis completed removal actions at suspected DF chemical warfare materiel Sites 1 and 24, and at MI Site 83. The Depot completed findings of suitability to transfer (FOSTs) for Parcels 1 and 2 on the MI and signed the deed for Parcel 2. The RAB received a TAPP grant.

In FY02, DDD Memphis completed the DF remedial investigation (RI) and soil vapor extraction (SVE) treatability study. DDD Memphis completed the MI remedial design (RD) work plan and conducted the MI groundwater enhanced bioremediation treatment pilot test. The engineering evaluation, cost analysis, and action memorandum with responsiveness summary for Site 60 DF was also completed. The Department of Army signed three deeds for property transferred in FOSTs 1 and 2. The RAB's TAPP contract was completed.

In FY03, DDD Memphis finalized the DF RI, two feasibility studies, a proposed plan and conducted a public comment period for the DF ROD. DDD Memphis completed surface soil removal actions for lead at Site 60 on DF. Additional monitoring wells were installed to determine the extent of increased volatile organic compound (VOC) concentrations of an off-site source down-gradient of DF. The MI pilot test on two in situ groundwater enhanced bioremediation treatment (EBT) technologies was completed. Additionally, DDD Memphis completed the DF disposal sites pre-design investigation and work plan, and the former PCP dip vat additional sampling work plan and fieldwork. The depot completed the 5-year review. The installation also conducted a public meeting for the preferred alternative at DF. DLA approved an ordnance and explosives statement of clearance for the Military Munitions Response Program (MMRP).

In FY04, DLA, EPA, and TDEC signed the DF ROD. The Department of Army signed FOST 3 for approximately 357 acres of the MI. DDD Memphis completed the MI RD and the DF disposal sites RD, presented FOST 4 for approximately 41 acres at DF (the area identified in the DF ROD as available for unrestricted reuse) to the BRAC cleanup team (BCT) for review, and updated the BCP and master schedule. DDD Memphis conducted a pilot study of zero-valent iron (ZVI) and permeable reactive barrier (PRB) innovative technologies at DF to reduce groundwater contaminant concentrations. The BCT initiated early implementation of the ZVI portion of the DF ROD to address contaminant concentrations down-gradient from the proposed offsite PRB location. The BCT and project team conducted a partnering session to assist the transition from the RD contractor to the remedial action (RA) contractor.

FY05 IRP Progress

DDD Memphis completed the FOST 4 public comment period, and submitted it to DLA, EPA and TDEC for concurrence. The Department of Army signed the FOST after concurrence was received. The installation also completed the MI RA work plan with EPA and TDEC approval. DDD Memphis began the DF source area RAs for three of the five identified sites. Additionally, the installation completed the IRA completion report with EPA and TDEC approval. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Technical issues delayed the completion of the DF source area RAs for the remaining two identified source area sites, and the completion of the DF source area for SVE and PRB RDs. Administrative issues delayed the completion of the MI groundwater EBT RA.

FY05 MMRP Progress

No work was performed on MMRP sites at this installation in FY05.

Plan of Action

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

IRP

- Complete the DF disposal sites RA in FY06.
- Initiate MI RA EBT in FY06.
- Complete DF source area RD in FY06.
- Initiate DF source area RA in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA997152083200 | Funding to Date: | \$ 66.5 million |
| Size: | 724 acres | Estimated Cost to Completion (Completion Year): | \$ 97.7 million(FY 2015) |
| Mission: | Receive, store, and distribute supplies, materials, and equipment | IRP/MMRP Sites Final RIP/RC: | FY 2005/None |
| HRS Score: | 42.24; placed on NPL in July 1987 | Five-Year Review Status: | Completed |
| IAG Status: | IAG signed in March 1989 | | |
| Contaminants: | VOCs, heavy metals, petroleum/oil/lubricants, TCE, pesticides | | |
| Media Affected: | 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 installation have included overhauls, repairs, painting, paint stripping, metal finishing, and degreasing of aircraft and heavy construction equipment. Investigations have identified contaminated and potentially contaminated groundwater plumes, soil, and building sites. EPA placed the installation on the NPL in July 1987, and the installation signed an interagency agreement in March 1989 with EPA and California regulatory agencies. The installation developed a community relations plan, which was updated in FY03. The installation completed a 5-year review in FY04.

The installation is approximately 724 acres. Of the 152 contaminated sites identified, 141 have achieved response complete (RC). Two Records of Decision (RODs) have been signed to date: the Operable Unit (OU) 1 groundwater remedy in FY93, and the OU 2 basewide remedy in FY96. The cleanup progress at DDD San Joaquin, Sharpe Facility for FY01 through FY04 is detailed below.

In FY01, remedial action (RA) reports for three metals and ten trichloroethylene (TCE)/volatile organic compounds (VOCs), and no further action (NFA) sites were completed. Operation of the three groundwater treatment systems continued. Implementation of remedial process optimization (RPO) recommendations began. The OU 1 interim groundwater RA report was completed. The soil vapor extraction (SVE) operational phase was extended. The last two remaining underground storage tanks (USTs) were removed.

In FY02, the SVE RA report was completed. A draft preferred alternatives report for USTs was submitted recommending NFA or natural attenuation (NA) for the remaining open UST sites. The completed sitewide preliminary closeout report was submitted. The Phase II RPO evaluation was completed and the installation continued implementation of recommendations. Operation of OU 1 groundwater treatment systems continued. The sitewide environmental baseline survey was completed. The 3-D groundwater model boundary conditions and parameters were updated in preparation for the 5-year review.

In FY03, the installation completed an update of the community

relations plan (CRP). The former UST sites preferred alternatives report was finalized. The report recommended NFA at 14 sites and monitored NA at 3 sites. The installation continued OU 1 groundwater remedial operation and process optimization. The installation submitted a draft final 5-year review report.

In FY04, the installation completed the final 5-year review report, and continued OU 1 groundwater remedial operation and process optimization. The installation also developed an internal response completion and resource management plan, formerly known as the exit strategy, for the final closeout report and delisting.

FY05 IRP Progress

DDD San Joaquin, Sharpe completed the response completion and resource management plan, which outlined the installation's plan for closure, and increased the number of sites achieving RC. EPA and California regulatory agencies concurred with the plan. The installation continued operations and maintenance (O&M), monitoring, and optimization of groundwater treatment systems and the groundwater monitoring program. The cost of completing environmental restoration at this installation has changed significantly due to regulatory and estimating criteria issues.

FY05 MMRP Progress

DLA has identified no Military Munitions Response Program (MMRP) sites at this installation.

Plan of Action

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

IRP

- Update the CRP in FY06.
- Continue O&M, monitoring, and optimization of groundwater treatment systems and the monitoring program in FY06.
- Implement the response completion and resources management plan by alternating

technology studies, feasibility studies, and signing the OU 1 ROD in FY06-FY07.

- Complete the OU 2 and Site S 26 RA, OU 2 ROD, and submit the OU 2 NPL delisting proposal in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA997150682700 | Funding to Date: | \$ 93.8 million |
| Size: | 908 acres | Estimated Cost to Completion (Completion Year): | \$ 80.7 million(FY 2015) |
| Mission: | Store and distribute medical, textile, food, electronic, industrial, construction, chemicals, and other supplies and equipment | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| HRS Score: | 37.16; placed on NPL in August 1990 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in 1991 | | |
| Contaminants: | Chlorinated solvents, heavy metals, pesticides, POLs, VOCs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Defense Distribution Depot (DDD) San Joaquin, Tracy Facility stores and distributes supplies and equipment for DoD. EPA placed DDD San Joaquin, Tracy Facility on the NPL in August 1990 and the installation signed a federal facility agreement in 1991. Sites at this installation include burn and disposal pits, underground storage tanks (USTs), hazardous waste storage sites, and other areas of contamination. Contamination has been identified in on-site soil and off-site groundwater. The installation completed a 5-year review in FY05.

To date, response complete has been achieved at 61 of the 73 identified sites at this installation. Two Records of Decisions (RODs) have been signed, one for the treatment of groundwater contamination and one sitewide comprehensive ROD. The cleanup progress at DDD San Joaquin, Tracy Facility for FY01 through FY04 is detailed below.

In FY01, operation of the groundwater treatment system Treatment Plant (TP) 1 and TP 2 continued. Operable Unit (OU) 2 remedial actions (RAs) at Sites 4, 6, 8, 20, and 27 were completed. Implementation of the remedial process optimization (RPO) recommendations began. The trichloroethylene (TCE) soil vapor extraction (SVE) system was constructed and began operation.

In FY02, operation and optimization of the OU 1 groundwater treatment systems continued. The draft former UST sites preferred alternative report was submitted, recommending no further action (NFA) or monitored natural attenuation (MNA) for remaining open sites. The operation of the SVE system continued. Small excavation Sites 6, 20, and 27 were completed. The wet season controls Site 4 RA report was completed. The draft Site 67 northern depot area cover installation RA report was submitted. The Phase II RPO evaluation was completed.

In FY03, the installation completed a former UST sites preferred alternative report and recommended 12 sites for NFA and 1 site for MNA. RAs for Site 8 and SVE sites were completed. The installation completed an RA report for Site 27 and converted TP 1 to granular activated carbon. The installation implemented pesticide treatment for TP 1. Operation and optimization of the OU 1 groundwater treatment systems

continued.

In FY04, DDD San Joaquin, Tracy Facility completed the sitewide ROD amendment and the sitewide ROD explanation of significant differences for various sites. The installation also completed three RA reports: one for Solid Waste Management Unit (SWMU) 8; one for SWMUs 4, 6, and 20; and one for Defense Site Environmental Tracking System 67. The facility also continued operations and maintenance (O&M), monitoring, and optimization of groundwater treatment systems.

FY05 IRP Progress

DDD San Joaquin, Tracy Facility completed the 5-year review, which included an outline of the draft response completion and resource management plan (exit strategy). The installation continued O&M, monitoring, and optimization of groundwater treatment systems. Additionally, the installation continued TCE/tetrachloroethylene (PCE) SVE and total petroleum hydrocarbons bioventing sites RA.

Technical issues delayed finalization of the RA report for the TCE/PCE SVE. Administrative issues delayed finalization of the draft exit strategy. The sitewide preliminary closeout report (PCOR) was delayed pending the completion of the RA report.

FY05 MMRP Progress

DLA has identified no Military Munitions Response Program (MMRP) sites at this installation.

Plan of Action

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

IRP

- Update the community relations plan, and continue the sitewide PCOR in FY06.
- Complete TCE/PCE SVE and total petroleum hydrocarbons bioventing sites RA report in FY06.
- Complete draft and final exit strategy in FY06.

- Continue O&M, monitoring, and optimization of groundwater treatment systems and groundwater monitoring program in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | PA397154266500 | Media Affected: | Groundwater and soil |
| Size: | 87 acres | Funding to Date: | \$ 28.0 million |
| Mission: | Procure and distribute 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 | Estimated Cost to Completion (Completion Year): | \$ 6.7 million(FY 2009) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2003/None |
| IAG Status: | None | Five-Year Review Status: | The installation has not completed a 5-year review. |
| Contaminants: | POLs, PCBs, pesticides, asbestos | | |



Progress To Date

In July 1993, the BRAC Commission recommended closure of the Defense Personnel Support Center, now known as the Defense Supply Center Philadelphia (DSCP), and relocation of its mission to the Naval Support Activity Philadelphia location in northeast Philadelphia. The commission also recommended closure of the Defense Clothing Factory and the Defense Contract Management District Mid-Atlantic. Studies at DSCP have identified 52 Installation Restoration Program (IRP) sites to date, including 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. The only IRP site currently open and undergoing remediation is the petroleum hydrocarbon plume, which underlies large portions of the installation. Studies have indicated that the plume originated offsite and migrated onto DSCP. A BRAC cleanup team was formed in FY94 and has since provided information to the base transition office and the local redevelopment authority to support reuse plans for the installation. A final environmental baseline survey and a BRAC cleanup plan were completed, and an environmental assessment was prepared. In FY95 a Restoration Advisory Board (RAB) was formed. From FY95 to FY00, DSCP and Sunoco, Inc. jointly remediated the hydrocarbon plume under a consent order with the State of Pennsylvania. In FY00, the Pennsylvania Department of Environmental Protection (PADEP) issued an administrative order against DLA, DSCP and the Department of Army, requiring sole remediation responsibility of the government. A cooperative agreement with the City of Philadelphia was implemented in FY99 for operating and maintaining the site until the air rights were transferred in FY01. In FY05, the installation established an administrative record.

DSCP is approximately 87 acres. To date, 52 IRP sites have been identified, including the subsurface hydrocarbon plume site that is the remaining open site still undergoing remediation. The cleanup progress at DSCP for FY01 through FY04 is detailed below.

In FY01, the human health risk assessment (HHRA) was submitted to PADEP for review and approval. Stakeholders also reviewed and provided comments to the HHRA. Five IRP

sites were closed. The installation began processing the decision document for the remaining IRP site (the subsurface plume). The remaining South Philadelphia DSCP environmental and site management personnel were relocated to the DSCP Northeast Philadelphia site. Skimming operations continued, and pilot-testing of the vacuum-enhanced recovery system was initiated.

In FY02, DLA finalized the HHRA. Public outreach sessions for the HHRA were conducted. The air rights to the property and ground lease were transferred to the City of Philadelphia. Design for the vacuum-enhanced recovery system began.

In FY03, DSCP identified and closed one IRP site. The RAB held three meetings.

In FY04, construction began on the vacuum-enhanced remediation system at DSCP. Additionally, DSCP identified and closed three more IRP sites, bringing the total number of IRP sites to 52 (including the subsurface hydrocarbon plume site). DSCP and DLA held meetings and discussions with the Department of Army regarding the transfer of environmental responsibility. A Notice of Intent to Remediate was submitted to PADEP as required by Pennsylvania Act 2.

FY05 IRP Progress

DSCP completed the development of the file coding and administrative record and began incorporating data. The installation also completed the construction of the vacuum-enhanced remediation system, and began testing operations. Additionally, DSCP, DLA, and the Defense Energy Support Center continued discussions with the Department of Army regarding environmental responsibilities, actions, and timelines. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY05 MMRP Progress

DLA has identified no Military Munitions Response Program (MMRP) sites at this installation.

Plan of Action

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

IRP

- Complete testing of the vacuum-enhanced remediation system and installation of deep and intermediate aquifer wells in FY06.
- Complete Pennsylvania Act 2 requirements in FY06.
- Continue discussions with the Department of the Army about transfer of environmental responsibilities in FY06.
- Continue incorporating data for the administrative record in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | VA397152075100 | Funding to Date: | \$ 52.2 million |
| Size: | 565 acres | Estimated Cost to Completion (Completion Year): | \$ 25.5 million(FY 2035) |
| Mission: | Provide logistics support (aviation weapon system and environmental) for DoD | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | 33.85; placed on NPL in July 1987 | Five-Year Review Status: | Completed |
| IAG Status: | IAG signed in 1991 | | |
| Contaminants: | POLs, chlorinated VOCs, PAHs, solvents, metals, pesticides | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Defense Supply Center Richmond (DSCR) provides aviation weapon systems and environmental logistics support for DoD. EPA placed the installation on the NPL in July 1987 and the installation signed an interagency agreement in 1991. Petroleum/oil/lubricants (POLs), polyaromatic hydrocarbons (PAHs), chlorinated volatile organic compounds (VOCs), solvents, metals, and pesticides have been identified in the groundwater and soil at the installation. Remedial technologies used at DSCR have included soil vapor extraction, air stripping, dual-phase extraction, density-driven convection, and pump and treat. The installation formed a Restoration Advisory Board (RAB) and implemented a community relations plan (CRP) in FY02. Five-year reviews were completed in FY97, in FY99 for Operable Unit (OU) 1, in FY02 for OUs 1, 3, and 9, and in FY2005.

Studies at DSCR have identified 32 sites, 13 of which have been organized into OUs. To date, the installation has signed seven Records of Decision (RODs), some of which are interim RODs. The cleanup progress at DSCR for FY01 through FY04 is detailed below.

In FY01, a risk assessment for OU 1 was submitted to eliminate land use controls (LUCs) at the site. A final density-driven convection pilot test report was submitted for OU 6. The OU 3 explanation of significant differences was issued. Findings from the first phase of the remedial process optimization (RPO) study were implemented. The draft feasibility study (FS) for OU 13 underwent review. A partnering exercise with regulators was completed. The draft CRP was issued, and the community was canvassed for interest in forming a RAB.

In FY02, RPO studies were conducted for OUs 8 and 9. A consolidated 5-year review was performed for OUs 1, 3, and 9. The installation formed a RAB and implemented the CRP. The RAB held various training exercises and meetings to inform the members of progress to date. The installation provided a tour of the facility to the RAB.

In FY03, the installation prepared a detailed supplemental FS work plan and began the field activities at four sites (OUs 6, 7, 8, and 13). The supplemental FS work plan employs an investigation strategy based on systematic planning, a dynamic

work plan, and the use of on-site analytical tools. A consolidated 5-year review report was completed for OUs 1, 3, and 9. An expanded basewide well survey was completed. Operations and maintenance monitoring of the OU 8 and OU 9 remedial systems was optimized using suggestions from the Phase II RPO report. The installation completed a community involvement plan. Partnering activities with state and federal regulators were conducted.

In FY04, DSCR conducted a basewide supplemental FS to refine the conceptual site model (CSM) and to screen technologies for remediation of groundwater. The study employed the Triad method, which integrates systematic planning, dynamic work plans, and on-site analytical tools to meet project and program goals. DSCR also submitted an action memo and removal site evaluation for a principal threat source material removal action. The memorandum supported a time-critical removal of persistent sources to groundwater contamination at DSCR's former fire training pit area (OU 4). The installation completed a second revised focused FS for OU 12, a former pesticide storage building. The report identified and screened remedial alternatives consistent with industrial risk-based action levels and long-term institutional controls. DSCR conducted a rebound study for the Acid Neutralization Pit groundwater (OU 8) site.

FY05 IRP Progress

DSCR completed a time-critical principal threat source material removal action and associated closeout report at the OU 4. Over 1,200 tons of hazardous waste was removed. Cost savings were realized by using an on-site laboratory to perform confirmation sampling, which enabled project managers to make quick decisions in the field. The installation also completed the DSCR CSM, and the management action plan to identify and manage the restoration program requirements. The proposed plan (PP) for OU 12 was completed. Additionally, the installation initiated a LUC implementation plan, and risk assessments for OUs 10 and 11. The cost of completing environmental restoration at this installation has changed significantly due to technical, regulatory, and estimating criteria issues.

Regulatory issues delayed initiation of a remedial action (RA), completion of a remedial design (RD), and final ROD signature

for OU 12. Technical issues delayed completion of RODs and a PP for OUs 10 and 11.

RAB meetings continued to inform the public of progress to date.

FY05 MMRP Progress

DLA has identified no Military Munitions Response Program (MMRP) sites at this installation.

Plan of Action

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

IRP

- Complete FSs and PPs for OUs 2 and 8 in FY06.
- Initiate pilot treatability studies of OUs 6 and 7, and conduct an interim RA evaluation of OU 9 in FY06.
- Complete risk assessments, and initiate proposed RA plans and RODs for OUs 10 and 11 in FY06.
- Sign a ROD, complete an RD and initiate an RA for OU 12 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | DE357182401000 | Funding to Date: | \$ 68.3 million |
| Size: | 3,730 acres | Estimated Cost to Completion (Completion Year): | \$ 62.6 million(FY 2032) |
| Mission: | Provide airlift support for troops, cargo, and equipment | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 35.89; placed on NPL in March 1989 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in August 1989 | | |
| Contaminants: | Solvents, paints, petroleum products, VOCs, heavy metals, plating wastes | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Since 1942, Dover Air Force Base (AFB) has provided airlift support for troops, cargo, and equipment. EPA placed the installation on the NPL in March 1989 and the Air Force signed a federal facility agreement in August 1989. Former waste management practices contaminated the shallow groundwater aquifer with petroleum products and volatile organic compounds (VOCs). Site types include solvent spills, fire training areas, landfills, fuel spills and leaks. The installation completed 5-year reviews for five remedies in FY03.

Fifty-nine restoration sites have been identified at this installation; 14 under the State RCRA petroleum program and 45 under CERCLA. Of the 14 petroleum sites, all 14 have been closed by the State or remedies in place/response complete (RIP/RC). As for the 45 CERCLA sites, all required soil cleanup actions have been completed, 7 sites are RC or have final groundwater RIP, and 16 are pending Records of Decision (RODs) for groundwater cleanup. The remaining 22 sites are pending RODs for implementation of land use controls (LUCs). The cleanup progress at Dover AFB for FY01 through FY04 is detailed below.

In FY01, the installation achieved cleanup standards for two of the petroleum sites and the state deemed the sites RC. The installation completed construction of an accelerated anaerobic bioremediation system to treat chlorinated solvents in groundwater underneath an active aircraft maintenance facility. The installation initiated two innovative technology demonstrations to collect field data for use in planning final groundwater remedial actions and gain regulator acceptance for use of more cost-effective field techniques.

In FY02, the installation completed construction of a free product trench collection system. The installation completed the final soil removal action at a pesticide source area, removing and incinerating 300 tons of soil. Five-year reviews were initiated for four natural attenuation (NA) sites and a soil removal site.

In FY03, the installation completed a focused feasibility study (FS) for LUC implementation in lieu of a LUC memorandum of agreement and implementation plans. Five-year reviews for five remedies were completed. The installation continued

operations of three free product recovery systems and an accelerated anaerobic bioremediation system. Total fuel recovered topped 28,000 gallons. The installation also continued monitoring at one petroleum NA site and five chlorinated solvent NA sites. An innovative bioremediation technology demonstration project was expanded due to its initial success at remediating trichloroethylene (TCE). A new innovative technology demonstration project, biogeochemical reductive dehalogenation, was initiated. There was no community interest in Restoration Advisory Board participation; however, the installation held monthly Tier I meetings and quarterly Tier II meetings with federal and state regulators to discuss progress and resolve issues.

In FY04, the installation completed regulatory reviews, final changes to the FSs for all remaining sites, and received state concurrence. Four proposed remedial action plans (PRAP) were drafted. The installation continued operation of three free product recovery systems, operation of an accelerated anaerobic bioremediation system, and monitoring of groundwater plumes. A work plan was drafted for a biogeochemical mulch barrier to treat chlorinated solvents in groundwater. A ROD for LUCs at multiple sites was drafted. Dover AFB continued to hold monthly Tier I meetings and quarterly Tier II meetings with federal and state regulators to discuss progress and resolve issues.

FY05 IRP Progress

Dover AFB drafted remedial action work plans for the South Management Unit and the Area 6 plume, including a total of 11 sites. Two additional PRAPs were drafted for groundwater actions at the remaining CERCLA sites. In addition, 4 RODs, covering groundwater actions at 11 sites and LUCs at 22 sites, were drafted. Four petroleum sites achieved RC based on no further action determinations received from the State. Dover AFB finalized FSs for all remaining sites. The installation constructed a biogeochemical mulch barrier to treat chlorinated solvents in groundwater as an innovative technology development project. Operation of three fuel recovery systems and an accelerated anaerobic bioremediation system continued, as did monitoring of groundwater plumes. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The installation accepted public comments and held a public meeting for four PRAPs. Dover AFB continued to hold monthly Tier I meetings and quarterly Tier II meetings with federal and state regulators.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Complete final RODs for all remaining actions in FY06.
- Implement LUCs per signed RODs in FY06.
- Begin implementation of final groundwater remedies in FY06.
- Initiate 5-year reviews for all remedies in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | VA317002251600 | Funding to Date: | \$ 6.8 million |
| Size: | 600 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2001) |
| Mission: | Provided radio transmitting facilities and services to support naval ships, submarines, and aircraft | IRP/MMRP Sites Final RIP/RC: | FY 1996/None |
| HRS Score: | NA | Five-Year Review Status: | Completed |
| IAG Status: | NA | | |
| Contaminants: | Dichlorobenzene, PCBs, POLs, trichlorobenzene, SVOCs, lead | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

The Driver Naval Radio Transmitting Facility was established as a naval air station to train pilots during World War II and was then converted to a transmitter facility after the war. In July 1993, the BRAC Commission recommended closure of the installation and installation operations ceased on March 31, 1994. The installation formed a technical review committee in FY88 and converted it to a Restoration Advisory Board (RAB) in FY94. The RAB was disbanded in FY97. In FY92, the installation completed a community relations plan and an administrative record, and established an information repository. Additionally, a BRAC cleanup team was formed in FY94. In FY99, three findings of suitability were signed, and the property was transferred to three agencies. In FY04, the installation completed a 5-year review.

Studies have identified 11 sites at the installation, including a former service station, two polychlorinated biphenyls (PCBs) spill areas, and a number of landfills and other areas used to dispose of solvents, acids, bases, and general refuse. The installation has completed two Records of Decision since environmental restoration activities began. The cleanup progress at Driver Naval Radio Transmitting Facility for FY01 through FY04 is detailed below.

In FY01, the installation continued long-term management (LTM) at Site 1. The possible removal action for PCB-contaminated soil at Site 1 was evaluated and deemed unnecessary.

In FY02, the installation and regulators evaluated remedial actions and determined that the best alternative for addressing groundwater issues at Site 1 was monitoring. The 5-year review was initiated. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the Long-Term Monitoring Annual Report for Year Five was finalized and the work plan for continued LTM at Site 1 was drafted. The Navy also completed the draft 5-year review.

In FY04, the installation finalized the 5-year review and the updated long-term monitoring project plans. The Navy also

continued LTM for groundwater and biota at Site 1.

FY05 IRP Progress

The installation continued LTM for groundwater and biota at Site 1.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Driver Naval Radio Transmitting Facility are grouped below according to program category.

IRP

- Continue LTM for groundwater and biota at Site 1 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | AR657002447300 | Funding to Date: | \$ 30.8 million |
| Size: | 3,401 acres | Estimated Cost to Completion (Completion Year): | \$ 1.2 million(FY 2016) |
| Mission: | Supported B-52 strategic bombers and KC-97 and KC-135 Stratotanker operations | IRP/MMRP Sites Final RIP/RC: | FY 1999/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Underway and planned |
| IAG Status: | None | | |
| Contaminants: | Petroleum hydrocarbons, POLs, VOCs, UXO, and metals | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1991, the BRAC Commission recommended closure of Eaker Air Force Base (AFB) which formerly supported aircraft and tanker operations. The installation closed on December 15, 1992. Typical environmental site types include underground storage tanks, aboveground storage tanks, oil-water separators, petroleum/oil/lubricants (POLs) 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. The installation formed a BRAC cleanup team (BCT) and a Restoration Advisory Board in FY94 and completed a Community Relations Plan in FY95. The BRAC cleanup plan was updated in FY97 and FY05. The RAB adjourned in FY00 due to successful remediation efforts and declining community interest. An Environmental Baseline Survey (EBS) and several supplemental EBSs (SEBSs) were completed. The last remedy-in- place was completed for all Installation Restoration Program (IRP) sites in FY99. In FY99, the Air Force completed the deed for the 110-acre golf course, and in FY00 transferred the 155-acre commercial tract. The installation initiated the first 5-year review in FY05.

Environmental studies conducted between FY85 and FY90 identified 12 sites at Eaker AFB. In addition, a RCRA facility assessment, completed in FY90, identified 21 solid waste management units and 9 areas of concern. Later, an administrative consent order was signed indicating that 30 sites were subject to RCRA corrective action and would be addressed under a RCRA facility investigation. The cleanup progress at Eaker AFB for FY01 through FY04 is detailed below.

In FY01, the Air Force operated the remedial action (RA) systems and began monitoring sites. Findings of suitability to transfer (FOSTs) documents and SEBSs for all remaining property were submitted to regulatory agencies for comment. The corrective measures implementation (CMI) report was submitted to the regulatory agencies for approval.

In FY02, monitoring and operation of existing systems continued. The CMI action report received regulatory approval. The FOST and SEBS for the airfield property and the remaining

commercial property were submitted to regulators and comments were received and incorporated. The deeds for all remaining property were signed. A 5-year performance-based contract was awarded to operate and close out nine of the 11 remaining sites.

In FY03, the 5-year performance-based cleanup contract was implemented for basewide RA operation activities, and long-term management (LTM) and groundwater monitoring activities were conducted.

In FY04, the 5-year performance-based cleanup contract for basewide RA operation activities, LTM, and groundwater monitoring continued. LTM completion reports for six sites were submitted to regulators for approval. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The draft 5-year review was initiated. The 5-year performance-based cleanup contract for basewide RA operation activities, LTM, and groundwater monitoring continued. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Finalize the first 5-year review in FY06.
- Continue the 5-year performance-based cleanup contract for basewide RA operation activities, LTM, and groundwater monitoring activities in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|-------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | NJ217002217200 | Funding to Date: | \$ 27.1 million |
| Size: | 11,134 acres | Estimated Cost to Completion (Completion Year): | \$ 8.4 million(FY 2030) |
| Mission: | Handle, store, renovate, and ship munitions | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2005 |
| HRS Score: | 37.21; placed on NPL in August 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in December 1990 | | |
| Contaminants: | VOCs, SVOCs, heavy metals, hydrocarbons, petroleum products | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Earle Naval Weapons Station (NWS) handles, stores, renovates, and ships munitions. Releases of volatile organic compounds (VOCs) and heavy metals from landfills and production areas have contaminated groundwater and soil at the installation. In FY90, the installation formed a technical review committee (TRC), completed a community relations plan (CRP), and established an information repository containing a copy of the administrative record. EPA placed the installation on the NPL in August 1990 and the Navy signed a federal facility agreement in December 1990. The Navy converted the TRC to a Restoration Advisory Board in FY95, updated the CRP in FY98, and completed a 5-year review in FY03.

To date, preliminary assessments (PAs) identified 29 sites of concern, 4 of which required further investigation. The sites include landfills, production areas, storage areas, maintenance areas, and disposal areas. Sixty-nine sites (48 CERCLA and 21 underground storage tank sites) have been identified. The installation has completed Records of Decision (RODs) at 11 sites and has recommended no further action (NFA) at 8 sites. The cleanup progress at Earle NWS for FY01 through FY04 is detailed below.

In FY01, the installation completed PA/site inspection (SI) fieldwork at Sites 47 and 48. Optimization study recommendations were implemented at Site 16F. A proposed plan (PP) was issued and a public meeting was held for Sites 3 and 10. Emergency ordnance disposal was conducted on a limited basis at the explosives and ordnance range. An internal draft PP for Site 13 was developed. Site 19 was reviewed quarterly.

In FY02, the installation completed the PA/SI for Site 48. An environmental engineering and cost analysis, a remedial action (RA), and confirmatory sampling indicating NFA were completed at Site 47. The draft feasibility study (FS) for Sites 1 and 11 was completed. A secondary tetrachloroethylene (PCE) plume was found at Site 26. The draft PP for Site 13 was submitted. A contract for remedial investigations/FSs, PPs, and RODs was initiated for Sites 1, 6, 11, 12, 15, and 17. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed the draft ROD for Site 13. The FS was completed for Sites 1 and 11. The draft PP for Sites 1 and 11 were under regulatory review. The Sites 6, 12, 15, and 17 FSs were reviewed. Sites 3 and 10 landfill caps were completed. The 5-year review plan was completed.

In FY04, the installation finalized the ROD for Site 13. The Navy completed the PP for Sites 1 and 11 and submitted the draft RODs for Sites 1 and 11 for regulatory review. The installation completed the FS for Sites 6, 12, 15, and 17. Regulatory reviews for the PP for Sites 6, 12, 15, 17, and Site 26 secondary PCE plume were completed. The installation finalized the ROD for Site 13 and initiated the RA. Optimization studies for Sites 16F and 26 were completed. The Conservation Club Range was recommended for NFA.

FY05 IRP Progress

Earle NWS completed the design and construction on the Landfill cap for Site 13. The Navy signed a ROD for Sites 1 and 11. The RA for Site 1 began. The installation completed a Classification Exception Area (CEA) draft for Site 1 and issued a draft ROD for Sites 6, 12, 15, and 17. The installation began a draft FS for Site 7 and began discussion of closeout of Sites 9, 41, and 46 through a memorandum of agreement with EPA.

FY05 MMRP Progress

The installation issued the final PA for the Conservation Club Range recommending NFA.

Plan of Action

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

IRP

- Continue RA at Site 1, including the implementation of a CEA in FY06-FY07.
- Finalize RODs for Sites 6, 12, 15, 17, and 26 in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | CA957172450400 | Funding to Date: | \$ 280.4 million |
| Size: | 301,000 acres | Estimated Cost to Completion (Completion Year): | \$ 586.6 million(FY 2034) |
| Mission: | Conduct aerospace research, development, testing, and evaluation, and provide support to United States and allies | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2016 |
| HRS Score: | 33.62; placed on NPL in August 1990 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement signed in 1990 | | |
| Contaminants: | Waste oils, solvents, VOCs, petroleum hydrocarbons, POLs, rocket fuel, potential chemical warfare materiel, heavy metals | | |
| Media Affected: | Groundwater, soil, surface water, sediment | | |



Progress To Date

Edwards Air Force Base (AFB) conducts aerospace research, development, testing, and evaluation, and provides support to the United States and its allies. In August 1990, EPA placed the installation on the NPL and in FY90 the Air Force signed a federal facility agreement. Interim remedial actions (IRAs) have included installing 11 groundwater treatment systems to remove JP-4 jet fuel and solvents, removing over 350 underground storage tanks and numerous drums of hazardous waste, stabilizing soil to immobilize dioxin and heavy metals, capping the fire fighting training facility, bioventing contaminated soil at 12 sites, and installing 7 soil vapor extraction treatment systems. The installation formed a Restoration Advisory Board (RAB) in 1995.

Studies have identified 461 sites and areas of concern (AOCs) that are divided into 10 operable units (OUs). Forty-seven sites are in the investigation phase; 27 sites are in the cleanup, operations, construction, Record of Decision (ROD), or decision document stages; 5 sites are in long-term monitoring; and 382 sites and AOCs require no further investigation. Over 1.9 million pounds of contaminants have been recycled or destroyed to date. The cleanup progress at Edwards AFB for FY01 through FY04 is detailed below.

In FY01, an ion-exchange (IX) pilot-scale test for removing perchlorate from groundwater was completed at Site 285. Development of a cost-reduction strategy using in situ chemical sensors for long-term monitoring was initiated. A mobile dual extraction system (DES) was used to remove soil and groundwater contamination at five sites in OU 1. The engineering evaluation/cost analysis for Site 426 was completed and an IRA work plan was prepared. Groundwater treatment systems were installed and began operation at Sites 25 and 133. A bioventing and air-sparging system was installed at Sites 71 and 74. Forty-five sites and AOCs achieved site closure (SC) or response complete (RC) status, respectively.

In FY02, the installation completed the work plan, engineering design documents, and procurement activities for the Site 285 full-scale IX treatability study (TS) for perchlorate. The installation field tested in-well chemical sensor technologies for remote monitoring of remediation sites. Four trenches at Site 426 were excavated and no chemical warfare agent-impacted

soil or debris were encountered. A successful steam-injection TS was performed at Site 61. Sixteen sites and AOCs achieved SC or RC status. A remedial process optimization program was initiated to review operation of all treatment systems. Construction of the Site 13 landfill cover was completed. The RAB met quarterly, took site tours, and participated in a three-day training session.

In FY03, the Air Force installed the Site 58 pilot-scale DES and began operation. Through a partnership with the Desert Research Institute, the installation completed soil testing and initiated moisture infiltration modeling to design a new generic landfill cover for arid environments. Ecological and human health risk assessments were completed for three OUs. The installation's first proposed plan (PP) and ROD, for OU 3, were completed. Nine sites and AOCs achieved SC or RC status, respectively.

In FY04, pilot tests and TSs at Site 285 and various OU 4 sites continued. The installation initiated a pilot test to treat perchlorate effluent discharge in OU 4. The natural resource injury assessment process resumed. The installation of wells for the nano-scale zero-valent iron study at OU 5 was completed. At Site 325, several wells were installed, and microcosm studies began to determine the best method of in situ biological contaminant degradation. The RAB met four times, provided advice on perchlorate and technical impracticability (TI) issues, reviewed several innovative remediation methods proposed for TSs, and received training.

FY05 IRP Progress

Edwards AFB began a PHOSter system TS of the Sites 5/14 groundwater contaminant plume. An in situ bioremediation TS utilizing whey powder injection was initiated at the Site 19 trichloroethene (TCE) plume in OU 1. The Air Force continued to operate the IX system at Site 285 in OU 5. The installation initiated in situ biological and chemical treatment TSs at two locations at Site 282 in OU 5. The installation began in situ bioremediation TSs at Sites 162 and 177 in OU 4 and Site 325 in OU 9. The Air Force finalized the PP for the TI waiver/containment zone designation strategy for groundwater plumes in OU 4. In addition, the installation tested the enhancement of hydraulic conductivity and fracture connectivity in bedrock aquifers by blast fracturing at Site 37 in OU 4. The

installation completed removal actions at Sites 275 and 278 in OU 10. Site 276 was removed from the CERCLA process because no contamination was found. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Contracting issues delayed installation of a six-phase heating (SPH) treatment system at Sites 225 and 298.

Four quarterly RAB meetings were held.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Install treatment cells and an SPH groundwater treatment system at Sites 225 and 298 in OU 8 in FY06.
- Continue operating the IX TS for treating perchlorate in groundwater at Site 285 and continue in situ biological or chemical treatment TSs at OUs 2, 4, 5, and 9 in FY06.
- Perform a bioaugmentation TS at the groundwater chlorinated solvent plume and a TS for in situ chemical oxidation at Site 14 in OU 2 in FY06.
- Perform enhanced in situ bioremediation and bioaugmentation for treatment of the groundwater chlorinated solvent plume at Site 3 in OU 7 in FY06.
- Finalize the OU 7 chemical warfare materiel remedial investigation summary report and feasibility study report in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|-------------------------|----------------------------------------------------|-------------------------------------|-------------------------|
| FFID: | AK057302864600 | Estimated Cost to Completion | \$ 7.4 million(FY 2016) |
| Size: | 19,790 acres | (Completion Year): | |
| Mission: | Provide tactical air support to Pacific Air Forces | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| HRS Score: | 48.14; placed on NPL in November 1989 | Five-Year Review Status: | Completed |
| IAG Status: | IAG signed in May 1991 | | |
| Contaminants: | Heavy metals, POLs, benzene, VOCs, PCBs, solvents | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 56.8 million | | |



Progress To Date

The mission at Eielson Air Force Base (AFB) is to provide tactical air support to Pacific Air Forces. EPA placed the installation on the NPL in November 1989 and the Air Force signed an interagency agreement in May 1991. Environmental studies at Eielson began in FY82. Sites include fire training areas, landfills, spill sites, aboveground storage tanks, underground storage tanks, and disposal pits. Primary contaminants affecting groundwater and soil are petroleum/oil/lubricants (POLs), benzene, and chlorinated solvents. Additional contaminants included heavy metals, volatile organic compounds (VOCs), and polychlorinated biphenyls (PCBs). In FY95, the installation converted its technical review committee to a Restoration Advisory Board (RAB). Five-year reviews were completed in FY98 and FY03.

By FY93, the installation had identified 64 sites. One additional site has been identified since then. Thirty-one of the sites were grouped into 6 operable units (OUs); 24 sites were investigated and determined to require no further action (NFA). To date, all Records of Decision (RODs) for the Installation Restoration Program (IRP) have been signed and amendments have been signed for the OU 2, OU 3, OU 4, and OU 5 RODs. The cleanup progress at Eielson AFB for FY01 through FY04 is detailed below.

In FY01, the installation completed the Phase I remedial process optimization (RPO), annual long-term operations (LTO), and long-term management (LTM). Biannual RAB meetings were held. Institutional controls at IRP sites were enforced during all base construction activities at IRP sites. Since Site OT 008 is located off Air Force property, and was determined to be a former Army anti-aircraft artillery site, the site was referred to the U.S. Army Corps of Engineers FUDS program for further action.

In FY02, the installation continued annual LTO/LTM at the active sites. Agenda preparations for the 5-year review were initiated as planned. The Phase II RPO process was completed. Institutional controls at IRP sites were enforced during all base construction activities. Biannual RAB meetings were held.

In FY03, the installation completed the formal decommission of the bioventing systems at Site ST 20, E 7 complex, and Site ST 48. The 5-year review was also completed. The installation prepared the proposed closure documents for all sites sampled in the FY02 sitewide sampling and analysis program. Closure documentation was incorporated into the ROD review report. The installation continued annual LTO/LTM at the active sites. Bioventing systems were removed at Site ST 20, E 7, and Site ST 48.

In FY04, Eielson AFB received funding for the proposed event-driven monitoring (EDM) concept for the long-term monitoring program. A removal action and site evaluation were completed at Site SS 35. Eielson AFB received regulatory concurrence that the remainder of buried drums at the site do not constitute a changing site condition and do not alter the conclusions drafted in the ROD. The installation remediated the emulsion seepage. Removal of the remaining buried drums required NFA. Removal of the OU 1 bioventing system at Site ST 20, E 9 was completed. LTO savings from the three decommissioned OU 1 bioventing systems were used to repair and upgrade the OU 2 bioventing system at Sites ST 10/SS 14. The RAB held biannual meetings.

FY05 IRP Progress

Eielson continued to make progress with the EDM initiative. The installation completed OU2 bioventing system repair and upgrade for Sites ST 13/DP 26. Remedial action operation (RA-O) activities at the OU 2 bioventing systems at Sites ST 10/SS 14 and ST 13/DP 26 were completed. The installation completed the sitewide sampling and analysis of monitoring wells. The current measures at Garrison Slough remain protective and progress toward the targeted risk range is being achieved. Fish removal action from the slough continued. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Administrative issues prevented the resolution of outstanding EDM issues and delayed implementation of the EDM.

The RAB co-chairs suspended regularly scheduled meeting periods and will meet on an as-needed basis only. A yearly fact sheet publication will convey IRP information to the surrounding communities.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Finalize RPO initiative for EDM implementation in FY06.
- Continue RA-O for OU 2 bioventing systems at Sites ST 13/DP 26 and ST 10/SS 14 in FY06.
- Continue fish removal action and fish tissue analysis at Garrison Slough in FY06.
- Develop a proposed work plan and decision document for Site SS 68 (formerly area of concern 29) in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| FFID: | CA917302320800 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 4,738 acres | Funding to Date: | \$ 124.8 million |
| Mission: | Serve 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 | Estimated Cost to Completion (Completion Year): | \$ 70.9 million(FY 2037) |
| HRS Score: | 40.83; placed on NPL in February 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| IAG Status: | Federal facility agreement signed in October 1990 | Five-Year Review Status: | Planned |
| Contaminants: | TCE and other VOCs, petroleum hydrocarbons, PCBs, pesticides, herbicides | | |



Progress To Date

The El Toro Marine Corps Air Station (MCAS) served as the primary Marine Corps jet fighter facility on the West Coast and provided materials and support for Marine Corps aviation activities. EPA placed the installation on the NPL in February 1990 and the Navy signed a federal facility agreement in October 1990. In July 1993, the BRAC Commission recommended closure of this installation and a transfer of its aircraft, personnel, equipment, and support to Miramar Naval Air Station and Camp Pendleton Marine Corps Base. The 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 installation's technical review committee, formed in FY90, was converted to a Restoration Advisory Board (RAB) in FY94. In FY94, a BRAC cleanup team (BCT) was formed and a BRAC cleanup plan was developed. In FY96 and FY05, the installation updated its community relations plan (CRP).

Studies at the station have identified 24 CERCLA sites, 594 locations of concern, and 404 underground storage tanks (USTs). To date, approximately 3,700 of the original 4,712 acres have been either transferred or found environmentally suitable for transfer. The installation has completed 15 Records of Decisions (RODs) since environmental restoration activities began. In addition, it has completed 2 No Further Action (NFA) RODs and achieved regulatory concurrence on NFA for 36 UST sites, 12 aerial-photography anomaly (APHO) sites, and 12 aboveground storage tanks (ASTs). The installation has also submitted two draft RODs and completed one interim ROD. The cleanup progress at El Toro MCAS for FY01 through FY04 is detailed below.

In FY01, the installation's historical radiological assessment was completed and radiological surveys began. The final NFA ROD at Sites 7 and 14 was published. A desalter settlement agreement was reached with the Department of Justice and two local water districts, allowing the proposed plan (PP) to move forward. Remedial investigation (RI) work for Site 1 began. Verification and remediation activities at various locations of concern, including UST Group 651, Tank 398, Tank Farm 555, and MSC R1/Anomaly Area 3, were performed. NFA status was

achieved for 22 compliance sites, including 9 ASTs, 4 USTs and 7 APHOs. Use of a multiphase extraction pilot test for the treatment of VOCs in soil and groundwater at Site 16 expedited the overall project cleanup schedule.

In FY02, the installation signed the final groundwater ROD for Sites 18 and 24. Closure was achieved at two USTs, two ASTs, and three RCRA facility assessment sites. Twenty closure reports were submitted for regulatory review. The installation completed the initial radiological survey. A final feasibility study and PP were published for Site 16. An aquifer test was initiated to facilitate Site 2 groundwater issues. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, El Toro MCAS coordinated with two local water districts for the development of remedial design (RD) on Site 18. The installation obtained NFA regulatory letters for 41 locations of concern. The installation completed the ROD for Site 16. The installation also initiated RD for Sites 18 and 24. The installation completed the update on the Environmental Baseline Survey and draft finding of suitability to transfer (FOST) and finding of suitability to lease (FOSL).

In FY04, the installation finalized the FOST and FOSL without regulatory agency exceptions or contingencies. El Toro MCAS also completed the radiological release report for sites 2, 8, 12, 17, and 25. The installation submitted the draft CRP update to regulators. The Navy signed the Site 16 monitored natural attenuation ROD. The installation initiated the Site 11 remedial action (RA) and Sites 8 and 12 non-time critical removal action.

FY05 IRP Progress

El Toro MCAS completed fieldwork for the Site 11 (Transformer Storage Area) RA. In addition, the installation completed the draft NFA ROD for Site 24 vadose zone soils and completed draft RI report for Site 1 Former Explosive Ordnance Disposal Range. The installation completed the RD for Site 24 groundwater VOC Source Area and initiated RA field activities. The installation also completed the RD for Site 18 Regional VOC groundwater plume. The installation completed a draft feasibility study (FS) addendum for Sites 3 and 5 landfills and Site 8 Defense Reutilization and Marketing Office (DRMO) Storage Yard. The Navy also completed exploratory trenching

at 43 locations and soil sampling at various pipeline features and achieved NFA status for 11 aircraft direct refueling stations. The installation completed the excavation and removal of petroleum-impacted soils at former UST Site 308. Additionally, the installation completed investigation and achieved regulatory concurrence on NFA for nine APHO sites, six temporary hazardous waste accumulation areas, seven oil/water separator sites, two USTs, and two solid waste management units. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The installation also completed the final CRP update and continued facilitating the BCT and RAB meetings.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete RODs: Sites 24 (vadose zone soils); 3, 5, 8, 12 in FY06-07.
- Complete RI/FS reports for Sites: 1 and Anomaly Area #3 in FY06-07.
- Complete RD/RA for Sites: 2 and 17 landfills, 11, 18, 24 in FY06-07.
- Complete treatment and confirmation sampling in FY06-07.
- Complete closure documentation for ten compliance program sites in FY06-07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | SD857212464400 | Funding to Date: | \$ 71.3 million |
| Size: | 4,858 acres | Estimated Cost to Completion (Completion Year): | \$ 31.4 million(FY 2028) |
| Mission: | Maintain a combat-ready force capable of executing long-range bombardment operations | IRP/MMRP Sites Final RIP/RC: | FY 2002/FY 2003 |
| HRS Score: | 33.62; placed on NPL in August 1990 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in January 1992 | | |
| Contaminants: | Solvents (including TCE), POLs, lead, low-level radioactive waste | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Ellsworth Air Force Base (AFB) maintains a combat-ready force capable of executing long-range bombardment operations. The base was placed on the NPL in August 1990 and signed a federal facility agreement in January 1992. Site types include landfills, underground storage tanks, maintenance areas, a fire training 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. In FY95, the base formed a Restoration Advisory Board. In FY00, a 5-year review was completed for 13 sites and in FY05, a second 5-year review was completed, both concluding that all sites were protective of human health and the environment.

Fifteen sites were initially documented as having potential environmental impacts relating to past use. Follow on investigations and research documented others, bringing the total to 21. Sites at the installation were grouped into 12 operable units (OUs). To date, Records of Decision have been signed for OUs 1 through 10 and OU 12. The cleanup progress at Ellsworth AFB for FY01 through FY04 is detailed below.

In FY01, remediation of basewide groundwater contamination continued and the installation completed the water line extension at OU 11 and placed the site under remedial action operations (RA-O). Long-term management (LTM) and RA-O continued at selected sites. The remedial investigation (RI) for Site RW 27 began.

In FY02, the installation continued the RI and started interim RA free product removal at Site RW 27. LTM and RA-O continued at Site OU 11 and other selected sites. The installation continued the RI and feasibility study (FS) for Site OT 18 and continued repairs to Landfill (LF) 05.

In FY03, the Air Force completed repairs at LF 05, continued RI/FS for Site OT 18, and removed free product at Site RW 27. RA-O and LTM continued at selected sites. Additional data was collected for the expanded RI/FS for RW 27.

In FY04, the installation completed the RI/FS for Site OT 18. For Site RW 27, the installation also completed the expanded RI and started the FS. In addition, Ellsworth AFB continued the

RA-O and LTM at selected sites. The preliminary assessment (PA) scheduled for FY05 is no longer required, as the area previously identified by Air Force contractors as a Military Munitions Response Program (MMRP) area of concern was subsequently determined to be an Explosives Ordnance Disposal site closed under the Environmental Restoration Program in FY97.

FY05 IRP Progress

Ellsworth AFB added information and reformatted data into a substantially expanded PA/ site investigation for Site RW 27 and continued RA-O and LTM at selected sites. The installation initiated a study of reductive biodechlorination and a study of impacts on substandard utilities and groundwater flow. Ellsworth AFB completed a second 5-year review. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The installation conducted outreach in support of the Badlands Bombing Range cleanup (Site OT 18).

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Continue RA-O and LTM at selected sites in FY06.
- Finalize the expanded RI/FS report for Site RW 27 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | |
|-------------------------|--------------------------------------------|
| FFID: | AK057302864900 |
| Size: | 13,130 acres |
| Mission: | Headquarters Alaskan Command |
| HRS Score: | 45.91; placed on NPL in August 1990 |
| IAG Status: | Federal facility agreement signed in 1991 |
| Contaminants: | VOCs, heavy metals, POLs, and solvents |
| Media Affected: | Groundwater, surface water, sediment, soil |
| Funding to Date: | \$ 82.1 million |

| | |
|--------------------------------------------------------|--------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 44.0 million(FY 2037) |
| IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2019 |
| Five-Year Review Status: | Completed |



Progress To Date

Elmendorf Air Force Base (AFB) serves as headquarters to the Alaskan Command. EPA placed the base on the NPL in August 1990 and the Air Force signed a federal facility agreement (FFA) in 1991. Sites include old construction landfills, petroleum spill sites, and underground storage tanks. The installation formed a Restoration Advisory Board (RAB) in FY92. In FY97, the RAB charter was rewritten to focus on all environmental activities, beginning the transition to a Community Advisory Board. The installation developed a community relations plan (CRP), which was revised in FY00. A 5-year review was conducted in FY98 and again in FY04.

Eighty-eight sites have been identified at this installation. Thirty-eight sites, grouped into six operable units (OUs), are covered by the FFA. An additional 42 sites have been designated as petroleum, oil, and lubricant (POL)-contaminated sources and remedial activities are being performed under the State of Alaska cleanup regulations. The remaining eight sites are not part of either the FFA or the agreement with the State of Alaska. By 1997, Records of Decision (RODs) had been signed for OUs 1, 2, 3, 4, 5, and 6. The cleanup progress at Elmendorf AFB for FY01 through FY04 is detailed below.

In FY01, the groundwater model for OU 2 was completed. Remedial action operations (RA-O) of 21 bioventing systems, the engineered wetland system at OU 5, and the high-vacuum extraction (HVE) system at Site SD 15 continued. The annual beach sweep at Landfill 04 (LF 04) was conducted. The site characterization investigation reports were completed for Sites SS 83 and DP 98, determining that further site characterization was necessary for Site DP 98. An expedited removal action was completed at Site SA 100. The installation received Pacific Air Forces' (PACAF's) General Thomas D. White Installation and Team awards for 2001.

In FY02, the installation continued RA-O of 21 bioventing systems, the engineered wetland system at OU 5, and the HVE system at Site SD 15. The annual beach sweep at LF 04 was conducted. A remedial process optimization (RPO) for the basewide groundwater program was completed, and resulted in a reduction in sampling frequency for a majority of the base's wells. A remedial investigation and feasibility study was initiated for Site DP 98.

In FY03, the Air Force began the engineering evaluation and cost analysis at Site SA 99, which resulted in a no further action determination. RA-O of 20 bioventing systems, operation of the engineered wetland system at OU 5, and operation of the HVE system at Site SD 15 continued. The installation also conducted the annual beach sweep at LF 04. Elmendorf AFB received PACAF's General Thomas D. White Installation award.

In FY04, Elmendorf AFB completed the second 5-year review. The installation also completed and signed the ROD for Site DP 98 and the site closure report for LF 05, LF 07, LF 13, and Site OT 56. In addition, the installation initiated the RA for Site DP 98 and system optimization of the OU 5 engineered wetland remediation system, as well as the removal action at Site SS 83. Elmendorf AFB received PACAF's General Thomas D. White Installation award.

FY05 IRP Progress

Elmendorf AFB began the Site SD 15 explanation of significant differences. The installation also completed and signed site closure documents for Sites ST 71, ST 74, and SA 99. In addition, the Site DP 98 limited source removal was completed, annual beach sweeps at LF 04 were conducted, and PACAF's first performance-based contract was accomplished at Site PL 81. An RPO project was conducted that resulted in implementing two separate groundwater plume treatability studies (TSs) to enhance the cleanup process at these two locations within the base boundaries. The installation received both PACAF's General Thomas D. White Installation and Team awards. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Conduct TS for enhanced bioremediation at the Kenney Plume (ST 37) in FY06.
- Conduct TS for bio-reactive barrier at Slammer Plume (ST 37) in FY06.
- Prepare decision documents for Sites ST 36/66, SS 43, ST 61, and ST 68 in FY06.
- Complete site closure report for Site SS 10 in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | LA657002445200 | Funding to Date: | \$ 34.9 million |
| Size: | 2,284 acres | Estimated Cost to Completion (Completion Year): | \$ 8.9 million(FY 2031) |
| Mission: | Used as a tactical fighter wing | IRP/MMRP Sites Final RIP/RC: | FY 2001/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Underway and planned |
| IAG Status: | None | | |
| Contaminants: | Industrial waste, spent solvents, fuels, waste oil, paints, pesticides, alkali, low-level radioactive waste, chlorine gas, PCBs, TCE, POLs, medical waste | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1991, the BRAC Commission recommended closure of England Air Force Base (AFB). The installation, used as a tactical fighter wing, closed in December 1992. Sites identified at the installation include landfills, 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. The installation formed a BRAC cleanup team (BCT) in FY93 and a Restoration Advisory Board (RAB) in FY94. The BRAC cleanup plan was updated in FY95 and FY04. The RAB disbanded in FY00. A 5-year review was initiated in FY05.

Environmental studies have identified 46 sites at the installation. A RCRA facility assessment conducted in FY92 identified 59 solid waste management units and 5 areas of concern. In FY98, 14 sites were closed and officially transferred to the local redevelopment authority (LRA), with an additional 152 acres transferred in FY04. In FY99, 19 additional sites were closed. The cleanup progress at England AFB for FY01 through FY04 is detailed below.

In FY01, the installation completed site investigations at restoration sites. The interim removal action for lead and chromium beneath the two water towers was completed. The remedial action for the petroleum/oil/lubricants (POLs) area and the removal of additional soil along underground fuel lines were completed. A hazardous waste permit renewal application was completed. Long-term management (LTM) began at some sites. A decision document to support meeting the last remedy in place milestone was finished.

In FY02, the installation completed draft post closure plans for Spill Site 45 (SS045) [trichloroethylene (TCE) plume], SWMU 41 Landfill 15 (LF015), and the POL Yard (SS021). Quarterly LTM was conducted for SS021 and LF015, and remedial action operation (RA-O) was conducted for SS045. TCE in the groundwater was determined to have migrated outside the area where studies indicated monitored natural attenuation (MNA) would be effective. The BRAC environmental coordinator determined that 11 sites required some explosive ordnance disposal clearance investigation/certification work.

In FY03, the installation conducted additional sampling and data research to include EPA Adda Lab field investigation for microbial DNA for specific microbes. Additional sentry monitoring wells were installed to further define the eastern TCE plume boundary. EPA identified microbes that break down TCE in half of the TCE plume. The installation worked with regulators to finalize the 13 final reports containing the sites on the Hazardous and Solid Waste Amendments permit and incorporate comments.

In FY04, the installation transferred 152 acres to the LRA and continued to monitor the MNA for the TCE plume to comply with post-closure plans. The installation revised the corrective action permit application as requested by the state. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation conducted LTM at LF015 and SS021, and RA-O at SS045. The installation developed an alternative strategy for site closure and submitted it for review.

Regulatory issues delayed the approval and implementation of the site closure strategy, the RCRA permit renewal application, and operating properly and successfully (OPS) documentation for SS045. In addition, regulatory issues delayed property transfer.

Two BCT meetings were held.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Survey and clearance activities were delayed, pending further evaluation of requirements.

Plan of Action

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

IRP

- Continue LTM at LF015 and SS021 and RA-O at SS045 in FY06.
- Submit renewal application for RCRA corrective action permit in FY06.
- Submit OPS documents for SS045 in FY06.
- Continue property transfer and complete the first 5-year review in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | WY857212417900 | Funding to Date: | \$ 117.4 million |
| Size: | 5,866 acres | Estimated Cost to Completion (Completion Year): | \$ 53.6 million(FY 2033) |
| Mission: | Maintained and repaired ships and provided logistical support for assigned ship and service craft | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 39.23; placed on NPL in February 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in September 1991; Modification 11 signed in July 1998 | | |
| Contaminants: | Oil, solvents, metals, acids, petroleum, explosives residues | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

The Air Force began restoration activities at F.E. Warren (FEW) Air Force Base (AFB) in FY84. Between 1984 and 1989, trichloroethylene (TCE)-contaminated soil was removed from Spill Sites (SSs) 1, 4, and 7 as well as the acid dry well site. The base was placed on the NPL in February 1990 and a federal facility agreement (FFA) was signed in July 1991 that included 19 sites, which were grouped into 7 operable units (OUs). The sites were subsequently grouped into 13 OUs and five investigative zones. A 20th site was identified later. In FY95, a Restoration Advisory Board (RAB) was formed. The Air Force completed a basewide 5-year review in FY99 and again in FY04.

To date, a remedial investigation (RI) has identified 5 plumes of TCE-contaminated groundwater and 20 contained sites which were grouped into 13 OUs. The installation has signed Records of Decision (RODs) for 16 sites, including 11 no further action (NFA) RODs, 3 interim remedial action (RA) RODs, and 2 final RODs. The cleanup progress at FEW AFB for FY01 through FY04 is detailed below.

In FY01, groundwater data collection and the initial field investigation of sources for Zone D were completed. A field investigation was also completed for Zone E. RI report preparation began for Zone D groundwater, Zone D sources, and Zone E. The Landfill 2A (LF 2A) and LF 2B site reclamation was completed. Long-term monitoring of LF 5A, the waste consolidation area, LF 6, and Site SS 7 continued. A supplemental preliminary assessment/site inspection (PA/SI) was initiated. The RODs for Zones B and C were completed and signed, and remedial designs were initiated.

In FY02, the engineering evaluation and cost analysis for Site SS 7 source area removal action was completed. The supplemental design work at Zone C indicated that the selected remedy of extraction and treatment was not feasible. The supplemental PA was completed. Meetings and training for the RAB continued. Partnering meetings with the Air Force, EPA, the State, contractors, and project managers continued on a regular basis.

In FY03, the Air Force completed construction of the Zone B final RA by installing a pump-and-treat system. The revised

feasibility study for Zone C was completed and the ROD amendment continued on schedule.

In FY04, the Air Force completed and signed the LF 4, LF 7, and Fire Protection Training Area 1 final RODs. The RAs for LF 4 and LF 7 were substantively completed. The source area removal action at Site SS 7 was completed. The second 5-year review was completed. The Zone C ROD Amendment was completed and signed.

FY05 IRP Progress

FEW AFB completed and signed the Zone E ROD indicating NFA required. The installation completed the Phase I Range RI with over 30,000 anomalies identified and investigated. The Zone C ROD amendment was signed and the remedy was implemented. The remedy selected for Zone C included the use of hydraulic fracturing to place solid potassium permanganate within the zone of groundwater contamination. The installation completed a supplemental PA/SI that added four sites to the installation's cleanup program. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Technical and regulatory issues delayed the RODs and RA for Zone D groundwater and sources.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response Program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Complete and sign the ROD for Zone D groundwater and an NFA ROD for Zone D sources in FY06.
- Begin RA construction for Zone D groundwater in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | WA057212464700 | Funding to Date: | \$ 47.8 million |
| Size: | 4,300 acres | Estimated Cost to Completion (Completion Year): | \$ 44.6 million(FY 2028) |
| Mission: | Provide aerial refueling and airlift services | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2013 |
| HRS Score: | 31.98; placed on NPL in March 1989 | Five-Year Review Status: | Underway |
| IAG Status: | IAG signed in FY90 | | |
| Contaminants: | Solvents, fuels, electroplating chemicals, cleaning solutions, corrosives, photographic chemicals, paints, thinners, pesticide residues, PCBs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Fairchild Air Force Base (AFB) provides aerial refueling and airlift services. EPA placed the installation on the NPL in March 1989 and the Air Force signed an interagency agreement in FY90. Sites include contaminated fire training areas, landfills, radioactive waste sites, spill sites, waste pits, disposal pits, and ditches. Interim actions included removal of 1,600 cubic yards of soil contaminated with fuels and oils. Additional interim removal actions were completed at the waste storage area, waste fuel operations, a fuel transfer facility, and the arsenic ditches and culverts in FY99. The installation formed a Restoration Advisory Board (RAB) in FY95. In FY00, a partial site delisting effort was initiated with the Washington State Department of Ecology (WA DOE) and EPA and the base prepared 22 sites for removal from the NPL. The installation, in cooperation with EPA and the state, completed a 5-year review in FY01.

Environmental studies have identified 37 sites at this installation. To date, Records of Decision (RODs) have been signed for 28 sites. The cleanup progress at Fairchild AFB for FY01 through FY04 is detailed below.

In FY01, the first 5-year review was completed. Fieldwork began for a remedial investigation and feasibility study (RI/FS) at the trichloroethylene (TCE) plume site. The base discovered and removed 30 buried drums containing 800 gallons of hazardous waste before the waste could leach into the groundwater. Food-grade soybean oil was added as a carbon source before the excavation was backfilled in order to accelerate remediation of TCE throughout the groundwater plume. The installation and the Air Force Center for Environmental Excellence initiated a phytoremediation pilot project. The Fairchild RAB teamed with the U.S. Army Corps of Engineers, Seattle District, at a FUDS site. The base provided a public platform to inform the local community of the site's cleanup progress.

In FY02, the installation initiated the Priority 3 ROD. The RI at Site SD 37 was completed. Basewide soil and groundwater monitoring operations continued, as did remedial actions (RAs) at groundwater treatment plants, groundwater air sparging, and soil bioventing systems. The installation continued to implement recommendations from the 5-year review.

In FY03, the installation completed the FS for Site SD 37 as well as 5-year review recommendations for various sites. The Air Force pursued privatization of Craig Road Landfill, an off-base Environmental Restoration site; however, privatization was determined not to be in the government's best interest and was no longer considered. The installation initiated preliminary discussion with the WA DOE regarding terminating remedial operations at Site WP 03.

In FY04, the installation performed significant remedial process optimization initiatives at five of the nine RA operation (RA-O) sites. The installation initiated the second 5-year review report preparation. A contract was initiated to perform a Triad RI/FS project for Site SS 39. The installation continued discussion with the WA DOE regarding terminating remedial operations at Site WP 03.

FY05 IRP Progress

Fairchild AFB initiated significant remedial process optimization initiatives at one additional RA-O site and began aggressive optimization at six of the nine RA-O sites. The installation completed the field effort for a Triad RI at Site SS 39. This effort defined the nature and extent of TCE and carbon tetrachloride contamination in the groundwater, and determined that the contamination would not adversely impact the family housing area. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Administrative issues delayed the Priority 3 ROD and the second 5-year review. Additional site characterization requirements delayed the ROD, RD, and RA construction (RA-C) at Site SS 39, and the RD and RA-C at Site SD 37. Technical issues delayed the final decision regarding Site WP 03, however, the Air Force initiated an overall exit strategy.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Finalize exit strategy at Site WP 03 in FY06.
- Complete the Priority 3 ROD and second 5-year review in FY06.
- Initiate exit strategy development at Site OT 17 and Site FT 32 in FY06.
- Initiate Site SS 39 FS in FY06.
- Initiate remedial design and RA construction at Site SD 37 in FY06 and FY07, respectively.

MMRP

- Complete all site investigations at all identified sites between FY06-FY10.

| | | | |
|------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | WV39799F789200 | Funding to Date: | \$ 0.8 million |
| Size: | 12 acres | Estimated Cost to Completion (Completion Year): | \$ 0.1 million(FY 2012) |
| Mission: | Manufactured smokeless powder (private party operated a batch chemical plant) | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2004 |
| HRS Score: | 36.3; placed on NPL in September 1983 | Five-Year Review Status: | Completed |
| IAG Status: | None | | |
| Contaminants: | Dioxin, nic and inorganic chemicals, metals | | |
| Media Affected: | Groundwater and soil | | |



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 were 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 and feasibility study (RI/FS) of groundwater and soil (OU 4); and RI of the cooperative sewage treatment plant (OU 5). EPA placed the property on the NPL in 1983.

The Army approved a Military Munitions Response Program (MMRP) project in FY96. It conducted a 5-year review in FY02. The cleanup progress at Fike-Artel Chemical for FY01 through FY04 is detailed below.

In FY01, the potentially responsible parties (PRPs) completed an additional groundwater study and the FS and risk assessment. The PRPs submitted the Record of Decision (ROD) to EPA. Additional sampling was conducted to characterize waste and media at Lagoon 3. The contractor completed the cap design for Lagoon 3 and submitted the documents to EPA. The stormwater treatment system operated in compliance with permit requirements. The PRPs aided the Nitro Redevelopment Authority in obtaining all deeds associated with land tracts.

In FY02, the PRPs provided their written election to perform the ROD soils groundwater remedies. The PRPs and EPA began to address the relevant technical details through the preparation of a plan for delineating the extent of the groundwater plume. The PRPs submitted that plan for EPA approval. EPA approved the OU 4 and OU 5 soils remedial design (RD) submittal. The groundwater pre-RD work plan, and sampling and analysis plan were submitted for approval. The operation of the stormwater pretreatment system continued. EPA and the West Virginia Department of Environmental Protection conducted the 5-year review inspection. A draft archive search report (ASR) was completed for the entire 16,000-acre former government plant.

In FY03, the U.S. Army Corps of Engineers (USACE) completed the soils remedy at the Cooperative Sewage Treatment (CST) Plant, which was leased by the local

redevelopment authority as a truck terminal. EPA approved the groundwater pre-RD investigation work plan, and sampling and analysis plan.

In FY04, work began for the complex groundwater RD. EPA approved a schedule change and moved the remedy start date to FY06. The PRPs began the work plan for the World War I sewer lines, and included a video inspection of the 66-inch sewer line. In addition, the soil remedy was completed for OU 4 and the CST plant. USACE also completed the ASR after it received no additional comments.

FY05 IRP Progress

The operations and maintenance (O&M) for OU 4 and the CST continued. USACE continued the groundwater component of the RD. RD efforts discovered new information with respect to groundwater flow and will increase the RD effort and removal action remedy.

Technical issues delayed the completion of the 66-inch World War I sewer line and 12-inch sewer line investigation.

FY05 MMRP Progress

No MMRP work was performed at this property in FY05.

Plan of Action

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

IRP

- Initiate remedial action work plan for groundwater in FY06.
- Continue OU 4 and CST O&M in FY06.
- Complete RD for groundwater in FY06.
- Complete 66-inch and 12-inch sewer line investigations in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|-----------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | VA39799F156700 | Estimated Cost to Completion (Completion Year): | \$ 90.6 million(FY 2044) |
| Size: | 975 acres | IRP/MMRP Sites Final RIP/RC: | FY 2034/FY 2009 |
| Mission: | Served as ordnance depot | Five-Year Review Status: | Planned |
| HRS Score: | 70.0; placed on NPL in July 1999 | | |
| IAG Status: | IAG under negotiation | | |
| Contaminants: | TNT, solvents, fuels, pesticides, heavy metals, MEC | | |
| Media Affected: | Soil, groundwater, sediment | | |
| Funding to Date: | \$ 33.9 million | | |



Progress To Date

The Former Nansemond Ordnance Depot (FNOD) consists of approximately 975 acres on the James River, at the mouth of the Nansemond River. The Army acquired the property between 1917 and 1929 and used the Depot from World War I until November 1950, when the property was leased to the Navy. In 1960, the Army excessed the property and conveyed it to the Beasley Foundation, Inc. Currently, Tidewater Community College (TCC), the General Electric Company (GE), Dominion Lands, Inc., Continental Bridgeway Office Park, Bridgeway LP, Suffolk Towers, SYSCO Food Services, Hampton Roads Sanitation District, Lockheed Martin, and Interstate 664 occupy the property. Contaminants identified at the property include TNT, fuels, solvents, pesticides, and munitions and explosives of concern (MEC). In FY97, FNOD held its first Restoration Advisory Board (RAB) meeting. EPA placed the property on the NPL in July 1999 and delisted the impregnite kit area soils from the NPL in FY03. Both the FNOD project delivery team and the statewide FUDS Management Action Plan team meet monthly. In addition, an EPA Region III FUDS Partnering team meets several times throughout the year. FNOD also has a highly effective public affairs work group with representation from regulatory agencies, property owners, and community stakeholders. Additionally, the FNOD RAB meets six times a year.

To date, the U.S. Army Corps of Engineers (USACE) has signed one No Further Action (NFA) Record of Decision (ROD). Continuous MEC response action presence began in 2000 and is expected to continue through FY08. The cleanup progress at FNOD for FY01 through FY04 is detailed below.

In FY01, USACE completed removal actions at the Nansemond and James River beachfronts and the Track K source area (over 2,660 tons of debris and contaminated soil), completed the offshore ecological risk analysis, and initiated site inspection work for Streeter Creek, TCC Lake, and J Lake. USACE completed offshore MEC investigations, including investigations of suspected unexploded ordnance near the Monitor Merrimac Bridge Tunnel. The Army established a Web site for FNOD and added bimonthly partnering meetings with the state and federal regulators.

In FY02, USACE completed the closeout documentation for the impregnite kit area and a draft remedial investigation (RI) on the main burning ground and horseshoe-shaped pond. Work continued on the TNT area RI, background study, and site screening process. USACE completed MEC removal actions on Dominion Lands property, and signed the interim land use control implementation plan (LUCIP) for MEC at FNOD.

In FY03, EPA delisted the impregnite kit area soils from the NPL. USACE completed RI sampling of the TNT area and re-interred the human remains unearthed at the James River beachfront site with an unprecedented outpouring of community support. USACE found that the Track K dump had unanticipated contamination, and was no longer proposed for NFA. USACE completed the time-critical removal action (TCRA) at the TNT area and discovered an additional MEC site at the Nansemond River beachfront. Although there is no evidence of chemical weapons materiel (CWM) storage or disposal at FNOD, EPA completed a second round of CWM sampling citing concerns over incomplete site documentation. The sampling yielded no indication of CWM.

In FY04, USACE completed the offshore NFA proposed plan and ROD. USACE initiated the site investigation phase of the Nansemond River Beachfront, the Marine Corps Power Generation Station, and Tracks G, H and I explosive magazine lines. Negotiations continued with landowners on the LUCIP memorandum of agreement (MOA). USACE completed the initial site screening process for the GE Pond area of concern.

FY05 IRP Progress

USACE completed the sitewide ground water conceptual site model investigation, a background sampling report, FNOD site specific screening process. USACE also completed near shore site investigations for the James River beachfront, and Horseshoe Pond, as well as the human health risk assessment (HHRA) and ecological risk assessment (ERA) for the Track K dump and the Horseshoe Pond. USACE determined that an engineering evaluation and cost analysis for the Pesticide Drum area was inappropriate, and began an HHRA and ERA as part of an RI. USACE also initiated site investigations of several areas of concern, including the Track J explosive magazine line, the arsenic area near GE, and the renovation plant area. The cost of completing environmental restoration at this

installation has changed significantly due to technical and estimating criteria issues.

FY05 MMRP Progress

USACE satisfied the requirements of the FNOD TCRA interagency agreement and began drafting the final report. TCC and USACE signed a LUCIP MOA. USACE also modified its MEC work plan and began using a mechanical sifter to significantly speed up the operation. Ordnance issues along the Nansemond River beachfront became more complex when erosion exposed several unanticipated pieces of MEC. At the end of FY05, a total of 2,575 discarded munitions items, 8,874 pounds of bulk explosives, and 3,453,180 pounds of debris and contaminated soil had been removed.

An exchange of letters was made committing the City of Suffolk to support the FNOD LUCIP.

Plan of Action

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

IRP

- Complete Track K dump RI and NFA ROD in FY06.
- Complete James River beachfront RI and NFA ROD in FY06.
- Complete Horseshoe Pond RI in FY06.
- Complete Pesticide Drum area RI in FY06.
- Update site management plan and site screening process in FY06.

MMRP

- Submit final FNOD TCRA report in FY06.
- Characterize Nansemond River beachfront MEC issues in FY06.
- Characterize J-Lake and Track A&B burning ground MEC issues in FY06.

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|-------------------------|---------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MO79799F037400 | Estimated Cost to Completion (Completion Year): | \$ 15.0 million(FY 2005) |
| Size: | 17,232 acres | IRP/MMRP Sites Final RIP/RC: | FY 2004/FY 2003 |
| Mission: | Manufactured TNT and DNT during World War II | Five-Year Review Status: | Completed |
| HRS Score: | 30.26; placed on NPL in February 1990 | | |
| IAG Status: | Interagency agreement signed in 1990; ammended in 1991. | | |
| Contaminants: | TNT, DNT, lead, asbestos, PCBs, PAHs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 254.2 million | | |



Progress To Date

From 1941 to 1944, the Weldon Spring Ordnance Works (WSOW) produced explosives for the Armed Services. The Army Reserves currently occupy the 1,655-acre Weldon Spring Training Area. The State of Missouri owns the majority of the remaining property and maintains it as a wildlife area and an agricultural research facility of the University of Missouri. Sites identified include lagoons, landfills, burning grounds, contaminated soil, underground wastewater pipelines, and groundwater. Primary contaminants affecting groundwater and soil are TNT, DNT, lead, polychlorinated biphenyls (PCBs), and polyaromatic hydrocarbons (PAHs). EPA placed the WSOW on the NPL in February 1990. The U.S. Army Corps of Engineers (USACE) and EPA signed an interagency agreement in 1990, which was amended in FY91. The Atomic Energy Commission acquired a parcel covering approximately 200 acres in the early 1950s that it used for a uranium ore feed material plant. DoD provides partial funding for the cleanup of this site, which is being investigated and remediated by DOE as a separate NPL site. USACE formed a Restoration Advisory Board (RAB) in FY97. USACE conducted a 5-year review in FY03 and submitted it to EPA in FY04.

Two operable units (OUs) exist at the former WSOW: OU 1 (soil and pipeline) and OU 2 (groundwater). USACE signed a Record of Decision (ROD) for OU 1 in FY96, and for OU 2 in FY04. The cleanup progress at the former WSOW for FY01 through FY04 is detailed below.

In FY01, USACE completed the construction associated with OU 1 after EPA identified a new area containing TNT-contaminated soil, which required additional remediation. EPA confirmatory sampling identified an area requiring excavation of DNT- and lead-contaminated soil. USACE completed the explanation of significant differences (ESD) for OU 1 and continued OU 2 groundwater monitoring. Discussions with EPA and the Missouri Department of Natural Resources (MDNR) about the OU 2 feasibility study (FS) and proposed plan (PP) also continued. Quarterly groundwater monitoring continued for approximately 36 months to acquire data representative of post-remedial action (RA) groundwater conditions before submission of a revised FS and PP.

In FY02, DOE/USACE generated the OU 1 closure report and submitted it to MDNR and EPA for comment. They also submitted the draft ESD to the regulatory agencies. The Army made a potentially responsible party payment to DOE. Groundwater monitoring for OU 2 continued. USACE procured a long-term monitoring contract, as part of a pilot study, to complete the remainder of the monitoring and sampling for the collection of data to be used in the revised FS. A work plan for groundwater sampling and well installation was completed. USACE installed five proposed monitoring wells to aid in determining the extent of groundwater contamination and removed approximately 0.8 bulk cubic yards of TNT-contaminated soil from two locations.

In FY03, USACE submitted the 5-year review and continued groundwater monitoring. Two additional OU 1 sites, T-13 and T-14, were identified. USACE modified the work plan for remediation at T-13, leading to a faster execution timeline and an awarded contract for remediation of this site. T-14 required no further action. USACE used geographic information system technology to present groundwater data more effectively. The Army initiated the closed, transferred, or transferring (CTT) ranges and site inventory for the Military Munitions Response Program (MMRP). RAB members participated in groundwater remediation decisions and the 5-year review process.

In FY04, USACE completed the supplemental FS, PP, public review period and meeting for OU 2. The Army, MDNR, and EPA signed the ROD for the OU 2; the selected remedy is monitored natural attenuation with land use controls. USACE completed the OU 1 closure and T-13 remediation, and submitted the final RA report and the 5-year review to EPA. The Army conducted the CTT ranges, site inventory, and concluded that all contaminated burning grounds were being cleaned up under FUDS and DOE work. No CTT ranges or sites containing unexploded ordnance, discarded military munitions or munitions constituents reported for the Phase III inventory were located on the former WSOW property.

FY05 IRP Progress

USACE closed out and completed contract task orders for OU 1 in accordance with FUDS policy. The former WSOW completed the remedial design work plan and Phase I RA work plan for OU 2 and regulators approved the plan. USACE obtained EPA

and MDNR concurrence on OU 1. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The USACE has identified no MMRP sites at this property.

Plan of Action

Plan of action items for Former Weldon Spring Ordnance Works are grouped below according to program category.

IRP

- Complete the Phase II RA work plan (institutional controls) for OU 2 in FY06.
- Complete the interim RA report for OU 2 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

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|-------------------------|---------------------------------|-------------------------------------|-------------------------|
| FFID: | AR621372018700 | Estimated Cost to Completion | \$ 0.7 million(FY 2001) |
| Size: | 71,359 acres | (Completion Year): | |
| Mission: | Light infantry and mobilization | IRP/MMRP Sites Final RIP/RC: | FY 2001/FY 1999 |
| HRS Score: | N/A | Five-Year Review Status: | Underway |
| IAG Status: | None | | |
| Contaminants: | POLs, DDT, Chlordane, TCE | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 29.7 million | | |



Progress To Date

When in operation, Fort Chaffee supported light infantry and mobilization missions. In July 1995, the BRAC Commission recommended closure of Fort Chaffee, except for the minimum essential buildings and ranges for a Reserve component training enclave. The installation closed in FY97. Primary site types include underground storage tanks, a fire training area, landfills, and hazardous waste and hazardous material storage areas. Primary contaminants of concern include petroleum/oil/lubricants (POLs) in groundwater and soil; solvents in groundwater; and pesticides in soil. The community formed a local redevelopment authority (LRA) in FY95. In FY96, the installation formed a BRAC cleanup team (BCT) and a Restoration Advisory Board (RAB). In FY99, the installation completed all previously funded work on the enclave sites, passing full responsibility for the sites to the National Guard. In FY04, the installation closed out the BCT and the RAB.

The BRAC parcel available for transfer was approximately 7,037 acres. To date, the installation has completed nine Records of Decision (RODs). Seven of the signed RODs included no further action (NFA) provisions. The cleanup progress at Fort Chaffee for FY01 through FY04 is detailed below.

In FY01, the Army completed finding of suitability to transfer (FOST) IV, freeing an additional 83 acres for transfer. Construction of the cap at Landfill Site 1 was completed. The installation completed characterization and remediation of two sites: the Pesticide Handling Area Building 477 (FTCH 042) and the Hazardous Waste Satellite Accumulation Point Building 460 (FTCH 21E). The soil removal action at FTCH 21E was completed on an accelerated schedule by using innovative sampling and monitoring technology. In addition, the installation used an expedited site characterization approach whereby the direction of fieldwork was developed on a day-by-day basis from the results of data collected. The installation completed remedial fieldwork at Landfill Site 1. Fort Chaffee met its remedy in place date through excellent partnering with regulators, innovative field techniques, and adept use of streamlining processes.

In FY02, the Army signed the ROD V and amended the action memorandum for FTCH 042. The closeout reports for FTCH

001 and FTCH 032 were completed. The installation initiated development of a land use control implementation plan (LUCIP). The installation completed groundwater monitoring plans for three sites. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY03, the installation briefed stakeholders on the LUCIP for FTCH 001, 013, 21E, and 032 and subsequently completed the document. The installation signed ROD VI, which included NFA for FTCH 045 and FTCH 013, and specified an industrial use control and 5-year reviews for FTCH 013. The installation signed FOST V to facilitate the transfer of the remaining acreage at Fort Chaffee. The Army completed the BRAC CTT range and site inventory report for Fort Chaffee. All six areas addressed in the report are part of FTCH 48C, a site investigated previously and now listed as response complete. Four are low risk areas and the remaining two are negligible risk.

In FY04, the Fort Chaffee Base Transition Team (BTT) provided stakeholders, including the City of Fort Smith, Sebastian County, and the Fort Chaffee LRA, with the supporting documents for the completed LUCIP. The BTT also issued the first FTCH 21E annual groundwater monitoring report and reviewed it with the BCT and RAB. The Army closed out the BCT and RAB. The installation shipped administrative files to the Army Environmental Center and closed the environmental site office.

FY05 IRP Progress

The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The 5-year review was delayed to incorporate all groundwater sampling planned for FTCH 032.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete 5-year reviews for the landfills FTCH 032 and FTCH 001 in FY06.
- Abandon groundwater monitoring wells at FTCH 032 and FTCH 001 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | MO79799F034700 | Media Affected: | Groundwater and soil |
| Size: | 42,786 acres | Funding to Date: | \$ 2.0 million |
| Mission: | 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 | Estimated Cost to Completion (Completion Year): | \$ 0.7 million(FY 2009) |
| HRS Score: | 50.00; placed on NPL in October 1999 | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2006 |
| IAG Status: | None | Five-Year Review Status: | The installation has not completed a 5-year review. |
| Contaminants: | VOCs, using TCE and carbon tetrachloride | | |



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, approximately 3,650 acres were transferred to the Air Force for the establishment of Air Force Plant (AFP) 65. Approximately 4,358 acres were leased to the Missouri National Guard for a training facility, known as Camp Crowder. AFP 65 operated, until 1968, as an Atlas missile manufacturing and testing facility, and later, until 1980, as a jet engine overhaul and testing facility. AFP 65 was a government-owned, contractor-operated facility. EPA placed the property on the NPL, in October 1999. In FY99, the U.S. Army Corps of Engineers (USACE), Kansas City District, signed two administrative orders on consent for removal actions.

The cleanup progress for Fort Crowder for FY01 through FY04 is detailed below.

In FY01, a potentially responsible party (PRP) group completed planning and began an alternate dispute resolution process. USACE continued technical and legal support to the Department of Justice (DOJ). USACE also monitored and reviewed work performed by PRPs and participated in planning a pilot study.

In FY02, USACE continued to provide support to DOJ. USACE planned and negotiated an engineering study for a source removal. USACE monitored the execution of work done by private PRPs and planned and negotiated an additional source removal. Site visits to a potential munitions area and a former chemical warfare materiel (CWM) area were conducted. USACE met with a landowner to discuss future actions.

In FY03, USACE provided support to DOJ, planned and negotiated two additional engineering studies, and monitored work done by private PRPs. Settlement discussions between USACE and DOJ continued. DoD completed a geophysical study of a potential CWM site. In addition, DoD initiated a review of potential military munitions and CWM areas.

In FY04, USACE provided technical and legal support to DOJ, monitored several source area investigations and removal

actions, and began planning a remedial investigation and feasibility study (RI/FS). Efforts continued with DOJ to obtain settlement of DoD liability for non-Military Munitions Response Program (MMRP) restoration. USACE completed intrusive investigations of the potential CWM site.

FY05 IRP Progress

USACE assisted in planning and oversaw the installation of a soil vapor extraction system at Quince Road Area that is scheduled for 12 to 24 months of operation. USACE and the Pools Prairie PRP group began planning a pre-RI/FS investigation and continued negotiating the administrative order. USACE continued monitoring removal actions executed by other PRPs and continued providing technical and legal support to DOJ in support of settlement discussions with PRPs. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

USACE completed the MMRP/CWM scoping security study site investigation phase. The scoping security study delayed USACE's development of a proposed plan.

Plan of Action

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

IRP

- Complete pre-RI/FS investigation planning and perform execution oversight in FY06 .
- Continue to provide legal and technical support to DOJ in FY06-FY07.

MMRP

- Begin remedial action construction phase with educational awareness training of local stakeholders in FY06.
- Initiate programmatic RI/FS and RA-C phase in FY06-FY07.

| | | | |
|------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MA121042027000 | Funding to Date: | \$ 142.7 million |
| Size: | 9,302 acres | Estimated Cost to Completion (Completion Year): | \$ 34.3 million(FY 2017) |
| Mission: | Support Reserve component training | IRP/MMRP Sites Final RIP/RC: | FY 2004/FY 2017 |
| HRS Score: | 42.24; placed on NPL in November 1989 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in November 1991 | | |
| Contaminants: | VOCs, heavy metals, petroleum products, PCBs, pesticides, herbicides, explosive compounds | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1991, the BRAC Commission recommended that Fort Devens close and establish a Reserve enclave. In FY96, the Army closed Fort Devens, replacing it with the Devens Reserve Forces Training Area, which assumed the remaining Army mission. EPA placed the installation on the NPL in 1989. The Army and EPA signed an interagency agreement in November 1991. Identified sites include landfills, vehicle and equipment maintenance and storage yards, the Defense Reutilization and Marketing Office scrap yard, motor pools, and underground storage tanks (USTs). Investigations revealed soil and groundwater contamination. In FY93, the Army investigated the training areas and ranges for possible unexploded ordnance (UXO), but found no ordnance. In FY94, the installation formed a Restoration Advisory Board (RAB) and a BRAC cleanup team (BCT). Beginning in FY95, the installation conducted several interim actions, including removal of USTs and installation of a soil vapor extraction system. Fort Devens completed 5-year reviews in FY01 and FY05.

Past environmental investigations identified 77 sites with 324 BRAC areas of concern (AOCs). The Army and EPA have signed 21 Records of Decision (RODs) to date. In addition, the Army approved 81 no further action decision documents (NFADD) and 32 NFADD Area Requiring Environmental Evaluation (AREE). From FY97 through FY99, the Army conveyed 222 acres to the U.S. Bureau of Prisons; 22 acres to the U.S. Department of Labor; and 836 acres to the U.S. Fish and Wildlife Service. The installation also transferred Parcel A1C and Lot 9 by deed in FY04. The cleanup progress at Fort Devens for FY01 through FY04 is detailed below.

In FY01, the installation completed the feasibility study (FS) and the ROD for AOC 57. Construction continued on the permanent on-site landfill. The draft FS for AOC 50 was completed. The installation obtained approval of the final 5-year review report. Excavation of AOCs 9, 11, 40, and 41 and Study Areas (SAs) 12 and 13 for transport to a permanent landfill began. The Army signed an environmental services cooperative agreement with the local redevelopment authority for demolition of the former military housing areas and removal of pesticide-contaminated soil underneath the housing units.

In FY02, the Army completed excavation and transport to a permanent landfill at AOCs 9, 11, 40, 41, and SAs 12 and 13. The RAB instituted a program of multiple community co-chairs to allow representation from the four contiguous towns and the community located on former Fort Devens property. The BCT addressed regulatory issues, concerns, and comments for all remaining sites undergoing environmental restoration. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with UXO, discarded military munitions, or munitions constituents.

In FY03, the installation completed the final FS and draft ROD for AOC 50. The installation completed removal of pesticide-contaminated soil underneath demolished military housing. The installation completed construction at the Fort Devens consolidated landfill and obtained approval of closeout reports. The Army completed the BRAC portion of the CTT range and site inventory and initiated the active sites portion of the inventory. The Army identified 11 Military Munitions Response Program (MMRP) sites.

In FY04, the installation completed remedial actions (RAs) along with the Final Interim Closeout Report for AOC 57. The installation completed the deed transfer for Parcel A1C and Lot 9. The Army approved the AOC 50 ROD and the 100 percent remedial design for remedy implementation and the installation implemented the remedy. The installation obtained approval for the NFADD for AREE 69 AE, North Post oil spill.

FY05 IRP Progress

The installation implemented the groundwater contingency remedy for Shepley's Hill Landfill and awarded a performance-based contract (PBC) for a comprehensive site assessment on the landfill. The installation completed the preliminary assessment, site investigation, and polychlorinated biphenyl (PCB) remediation at the Grant, Locust, and Cavite Army Family Housing Areas. Additionally, Fort Devens reached remedy in place and finalized the RA workplan and land use control plan for AOC 50. The installation sampled for perchlorate in the groundwater monitoring wells on the South Post Impact Area. The Army completed a 5-year review. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed EPA certification for operating properly and successfully (OP&S) for AOCs 50 and 57.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Obtain EPA certification for OP&S for AOCs 50 and 57 in FY06.
- Complete pesticide soil remediation at the Shirley Housing Area in FY06.
- Complete the transfer of all properties leased in furtherance of conveyance with the exception of Shepley Hill in FY06.
- Implement PBC for all long-term monitoring sites in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | NJ221042027500 | Estimated Cost to Completion (Completion Year): | \$ 20.1 million(FY 2017) |
| Size: | 30,997 acres | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2017 |
| Mission: | Provide training and Reserve support | Five-Year Review Status: | Completed and planned |
| HRS Score: | 37.40; placed on NPL in July 1987 | | |
| IAG Status: | Federal facility agreement signed in September 1991 | | |
| Contaminants: | Heavy metals, VOCs, POLs, chlorinated solvents, PCBs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 13.1 million | | |



Progress To Date

Remedial investigation (RI) of the Fort Dix Sanitary Landfill began in 1979, leading to the installation of groundwater monitoring wells around the perimeter. Due to the identified contamination, EPA placed the landfill on the NPL in 1987. The Army and EPA signed a federal facility agreement in September 1991. In FY89, the installation identified contamination at storage areas, motor pools, abandoned underground storage tanks (USTs), landfills, lagoons, impact areas, and an incinerator. Contaminants identified include heavy metals, volatile organic compounds (VOCs), petroleum/oil/lubricants (POLs), and chlorinated solvents. In FY95, the BRAC Commission recommended realignment of Fort Dix, with retention of land and facilities for Reserve component training. The installation formed a Restoration Advisory Board in FY96. In FY00, the Army petitioned EPA to remove the Sanitary Landfill from the NPL. The installation completed 5-year reviews for the landfill in FY99 and FY05.

The installation has completed nine Records of Decision (RODs) to date. In FY89, the installation performed site characterization and field screening at 16 sites and, in 1993, identified 42 areas requiring environmental evaluation. In FY97, the installation removed 80 abandoned USTs and began evaluating the contaminated sites. In FY99, the Sanitary Landfill was added to EPA's construction complete list. The cleanup progress at Fort Dix for FY01 through FY04 is detailed below.

In FY01, the Army reached an agreement with regulators on a remedy for the Taxi Stand site, Property Disposal Office (PDO) landfill, Environmental Photographic Interpretation Center (EPIC) 8 landfill, Armament Research and Development Center (ARDC) test facility, and Magazine (MAG) 1 site. The installation completed site investigations of residual contamination at Buildings 7061 and 5390, and New Egypt Armory. Monitoring continued at the Sanitary Landfill. Proposed plans (PPs) for the EPIC 8 landfill and PDO landfill were completed. The installation received a no further action letter and a covenant not to sue from the New Jersey Department of Environmental Protection (NJDEP) for five former hydrocarbon spill sites, two motor pool spill sites, the MAG 2 area, and the old sewage treatment plant site. EPA, NJDEP, and Pinelands Commission reviewed a PP for monitored natural attenuation

for the Range Impact Area 4400 spill site. The Army conducted an investigation of previously removed USTs.

In FY02, the Army initiated a remedial design and a remedial action (RA) at the Taxi Stand site and an RI/feasibility study at the Pesticide Control Shop. The UST RI report (RIR) for Buildings 5390, 7061, and the golf course site were all completed. The installation completed RODs for EPIC 8 landfill, PDO landfill, hazardous waste storage area, paint shop, polychlorinated biphenyls (PCBs) transformer storage area, Bivouac 5 wash rack, MAG 1 area, and the golf course pesticide mixing area. Fort Dix continued to pursue deletion of the Sanitary Landfill from the NPL.

In FY03, the Army included MAG 1 site, ARDC site, leaking USTs 7061, 5390, and golf course leaking USTs in a contract for remediation of 14 sites at Fort Dix. Fort Dix continued to pursue deletion of the Sanitary Landfill from the NPL. The installation continued long-term monitoring at the Sanitary Landfill. However, additional delineation work is required around four monitoring wells that exceed criteria and standards for VOCs and metals that could increase long-term monitoring. The Army completed the inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents for the active portion of the installation. Six Military Munitions Response Program (MMRP) sites were identified at this installation.

In FY04, the installation awarded a guaranteed fixed price remediation contract to conduct remediation at 14 sites. The installation submitted RA work plans and RIs to the regulators and completed soil removals at two sites. The installation continued long-term monitoring at the Sanitary Landfill. The installation completed, and regulators approved, the draft final RIR for the New Egypt Armory site, and an interim removal action of PCB-contaminated soils was initiated. The installation submitted the draft RIR for the former Pesticide Control Shop to the regulators for comment. Fort Dix initiated a 5-year review for the Sanitary Landfill and continued to pursue deletion of it from the NPL.

FY05 IRP Progress

The installation completed a 5-year review of the Fort Dix Sanitary Landfill as well as soil remediation at the New Egypt Armory site. The installation continued remediation at 14 Fort Dix sites. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the investigation and installation of additional monitoring wells needed to completely delineate groundwater plume at the Sanitary Landfill site. The draft final workplan and geoprobe sampling are being reviewed to determine the well's final location. Regulatory issues delayed the RIR at the former Pesticide Control Shop and the RIR at the New Egypt Armory site.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete sentinel well installation at Sanitary Landfill and pursue NPL delisting in FY06.
- Complete in situ treatment of plume at Taxi Stand site and submit amended RIR in FY06.
- Complete RIRs for Range Landfill and ANC 2 Disposal Area in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|----------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | NJ221402027500 | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2001) |
| Size: | 31,065 acres | IRP/MMRP Sites Final RIP/RC: | FY 2001/FY 2000 |
| Mission: | Provide training and mobilization | Five-Year Review Status: | The installation has not completed a 5-year review. |
| HRS Score: | N/A | | |
| IAG Status: | Federal facility agreement signed in 1991 | | |
| Contaminants: | Chlorinated solvents, heavy metals, PCBs, asbestos | | |
| Media Affected: | Groundwater, soil, building interior | | |
| Funding to Date: | \$ 30.7 million | | |



Progress To Date

Prior to being slated for closure, Fort Dix supported training and mobilization efforts for the Army. In July 1995, the BRAC Commission recommended realignment of Fort Dix and transfer of excess property. The Army signed a federal facility agreement in 1991. In FY95, the installation formed a BRAC cleanup team and began developing an Environmental Baseline Survey (EBS) and a BRAC cleanup plan, which were both completed in FY97. The installation formed a Restoration Advisory Board (RAB) in FY96.

The cleanup progress at Fort Dix for FY01 through FY04 is detailed below.

In FY01, preliminary sampling results from an investigation at Facilities 5656 and 5675 revealed that the Army need not remediate soil and groundwater at those locations. The installation conducted an asbestos inspection and sampling survey of Walson Hospital complex Buildings 5250, 5251, and 5252. It also completed asbestos abatement at the Walson Hospital heating plant (debris removal) and mid-state correctional facility (MSCF), Building 8401. The installation submitted a draft investigation and underground storage tank (UST) closure report (Parcel 48) for regulatory review. It removed the two USTs identified by the investigation and performed soil sampling. The installation completed a supplemental EBS for the Walson Hospital complex and the environmental condition of property document for property transfer of Buildings 5651, 5653, and 5654. The Army completed a final site inspection (SI) report on ordnance for the MSCF Building 8401 and found no ordnance.

In FY02, the installation submitted the SI of the Walson Hospital complex for regulatory review. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY03, the installation completed asbestos abatement at the Walson Hospital complex and received EPA concurrence on the closeout report. The Army completed the CTT ranges and sites inventory for the BRAC portion of the installation. The inventory identified no Military Munitions Response Program (MMRP) sites on the BRAC portion of the installation. The

installation began a SI of transformer locations at the Federal Corrections Institute (FCI).

In FY04, the installation completed SI fieldwork at Walson Hospital. The Army removed Walson Hospital from the list of excess BRAC properties; choosing instead to retain the property. The installation prepared a draft field investigation and remedy selection report for the transformer SI at the FCI.

FY05 IRP Progress

The installation completed the SI and field investigation and remedy selection report for the FCI. Polychlorinated biphenyls (PCBs) were detected at two transformer locations.

Technical and regulatory issues delayed the decision document (DD) for PCBs at the FCI.

The installation continued to coordinate with the RAB and regulators.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete a deed notice for Facility 5675 in FY06.
- Complete SIs for chlorinated solvents and PCBs in 5600 area in FY06.
- Complete DD and PCB remediation at FCI in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | VA321372032100 | Funding to Date: | \$ 49.3 million |
| Size: | 8,228 acres | Estimated Cost to Completion (Completion Year): | \$ 125.3 million(FY 2017) |
| Mission: | Home of the Army Transportation Center; provide training in all modes of transportation, including rail and marine; aviation maintenance; involved in amphibious operations | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2017 |
| HRS Score: | 50.00; placed on NPL in December 1994 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | Petroleum products, PCBs, VOCs, pesticides, heavy metals | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



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. EPA placed the installation on the NPL in December 1994. Identified sites include landfills, underground storage tanks (USTs), pesticide storage areas, range and 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, polycyclic aromatic hydrocarbons, and lead in surface water and sediment. During FY96, the installation established an administrative record and set up information repositories at three local libraries. The Agency for Toxic Substances and Disease Registry published a final public health assessment that indicated that the Fort Eustis NPL site poses no apparent risk to public health. To date, there has been little public interest for the formation of a Restoration Advisory Board. Since FY00, two technical review committee meetings have been held each year off-post that are open to the public. The community relations plan is currently being updated.

Investigations have identified 27 sites at the installation. Two Records of Decision (RODs) have been signed to date. The cleanup progress at Fort Eustis for FY01 through FY04 is detailed below.

In FY01, the installation developed a Web site, which provided the local community with cleanup information through access to administrative record documents. The free product recovery system operated at two UST sites. Long-term management (LTM) of groundwater and surface water at one closed landfill and operation of a methane soil vapor extraction system (SVES) at another closed landfill continued. Fort Eustis completed a feasibility study (FS) and proposed plan, held a public meeting, and completed a ROD for the pesticide storage area (DOL Yard). A deep monitoring well was installed and sediment, soil, and groundwater samples were collected at the Fire Training Area (FTA). Free product recovery began at two UST sites, the Army-Air Force Exchange Services (AAFES) Service Station and the Helicopter Maintenance Area (HMA).

In FY02, the Army awarded a treatability study (TS) contract at the FTA. The installation developed alternatives to correct the settling and runoff problems at the closed landfill. The draft ROD for the Oil Sludge Holding Pond was prepared. The installation completed sampling at Milstead Island Creek and initiated sampling at Felker Airfield. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions or munitions constituents.

In FY03, the installation completed the remedial action (RA) at the DOL Yard. The Army signed the final ROD for the Oil Sludge Holding Pond and awarded an RA contract. The installation submitted the Bailey Creek draft FS. The Army awarded a contract for additional sediment and fish tissue sampling at Eustis Lake. The installation continued free product recovery and initiated liquid vapor extraction (LVE) at the AAFES and the HMA. The methane SVES continued to operate at Landfill 7. The Army awarded a contract for preparation of a 50 percent design stage for the final cap renovation of Landfill 15. The Army submitted the federal facilities agreement (FFA) for regulatory review, however the FFA was not signed due to a land use control (LUC) dispute. The Army completed the CTT range and site inventory report. Twelve Military Munitions Response Program (MMRP) sites were identified at this installation.

In FY04, the installation completed the draft remedial investigation (RI) for Felker Airfield and the DOL Yard LTM plan. The installation conducted monthly LVE events at AAFES Service Station and at HMA, and continued operation of the SVES at Landfill 7. The installation completed an explanation of significant differences to amend the ROD for the Oil Sludge Holding Pond Site. The installation initiated the TS at the FTA and completed the Landfill 15 cap renovation and repair project. The Army revised and resubmitted the FFA. The installation completed RA fieldwork at the Oil Sludge Holding Pond and conducted sampling at Eustis Lake to support the FS.

FY05 IRP Progress

Fort Eustis conducted monthly LVE events at AAFES Service Station and monthly monitoring at HMA. Additionally, the Army continued operation of the SVES at Landfill 7. The installation completed a proposed plan for Brown's Lake submitted a ROD

to the regulators. The Army prepared a supplemental site evaluation report for Milstead Island Creek, which recommended no further action (NFA). A groundwater and soil TS was initiated at the FTA site. The installation initiated a Vegetative Management Program for Landfill 15 to lower maintenance costs, establish native vegetation, and improve wildlife habitat. The Army submitted a draft LTM plan for the Oil Sludge Holding Pond site for regulatory comment.

Regulatory issues delayed the development of RODs for Bailey's Creek and Eustis Lake. The ROD for Third Port UST is delayed until the installation completes the SI. Contractual issues delayed the Felker Airfield FS. Ongoing LUC issues delayed the FFA negotiations. The FFA is in the final phase of concurrence with the EPA.

FY05 MMRP Progress

The installation held an MMRP kick-off meeting with the Army, regulatory agencies, and the awarded contractor. The installation initiated the site inspection (SI) at CTT ranges under the MMRP.

Plan of Action

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

IRP

- Initiate monitoring well abandonment and site closeout at HMA site in FY06.
- Complete Felker Airfield FS and FFA negotiations with EPA in FY06.
- Conduct fieldwork related to development of FS for the FTA in FY06.
- Complete NFA ROD for Milstead Island Creek and NFA DD for Third Port UST in FY06.
- Complete ROD, conduct remedial design and RA, and begin LTM for Brown's Lake in FY06.

MMRP

- Conduct SI at MMRP sites in FY06.

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|------------------------|----------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MD321022056700 | Funding to Date: | \$ 78.4 million |
| Size: | 13,680 acres | Estimated Cost to Completion (Completion Year): | \$ 26.9 million(FY 2023) |
| Mission: | Serve as administrative post for various DoD tenants | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2017 |
| HRS Score: | 52.0; placed on NPL in July 1998; delisted from NPL in November 1999 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | Heavy metals, petroleum hydrocarbons, VOCs, UXO | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In December 1988, the BRAC Commission recommended closing the Fort Meade range and training areas and realigning Fort Meade as an administrative center. The National Security Agency is the primary tenant. In July 1995, the Commission recommended additional realignment, reducing Kimbrough Army Community Hospital to a clinic. Investigations beginning in FY88 identified several areas of concern, including landfills, petroleum and hazardous waste storage areas, aboveground storage tanks, underground storage tanks, asbestos-containing material in structures, and unexploded ordnance (UXO). The installation formed a BRAC cleanup team in FY94 and a Restoration Advisory Board (RAB) in FY95. EPA placed Fort Meade on the NPL in July 1998. EPA delisted the Tipton Airfield parcel from the NPL in November 1999. The installation completed a 5-year review in FY05.

To date, the Army has completed three No Further Action (NFA) Records of Decision, two for Tipton Airfield and one for the clean fill dump. The cleanup progress at Fort Meade for FY01 through FY04 is detailed below.

In FY01, the installation continued remedial investigation and feasibility study (RI/FS) activities and discussions with the regulatory community concerning the ordnance demolition area (ODA). Long-term monitoring began at the Tipton Airfield and the clean fill dump site. Initial screening of solid waste management units (SWMUs) throughout the installation continued. The installation continued to work on its site management plan and federal facility agreement.

In FY02, the installation continued long-term monitoring activities at the clean fill dump and Tipton Airfield. Fort Meade completed follow-up investigations of SWMUs requiring further action. Approximately 50 of the original 152 SWMUs needed NFA. The installation consolidated the remaining SWMUs as appropriate. The Army drilled offsite wells on the south side of the closed sanitary landfill to monitor offsite migration of contaminants. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with UXO, discarded military munitions or munitions constituents under the Military Munitions Response Program (MMRP).

In FY03, the installation completed the FS and proposed plan for ODA. Long-term monitoring activities for the BRAC parcel continued. The 5-year review for Tipton Airfield was underway. The installation initiated RI work plans for many of the CERCLA SWMU sites. The installation completed the BRAC CTT range and site inventory. The Army initiated the non-time-critical removal action (NTCRA) at the Patuxent Research Refuge.

In FY04, the installation continued long-term monitoring activities for the BRAC parcel and completed the remaining RI work plans for the CERCLA SWMUs and initiated RI field work for four sites. The RI effort at Fort George G. Meade (FGGM) 86 and FGGM 17 continued. The Army initiated an installationwide evaluation of historical impacts associated with past disposal practices and an environmental engineering and cost analysis field work for the former trap and skeet range. The installation completed the focused FS for the Defense Reutilization and Marketing Office (DRMO) groundwater plume and opened an investigation of FGGM 13. Preparations for the initiation and implementation of the performance-based contract (PBC) strategy continued. The Army completed the CTT range and site inventory for the active portion of Fort Meade under the MMRP. The MMRP inventory evaluated six areas and proposed two for additional evaluation.

FY05 IRP Progress

The installation completed the 5-year review for the Tipton Airfield BRAC parcel and began work on the 5-year review for the Clean Fill Dump BRAC parcel. The installation submitted the decision document for the ODA BRAC site and the draft Closed Sanitary Landfill RI report for stakeholder review. The installation continued negotiations with EPA on the federal facilities agreement (FFA); however, it is not yet finalized. Additionally, the installation awarded the PBC for 11 sites, including the DRMO and the Trap and Skeet Range. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Technical issues delayed the closeouts of the Battery Shop and the Granite Nike Control site.

The installation held monthly RAB meetings and regulatory partnership meetings as needed.

FY05 MMRP Progress

The installation completed the NTCRA at the Patuxent Research Refuge BRAC Parcel.

Plan of Action

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

IRP

- Complete RIs at the Manor View Dump site and Closed Sanitary Landfill in FY06.
- Closeout Battery Shop and Granite Nike Control site in FY06.
- Complete comprehensive evaluation of all historical data in FY06.
- Continue investigation efforts at the Former Pesticide Shop (FFGM 13) in FY06.
- Resume FFA negotiations with EPA in FY06.

MMRP

- Begin site inspection at active MMRP sites in FY06.

| | | | |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| FFID: | WA021402050600 | Contaminants: | VOCs, PCBs, heavy metals, oils and fuels, coal liquification wastes, PAHs, solvents, battery electrolytes |
| Size: | 86,176 acres | Media Affected: | Groundwater and soil |
| Mission: | Provide I Corps Headquarters; plan and execute Pacific, NATO, or other contingency missions; provide troop training, airfield, medical center, and logistics | Funding to Date: | \$ 74.5 million |
| HRS Score: | 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 | Estimated Cost to Completion (Completion Year): | \$ 48.7 million(FY 2041) |
| IAG Status: | IAG signed in January 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2010/FY 2018 |
| | | Five-Year Review Status: | Completed |



Progress To Date

EPA placed two Fort Lewis sites, Landfill (LF) 5 and the Logistics Center, on the NPL in July 1987 after investigations revealed soil and groundwater contamination. EPA removed LF 5 from the NPL in May 1995. EPA placed the Logistics Center on the NPL in November 1989. The Army and EPA signed an interagency agreement in January 1990. Additional sites include landfills, disposal pits, contaminated buildings, abandoned ranges, and spill sites. Primary contaminants include organic solvents, heavy metals, and fuels. The Army completed a 5-year review for the Logistics Center in FY97 and one for for the Logistics Center, LF 4, and the Illicit Polychlorinated Biphenyls (PCBs) Dump Site in FY02. Fort Lewis has developed a community relations program.

Three Records of Decision have been signed to date. The cleanup progress at Fort Lewis for FY01 through FY04 is detailed below.

In FY01, the removal of 29,000 pounds of trichloroethylene (TCE) in drums (Logistics Center contaminating source) and 250 tons of RCRA waste occurred during the LF 2 vadose zone source removal project. The Army completed the engineering evaluation and cost analysis report for LF 2 and Logistics Center remediation. The two pump and treat systems at the Logistics Center continued operation. EPA Region 10 approved innovative biotechnology treatment of dense non-aqueous phase liquid (DNAPL). The Army used Stratiprobe tools and sonic drilling to characterize source contamination in the unconfined aquifer at LF 2.

In FY02, the installation completed a 5-year review for the Logistics Center, LF 4, and the Illicit PCB Dump Site. It also completed a Phase II remedial investigation at LF 2 (Logistics Center) and thermal specifications for TCE source removal in the vadose zone. The Army completed the installation of six lower aquifer wells to assist in monitoring the lower aquifer TCE plume.

In FY03, the installation continued to operate two pump and treat systems for containment and treatment of the upper aquifer TCE plume. Planning for thermal remediation systems for Area 1 was completed. Construction of infrastructure for the remediation of LF 2 vadose zone and unconfined aquifer TCE

DNAPL began. The monitoring of LF 4 contaminants (TCE) continued. The Army completed bioremediation feasibility studies for TCE and began further studies involving enhanced mass transfer, assessment of flux, and numerical modeling to support a monitored natural attenuation decision. The installation continued work on the lower aquifer study. The Army initiated the closed, transferred, and transferring (CTT) range and site inventory for Fort Lewis and Vancouver Barracks. The installation hosted quarterly work group meetings with scientists and regulators to assist the remediation of the Logistics Center, held an open house, distributed a newsletter about the status of site remediation activities and to solicit Restoration Advisory Board (RAB) interest.

In FY04, the installation operated and maintained remedies at the Logistics Center and the Illicit PCB Dump Site. The installation completed the delineation of extent of TCE plume in Logistics Center Sea Level Aquifer (lower aquifer) and the associated study. The installation completed the field sampling portions of a vapor intrusion study for the Madigan Housing Area. The installation completed interim remedial actions (IRAs) for the Former Miller Hill Ranges. The installation submitted draft decision documents (DDs) with proposed final remedies for three Installation Restoration Program (IRP) sites. The Army completed the confirmatory sediment investigation at Park Marsh LF. The installation completed in situ thermal treatment of Area 1 in order to reduce life-cycle pump and treat costs, and continued research involving enhanced mass transfer and assessment of flux at the Logistics Center. The Army completed the Phase III CTT inventory under the Military Munitions Response Program (MMRP). The installation completed an IRA for the Former Skeet Range.

FY05 IRP Progress

Fort Lewis continued operation and maintenance of remedies at the Logistics Center (two groundwater pump and treatment systems) and the Illicit PCB Dump Site (cap and fence). Long-term management remedies at the Logistics Center, LF 4, and LF 1 continued. The installation completed in situ thermal treatment (an innovative technology) at the second of three Logistics Center source areas. The installation began significant modification of one Logistics Center pump and treat system by installing eight new extraction wells. Additionally, the

installation closed the potential vapor intrusion pathway for the Logistics Center.

A completed Sea Level Aquifer focused feasibility study was expanded into a full feasibility study. Additional monitoring wells were installed and sampled to further delineate the TCE plume in the Sea Level Aquifer. The installation submitted draft DDs with proposed final remedies for four IRP sites, including a no further action remedy for the Park Marsh LF site. The installation conducted site investigation (SI) sampling at one of the two remaining sites without a selected or proposed remedy (LF 6).

The installation continued the community relations program. There has been no interest in establishing a RAB at Fort Lewis.

FY05 MMRP Progress

The installation completed IRAs at the former Evergreen Infiltration Range (soil removal) and former Skeet Range (perimeter fence) as well as the associated State public comment requirements. The Army initiated an SI for seven MMRP sites.

Plan of Action

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

IRP

- Complete in situ thermal treatment at the final Logistics Center source area in FY06.
- Complete modification of Logistics Center pump and treat system in FY06.
- Complete Logistics Center Sea Level Aquifer remedy selection in FY06-FY07.
- Complete DDs for the two remaining non-NPL sites without a final remedy selected in FY06-FY07.

MMRP

- Complete SI for all MMRP sites in FY06.

| | | | |
|------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | AL421372056200 | Funding to Date: | \$ 172.6 million |
| Size: | 41,191 acres | Estimated Cost to Completion (Completion Year): | \$ 152.7 million(FY 2019) |
| Mission: | House the U.S. Army Chemical School, the U.S. Army Military Police School, and the DoD Polygraph Institute | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2015 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | VOCs, SVOCs, pesticides, explosives, metals, UXO, radioactive sources, non-stockpile chemical warfare materiel | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1995, the BRAC Commission recommended closing most Fort McClellan facilities. The Army will retain the minimum essential land and facilities for a Reserve component enclave and essential facilities for auxiliary support of the chemical demilitarization operation at Anniston Army Depot. 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 environmental conditions at Fort McClellan did not warrant its placement on the NPL. During FY95, the Army established information repositories at three locations, and the community formed a local redevelopment authority (LRA). In FY96, the installation formed a BRAC cleanup team (BCT) and a Restoration Advisory Board (RAB). The installation completed its environmental baseline survey and BRAC cleanup plan version I in FY98. The Army provided technical assistance for public participation (TAPP) contracts for the RAB in FY02, FY03, FY04, and FY05.

The Army has identified 140 sites at the installation and transferred 18,129 acres. The Army has completed 95 decision documents (DDs), 6 action memoranda, and a Record of Decision. The cleanup progress at Fort McClellan for FY01 through FY04 is detailed below.

In FY01, the BCT reviewed 4 findings of suitability to transfer (FOSTs) totaling 301 acres, and 2 environmental condition of property (ECOP) determinations totaling 83 acres. The Army transferred 638 acres.

In FY02, the BCT reviewed 3 FOSTs totaling 3,161 acres and the Army transferred 3,030 acres. The BCT reviewed the EE/CAs for M1.01 Parcel, 33 chemical warfare material (CWM) sites, and 11 fill areas. The Army completed the M1.01 Parcel and M3 miscellaneous property EE/CA, and removal reports for the M2 Parcel and the Eastern Bypass construction support surface clearance. The Army also completed a CWM EE/CA for 33 sites; no CWM was found. The RAB received a TAPP contract for technical evaluation and training.

In FY03, the BCT reviewed 3 FOSTs totaling 185 acres, 1 ECOP totaling 7,758 acres and 1 finding of suitability for early transfer totaling 4,692 acres, and the Army transferred 12,992 acres. The LRA assumed responsibility for characterization/remediation for a portion of the early transfer parcels as specified in the Environmental Services Cooperative Agreement (ESCA) between the Army and the LRA. The installation completed the EE/CA for 11 fill areas, decommissioning activities at Rideout Field burial mound, and field work for site inspections at the historical ranges. The Army completed the closed, transferring, and transferred ranges and sites inventory report that identified 12 Military Munitions Response Program (MMRP) sites. Under the MMRP, the installation completed the Alpha Area EE/CA and the M1.01 Parcel final removal report, and continued EE/CAs for the Bravo and Charlie Areas. The RAB received another TAPP contract for technical evaluation and training.

In FY04, the installation completed CWM 3X scrap removal field activities at Training Areas T 38 and T 24A and a FOST for Highway 21. The BCT reviewed 1 FOST totaling 93 acres and the Army transferred 158 acres to the Alabama Department of Transportation. Under the MMRP, the installation completed the Eastern Bypass final removal report for 282 acres of land. Additionally, the Army completed fieldwork activities for an interim removal action (IRA) on 60 acres of the "Y" Area Junction of the Eastern Bypass in the Bravo Area. The installation also completed fieldwork activities for a time-critical removal action on two acres at the dog kennels in the Bravo Area. The Army completed fieldwork activities for additional IRAs, including a clearance to depth on 19 acres at 3 water tank sites in the Bravo Area under the Water Tower removal action and a clearance to depth on roads, firebreaks, and high-use areas in the Mountain Longleaf Pine National Wildlife Refuge. The Army extended the TAPP contract for the RAB.

FY05 IRP Progress

The Army transferred five acres and completed a modification to the ESCA to comply with the new two year funding restriction in accordance with the 2003 DoD Appropriations Act. The Army also completed negotiations for a second modification to the ESCA technical specification and requirements statement to include additional early transfer parcels and Army continuing responsibility sites. The Army completed a removal action for

lead contaminated soils in a portion of the Iron Mountain Road Ranges that extended into the Eastern Bypass. No further action DDs were also completed for several small arms firing ranges. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The Army extended the TAPP contract for the RAB. The BCT held facilitated meetings.

FY05 MMRP Progress

The installation completed a clearance to depth within the construction debris area of the Eastern Bypass.

Regulatory issues delayed the final Bravo Area EE/CA.

Plan of Action

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

IRP

- Complete x-ray fluorescence surveys at two future water tank sites in FY06.

MMRP

- Complete clearance to depth along Bains Gap Road in FY06.
- Complete Bravo Area EE/CA in FY06.
- Complete Charlie Area EE/CA in FY07.

| | | | |
|------------------------|----------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | NJ221382059700 | Funding to Date: | \$ 25.6 million |
| Size: | 1,338 acres | Estimated Cost to Completion (Completion Year): | \$ 1.9 million(FY 2017) |
| Mission: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2003/FY 2017 |
| HRS Score: | N/A | Five-Year Review Status: | Underway |
| IAG Status: | Federal facility agreement signed in July 1990 | | |
| Contaminants: | Petroleum hydrocarbons, VOCs, SVOCs, PCBs, heavy metals, and radionuclides | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In 1993, the BRAC Commission recommended realignment of Fort Monmouth. This realignment resulted in the closure of the Evans Area; transfer of part of the Charles Wood Area to the Navy; and relocation of personnel from the leased space, Evans Area, and Vint Hill Farms Station to the main post and Charles Wood Area. To speed transfer, the Army divided the Fort Monmouth BRAC property into eight parcels: the Charles Wood Housing Area and seven parcels in the Evans Area. The Army and EPA signed a federal facility agreement in July 1990. In FY94, an enhanced preliminary assessment of the BRAC parcels identified 32 sites in the Evans Area and eight sites in the Olmstead Housing Area. Prominent sites are 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. In FY94, the installation formed a BRAC cleanup team and completed Version 1 of the BRAC cleanup plan. In FY96, the installation formed a Restoration Advisory Board.

Environmental studies identified 37 sites in three areas of the installation. The cleanup progress at Fort Monmouth for FY01 through FY04 is detailed below.

In FY01, the Army completed all radiological disposal actions and obtained Nuclear Regulatory Commission unrestricted use approval for the remainder of the Evans Area. The Army completed remedial action (RA) reports for the metal plating facility and the mercury remediation sites and the New Jersey Department of Environmental Protection (NJDEP) issued no further action letters. PCB soil contamination was identified within Parcel C and D, adjoining the electrical substation (Building 9112) as well as adjacent residential properties. The NJDEP approved a Groundwater Classification Exception Area application for Parcels A', B, C, D and D'. The installation completed all finding of suitability to transfer (FOST) and BRAC disposal support packages for Parcels A and A'. The Army completed the Historic and Cultural Resources memorandum of agreement (MOA) with the NJ State Historic Preservation Office and the Advisory Council on Historic Preservation.

In FY02, the installation assessed the chemical discharges at storage sheds impacting Parcels C and D (34 sites). The installation completed the Parcels B, D', and F Environmental Baseline Surveys (EBSs), records of environmental compliance, and FOSTs. The installation also completed the FOST for 184 acres; 31 acres were adversely impacted by chemical storage and PCB electrical equipment discharges to soils. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents; the Army identified no Military Munitions Response Program (MMRP) sites at this installation.

In FY03, the Army transferred Parcels D' and F via deed. The installation completed PCB soil remediation in Parcels A and D.

In FY04, the Army completed deed transfer actions for Parcels A (including the pumphouse area), A', and B (partial). The installation completed the draft EBS/FOST for Parcels C and D. The contractor completed Parcel G RAs, while the installation initiated the FOST. The Army obtained regulatory approval for the remediation workplan for all chemical storage shed discharge areas. The installation has completed all PCB remediation and restoration actions within Parcel C and adjacent residential properties.

FY05 IRP Progress

Fort Monmouth assessed and delineated wetlands within Parcel B as well as completed its deed transfer actions. The Army completed a FOST for Parcel G. The Army also completed a FOST amendment for Parcel E that included a lead based paint provision and completed deed transfer. The Army entered into an MOA, agreeing to abate asbestos-containing materials and perform interior demolition activities within historic buildings in Parcel C. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Funding issues delayed the Hazardous Shed PCB soil remediation of Building 9053 in Parcel D. Regulatory issues delayed the hazard abatement within historic buildings in Parcel C.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete deed transfer of Parcel G in FY06.
- Complete 5-year review in FY06.
- Complete Hazardous Shed PCB soil remediation of Building 9053 (Parcel D) in FY06.
- Complete hazard abatement within historic buildings (Parcel C) in FY06.
- Complete assessment and RA work plan for semivolatile organic compound (SVOC) discharge within Parcel B in FY06.
- Complete EBS and FOST for Parcels C and D in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | CA921372067600 | Funding to Date: | \$ 314.9 million |
| Size: | 27,827 acres | Estimated Cost to Completion (Completion Year): | \$ 342.3 million(FY 2021) |
| Mission: | Housed 7th Infantry Division (Light); supports the Defense Language Institute Foreign Language Center, currently at the Presidio of Monterey, California | IRP/MMRP Sites Final RIP/RC: | FY 2015/FY 2021 |
| HRS Score: | 42.24; placed on NPL in February 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in July 1990 | | |
| Contaminants: | VOCs, petroleum hydrocarbons, heavy metals, pesticides | | |
| Media Affected: | Groundwater and soil | | |



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. EPA placed the installation on the NPL in 1990. The Army and EPA signed a federal facility agreement in 1990. 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. The installation discovered that petroleum hydrocarbons and volatile organic compounds (VOCs) were migrating into groundwater. 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, the installation converted its technical review committee (TRC) to a Restoration Advisory Board (RAB) and formed a BRAC cleanup team. In FY99, the installation reestablished the TRC and dissolved the RAB. The installation completed 5-year reviews in FY99, FY01, and FY02.

The Army has identified 46 Installation Restoration Program (IRP) category sites at Fort Ord. The Army has transferred over 12,768 acres and completed eight Records of Decision (RODs) to date. The cleanup progress at Fort Ord for FY01 through FY04 is detailed below.

In FY01, the installation continued an off-post groundwater investigation to further define the limits of a carbon tetrachloride contamination plume and continued operation of the three groundwater treatment systems. The installation prepared and reviewed two findings of suitability for early transfers (FOSETs) and one finding of suitability to transfer (FOST) and completed a 5-year review for Operable Unit (OU) 1. The State completed and certified RCRA clean closure of the Defense Reutilization and Marketing Office. The installation formally documented a site security/school safety program plan for Military Munitions Response Program (MMRP) category sites, which has been in place for several years. The installation issued an ordnance detection and discrimination study in support of the MMRP remedial investigation and feasibility study (RI/FS) for the entire installation.

In FY02, the installation initiated a pilot study for Site 39

lead-contaminated soil cleanup and completed an installationwide 5-year review. Fort Ord completed an RI/FS and signed a ROD to allow for MMRP cleanup in three high priority areas. Development continued of the four-phase MMRP RI/FS-associated studies. The Army completed surface clearance of MMRP category open areas to address imminent threats to human health and the environment, and of areas that it will transfer to the City of Seaside for redevelopment. The Army and regulators signed a ROD for the Track 0 MMRP sites. The Army initiated the property transfer process on the affected parcels.

In FY03, the installation completed a lead-contaminated soil waste consolidation action and closed OU 2. The installation designated carbon tetrachloride as an OU and initiated an RI/FS. The installation completed all RCRA clean closure actions for Building T-111. The installation continued operation of the three groundwater pump and treat plants. The Track 0 FOST and Del Rey Oaks FOSET property transfers were initiated. The Army transferred ten parcels totaling 484 acres. The installation initiated MMRP cleanup actions at the Seaside Parcel area and Monterey County Parcel and completed the removal at the Del Rey Oaks parcel. Long-term management actions included munitions and explosives of concern (MEC) school safety presentations, clearance of fuel breaks in the impact area, site security patrols, and MEC awareness classes for construction workers. The installation completed the final closed, transferred, and transferring ranges inventory report and organized 24 MMRP sites and some adjacent areas into range complexes covering 19,977 acres.

In FY04, the installation completed the Track 1 proposed plan (PP) and public comment period. The Army completed the non-munitions response (MR) related RCRA closure actions for open burn/open detonation area 36A and the Track 0 FOST. The Army signed the Del Rey Oaks FOSET. The installation completed the PP and public comment period related to the ecological risk issues at Site 3. The Army transferred 1,227 acres. The Army completed a 500-acre vegetation removal and surface removal at MMRP sites Ranges 43 through 48, followed by remedial actions. The installation completed surface removal work at the 1,000 acre Watkins Gate area. The Army completed a 700-acre surface removal in the Eucalyptus wildfire area.

FY05 IRP Progress

The installation completed a groundwater treatment systems optimization strategy and began implementation at OU 2 and Site 2/12. The Army completed FOSTs for Track 0 Plug-in properties. Additionally, the Army completed a ROD for Track 1 and completed FOSTs for related property transfers. The installation completed an RI/FS for the carbon tetrachloride site.

FY05 MMRP Progress

The installation completed remedial actions to depth at Ranges 43 through 48. The installation began planning the prescribed burn project for MR Site 16. In addition, the installation began an RI/FS for the Track 2 Parker Flats site and continued developing an RI/FS for Track 3 sites.

Administrative issues delayed the transfer of the Del Rey Oaks parcel.

Plan of Action

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

IRP

- Implement optimization for groundwater treatment systems at OU 2 and Site 2/12 in FY06.
- Install landfill gas extraction and treatment system at OU 2 in FY06.
- Install groundwater pilot study treatment system at OU 1 in FY06.
- Complete PP and ROD for carbon tetrachloride site in FY06-FY07.

MMRP

- Continue development of an RI/FS for Track 3 sites in FY06.
- Transfer Del Rey Oaks parcel in FY06.
- Conduct prescribed burn and removal to depth for MR Site 16 in FY06.
- Complete RI/FS, PP, and ROD for Track 2 Parker Flats site in FY06-FY07.

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|------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | VA321402070500 | Funding to Date: | \$ 11.3 million |
| Size: | 45,160 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2002) |
| Mission: | Provide training support for active and Reserve component units of all Services | IRP/MMRP Sites Final RIP/RC: | FY 2002/FY 1997 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Petroleum hydrocarbons, metals, pesticides, PCBs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

In 1995, the BRAC Commission recommended closure of Fort Pickett except for essential training areas and facilities used for Reserve components. The installation closed on September 30, 1997. Site types include underground storage tanks, petroleum spills, old salvage yards, motor pools, and firefighter training areas. Petroleum hydrocarbons are the primary contaminants affecting groundwater, surface water, sediment, and soil. During FY95, the local community formed a local redevelopment authority (LRA). In FY96, the Army formed a BRAC cleanup team and a Restoration Advisory Board (RAB), while the LRA developed a land reuse plan.

To date, the Army has transferred approximately 45,160 acres from Fort Pickett, over 42,000 acres of which went to the Army National Guard. The cleanup progress at Fort Pickett for FY01 through FY04 is detailed below.

In FY01, the installation completed a site characterization report for former Fuel Station #1 and began a quarterly monitoring program. It also completed remedial investigations (RIs) at the Storage Compound, the Firefighter Training Area, and the former Service Station. The draft Phase II RI at the Salvage Yard was completed, and the RI at the Motor Pools began. The installation completed four removal actions at isolated contamination areas and a removal action at the Firefighter Training Area. The Army assigned 1,182 acres to the U.S. Department of Education for a public benefit conveyance and 1,608 acres to Nottoway County as an economic development conveyance.

In FY02, the installation awarded a guaranteed fixed price remediation (GFPR) contract to complete restoration activities at the former Salvage Yard [Environmental Baseline Survey (EBS) 13] and to complete a decision document (DD) at the former Storage Compound (EBS 79). The installation completed RIs at the Motor Pools (EBS 115 and EBS 124). DDs were completed for 41 sites including the Firefighter Training Area (EBS 103) and the former Service Station (PI 1).

In FY03, the Army completed finding of suitability to transfer (FOST) documents for 11.25 acres and transferred the property to the Nottoway County LRA and Virginia Polytechnic Institute. Progress at the former Salvage Yard (EBS 13) under the GFPR

contract proceeded as scheduled. The Army completed the inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents at Fort Pickett. No Military Munitions Response Program (MMRP) sites were found at this installation.

In FY04, the installation completed the RI and feasibility study at the former Salvage Yard (EBS 13); additionally, the draft proposed plan was submitted for review. The installation completed the FOSTs for the Motor Pools and the former Storage Compound.

FY05 IRP Progress

Fort Pickett completed remedial actions at the former Salvage Yard. The installation also completed DDs for the Motor Pools (EBS 115 and EBS 124), the former Storage Compound (EBS 79), and the former Salvage Yard (EBS 13). The installation transferred 5 parcels, totaling 60 acres, to the LRA.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Continue groundwater monitoring and maintenance operations for the former Salvage Yard in FY06.
- Establish a groundwater monitoring program for the former Fuel Station in FY06.
- Complete the compilation and digitization of the administrative record and information repository in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | AK021452215700 | Funding to Date: | \$ 86.1 million |
| Size: | 64,470 acres | Estimated Cost to Completion (Completion Year): | \$ 286.0 million(FY 2034) |
| Mission: | Support and sustain forces assigned to U.S. Army Alaska | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2017 |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in December 1994 | | |
| Contaminants: | White phosphorus, PCBs, heavy metals, POLs, solvents, dioxins, pesticides, VOCs | | |
| Media Affected: | Groundwater, surface water, sediment, 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 serves as an active ordnance impact area were contaminated with white phosphorus. EPA placed Fort Richardson on the NPL in 1994. The Army and EPA signed a federal facility agreement in December 1994. Removal 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). The Army completed the initial 5-year review in FY03.

Preliminary assessments and site inspections ending in FY93 identified 38 potential contaminated sites. Five Records of Decision (RODs) have been signed to date. The cleanup progress at Fort Richardson for FY01 through FY04 is detailed below.

In FY01, a review of all data collected for Operable Unit (OU) B showed that heat-enhanced soil vapor extraction had significantly reduced contamination to levels such that further active treatment was not required. The Army started to develop remedial action (RA) reports and exit strategies for the operational and functional remedies at OU B and OU C (Eagle River Flats). The installation conducted pre-remedial investigations (RIs) (geophysical studies and groundwater sampling) at OU E sites and developed the RI and feasibility study (FS) management plan.

In FY02, the Army initiated the RI/FS for OU E. The Army used EPA's TRIAD approach to conduct the RI, which provided greater flexibility and cost savings through on-site sampling and analysis. The Army began the initial CERCLA 5-year review. Interim draft RA reports were developed for OU B and OU C. The Army conducted innovative geophysical investigations at OU B to enhance the existing groundwater model. The Army also completed the fourth year of the RA to clean up white phosphorus at OU C. There was active public participation in the RAB and several new members were added. The Army completed an inventory of closed, transferred, and transferring

ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. Military Munitions Response Program (MMRP) sites were identified at this installation.

In FY03, the installation completed the initial 5-year review. The Army completed the geologic and groundwater model for OU B. The installation is using the model to develop a long-term monitoring plan and exit strategy. The installation completed and signed the interim RA reports for OU B and OU C, finalizing the construction complete process for both sites. The Army completed the final year of active RA at OU C. The Army identified 12 MMRP sites and incorporated them into the environmental sites database. The RAB met four times and participated in a tour of the Rapid Response System that was deployed to Fort Richardson. The installation continued to partner with EPA and the Alaska Department of Environmental Conservation. The Army conducted four agency meetings to discuss all regulated sites.

In FY04, the Army completed the RI/FS and proposed plan for OU E. After meeting the short-term RA objectives, the Army developed a long-term mortality monitoring strategy for OU C and initiated long-term monitoring. The installation updated the groundwater model for OU B by incorporating additional data. The RAB met four times and completed a tour of the OU C site. The RAB voted to reduce the number of meetings in FY05.

FY05 IRP Progress

The Army completed the ROD for OU E, which included natural attenuation with institutional controls for groundwater that potentially can be used as a drinking water source. The installation treated two areas with white phosphorous contamination and developed a long-term monitoring plan at OU C. In addition, a treatability study was conducted to treat contaminated soil that was discovered at OU B. The Army completed a comprehensive groundwater evaluation.

The RAB held two meetings and one site visit.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Determine whether additional action is required at OU B in FY06.
- Determine whether sufficient interest exists to warrant reactivation of RAB in FY06.
- Conduct RI/FS at Nike Site Summit in FY06-FY07.
- Complete 5-year review in FY07.

MMRP

- Conduct site evaluations in FY06.

| | | | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| FFID: | KS721402075600 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 100,656 acres | Funding to Date: | \$ 66.2 million |
| Mission: | Provide training, readiness, and deployability for two component combat brigades and one engineer group; serve as higher headquarters for three separate brigades; active and reserve component units | Estimated Cost to Completion (Completion Year): | \$ 17.7 million(FY 2017) |
| HRS Score: | 33.8; placed on NPL in August 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2016 |
| IAG Status: | IAG effective June 1991 | Five-Year Review Status: | Completed and planned |
| Contaminants: | Solvents, pesticides, lead | | |



Progress To Date

Fort Riley provides facilities for several active and reserve Army combat brigades. EPA placed Fort Riley on the NPL in 1990. The installation has seven 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), 354 Area Solvent Detections (OU 5). Groundwater contamination from OU 4 extends off post. A 5-year review for OUs 1 and 2 was completed in FY02. The installation formed a Restoration Advisory Board (RAB).

Environmental studies identified 72 sites at Fort Riley. To date, the installation completed three Records of Decision (RODs) for OUs 1, 2, and 4. The cleanup progress at Fort Riley for FY01 through FY04 is detailed below.

In FY01, the installation performed additional site screening at OU 3 that led to remedial investigation/feasibility study (RI/FS) revisions. The RI report for OU 4 was approved. The Army negotiated revised schedules with the regulators for OUs 3, 4, and 5. The Army initiated the first 5-year review, focusing on OUs 1 and 2. The installation initiated a new project to repair excessive settlement at OU 1. Fort Riley initiated a site investigation (SI) at the petroleum/oil/lubricants Tank Farm (POL Tank Farm).

In FY02, the installation completed the 5-year review, which was reviewed by the public and the RAB. EPA approved the review. The installation initiated the FS for OU 4. The Army installed an alternate water supply for affected off-post properties to meet a lawsuit judgment. The installation completed an RI addendum work plan and fieldwork for additional investigations for OU 3 and an RI for a baseline risk assessment for OU 5. The installation initiated an engineering evaluation and cost analysis for the OU 5 hot spot removal. The SI for the POL Tank Farm continued and the installation initiated an SI for the abandoned gasoline line (AGL).

In FY03, the installation submitted the FS for OU 4 for regulatory review. The SIs for the POL Tank Farm and AGL continued. The Army initiated an inventory of closed, transferred, and transferring ranges and sites with unexploded

ordnance, discarded military munitions, or munitions constituents.

In FY04, the installation completed the RI addendum and initiated the FS addendum for OU 3. The installation completed the proposed plan (PP) and initiated the ROD for OU 4. The installation completed the RI and initiated the FS for OU 5. The Army developed a technical memorandum for characterization of the open burning/open detonation (OB/OD) range. The installation completed the SI for the POL Tank Farm and began monitoring to determine future actions. The Army established OUs 6 and 7 to address inappropriately closed sites. The Army conducted the initial Military Munitions Response Program (MMRP) site visit and a historical records review for the MMRP SI.

FY05 IRP Progress

Fort Riley completed the FS Addendum for OU 3. The installation completed a ROD and initiated a remedial design/remedial action (RD/RA) plan for OU 4. Additionally, the installation completed an FS and a PP and initiated a ROD for OU 5. The Army completed an engineering evaluation and cost analysis (EE/CA) for the AGL and the associated public comment period. The Army also completed a technical memorandum for the OB/OD area and installed a new monitoring well. The installation completed Phase II of SI for POL Tank Farm and developed a plan to address multiple sites previously listed as response complete under an expanded SI.

Regulatory issues delayed the completion of a PP for OU 3. Fort Riley's decision to do the expanded SI negated the planned requirement for establishing OUs 8, 9, and 10.

The installation held a public comment period and public meeting for the OU 5 PP in conjunction with the July 2005 RAB meeting. The installation also developed a revised community involvement plan.

FY05 MMRP Progress

The installation generated the historical records review report and conducted SI sampling at the MMRP sites.

Plan of Action

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

IRP

- Conduct pilot study and develop PP for OU 3 in FY06.
- Complete RD/RA plan and initiate monitored natural attenuation remedy for OU 4 in FY06.
- Complete ROD and RD/RA plan for OU 5 in FY06.
- Conduct sampling and analysis for expanded SI in FY06.
- Complete removal action under the EE/CA for AGL in FY06.
- Initiate development of performance-based contract for long-term management in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | MD321022075800 | Estimated Cost to Completion (Completion Year): | \$ 3.4 million(FY 2006) |
| Size: | 1,374 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2003 |
| Mission: | Supported Site R underground facility | Five-Year Review Status: | Planned |
| HRS Score: | N/A | | |
| IAG Status: | None | | |
| Contaminants: | UXO, heavy metals, asbestos, VOCs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 9.3 million | | |



Progress To Date

In 1995, the BRAC Commission recommended the closure of Fort Ritchie. The installation closed in September 1998. Environmental contamination at Fort Ritchie resulted from underground storage tanks (USTs), various firing ranges, and a skeet range. The ranges may contain unexploded ordnance (UXO). Housing units and administrative buildings contain asbestos and lead-based paint. Interim actions at the installation included removal or replacement of USTs, relining of sewer lines with plastic, removal of falling lead paint and high-hazard friable asbestos, and closure of an incinerator. In FY96, the Army formed a BRAC cleanup team and a Restoration Advisory Board. Measures to improve communication and decision making at the installation include forming a planning group, conducting meetings at the town hall, conducting quarterly in-progress reviews, establishing hotlines to answer employee questions, and relaying installation updates to the local news media. In FY97, the installation completed the UXO archive search with the help of the U.S. Army Corps of Engineers, St. Louis District. In FY98, the installation completed the UXO sampling and UXO interim characterization report. In FY99, the Army published a final engineering evaluation and cost analysis for the ordnance and explosives impact area.

To date, the installation has completed one Record of Decision. The Army has made more than 300 acres of non-UXO property available for reuse. The cleanup progress at Fort Ritchie for FY01 through FY04 is detailed below.

In FY01, the Army completed the Directorate of Public Works maintenance area removal action. The installation completed decision documents (DDs) for no further action (NFA) on Operable Units (OUs) 1, 2, 3, 7, 9, 11, and 15. It also completed a memorandum of agreement for property transfer. Sampling results from the fish studies indicated that the risk associated with eating fish from the lakes was acceptable. The Army completed the finding of suitability to transfer (FOST) for all non-UXO property. The installation completed a munitions and explosives of concern (MEC) safety submission and work plan, and the removal action started at the munitions impact area.

In FY02, the Army successfully completed the motor pool treatability study and initiated the corrective action plan (CAP). The installation completed the burn pit delineation and subsequent removal action. The installation also completed DDs for NFA on OUs 5, 8, 14, and 16. The Army completed 90 percent of the UXO removal, as well as the draft inventory of closed, transferred, and transferring (CTT) ranges and sites with UXO, discarded military munitions (DMM), or munitions constituents (MC).

In FY03, the Army completed Phase II of the motor pool CAP. The Army completed the MEC removal action report, DD, FOST, and final inventory of CTT ranges and sites with UXO, DMM, or MC. The inventory identified six Military Munitions Response Program (MMRP) sites at this installation, all of which are response complete.

In FY04, the installation completed the polishing round of permanganate treatment under the motor pool floor slab and continued monitoring motor pool wellheads.

FY05 IRP Progress

Fort Ritchie continued monitoring motor pool wellheads. The installation completed the feasibility study and proposed plan for motor pool.

FY05 MMRP Progress

The installation completed the MEC removal action in the Fill Area.

Plan of Action

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

IRP

- Complete DD and FOST for the motor pool in FY06.
- Initiate long-term management (LTM) for motor pool in FY06.

MMRP

- Complete FOST for Fill Area in FY06.
- Initiate LTM for Fill Area in FY06.

| | | | |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | IL521402083800 | Funding to Date: | \$ 56.7 million |
| Size: | 709 acres | Estimated Cost to Completion (Completion Year): | \$ 14.3 million(FY 2003) |
| Mission: | Provided administrative and logistical support; non-excess property currently used as Army Reserve installation and Navy housing area | IRP/MMRP Sites Final RIP/RC: | FY 2001/FY 2003 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Metals, VOCs, UXO, Fuel hydrocarbons, PAHs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In December 1988, the BRAC Commission recommended closure of Fort Sheridan. The Fort's missions have included cavalry and infantry training, Nike systems maintenance, and administrative and logistical support. Currently, the Army uses 104 acres for an Army Reserve installation. Sites include landfills, pesticide storage areas, hazardous material storage areas, underground storage tanks (USTs), polychlorinated biphenyl (PCB)-containing transformers, and unexploded ordnance (UXO) areas. Petroleum hydrocarbons, volatile organic compounds (VOCs), and polyaromatic hydrocarbons (PAHs) affect groundwater and soil. Early actions included removal of USTs and contaminated soil. Remedial investigation and feasibility study (RI/FS) activities, beginning in FY90, identified groundwater and soil contamination at seven landfills and coal storage areas. In FY94, the installation formed a BRAC cleanup team. In FY94, an installation survey identified UXO at the former artillery range at the north end of the Fort and in FY96, the installation performed a UXO clearance. In FY95, the installation formed a Restoration Advisory Board (RAB). The RAB requested a technical assistance for public participation contract to support RAB activities in FY99.

The cleanup progress at Fort Sheridan for FY01 through FY04 is detailed below.

In FY01, the installation updated the non-surplus DoD operable unit (OU) property RI report with Phase III RI data. The installation completed the FS for the DoD OU property study areas. The Army awarded a guaranteed fixed price remediation contract in order to complete the remedial actions for the DoD OU property.

In FY02, the Army completed the final Landfills 6 and 7 cap design and began cap construction. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with UXO, discarded military munitions, or munitions constituents.

In FY03, the Army prepared proposed plans (PPs) for CSA 3 and Landfill 5 and initiated the no further action (NFA) decision document (DD) for CSA 4, VES 8, Water Tower, and pesticides in Building 70. The Army completed the CTT inventory. One

Military Munitions Response Program (MMRP) site was identified within the BRAC portion of the installation.

In FY04, the installation completed the NFA DD for CSA 4, VES 8, Water Tower, and pesticides in Building 70. The Army initiated the NFA DD for Bartlett Ravine, Van Horne Ravine, Shenck Ravine, Excavation Area 8, Beach Pistol/Machine Gun Range, Wells Ravine Northern Tributary, and Wells Ravine Western Extension. The installation completed construction of the Landfills 6 and 7 cap. The DD for CSA 3 and Landfill 5 and the implementation of the remedy progressed. The Army completed the PP for Landfill 1 and initiated the DD. The installation prepared a draft operation and maintenance (O&M) plan and a groundwater monitoring plan for Landfills 6 and 7.

FY05 IRP Progress

Fort Sheridan completed the O&M and groundwater monitoring plans for Landfills 6 and 7, and implemented the O&M plan. The installation completed the DD and its implementation for CSA 3 and Landfill 5. The installation prepared removal action completion reports for CSA 4, VES 8, Building 70, and the water tower.

While the installation completed the DD for Landfill 1, regulatory issues delayed its implementation. Regulatory issues also delayed the NFA DD for Bartlett Ravine, Van Horne Ravine, Shenck Ravine, Excavation Area 8, Beach Pistol/Machine Gun Range, Wells Ravine Northern Tributary, and Wells Ravine Western Extension. Regulatory issues delayed the implementation of the groundwater monitoring plan for Landfills 6 and 7.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete the NFA DD for Bartlett Ravine, Van Horne Ravine, Shenck Ravine, Excavation Area 8, Beach Pistol/Machine Gun Range, Wells Ravine Northern Tributary, and Wells Ravine Western Extension in FY06.
- Complete the PP and DD for Landfills 6 and 7 in FY06.
- Implement groundwater monitoring plan for Landfills 5, 6, and 7 in FY06.
- Implement O&M and long-term management of CSA 3 and Landfill 5 in FY06.
- Complete closure reports for CSA 3 and Landfills 5, 6, and 7 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | AK021452242600 | Funding to Date: | \$ 134.9 million |
| Size: | 917,993 acres | Estimated Cost to Completion (Completion Year): | \$ 95.1 million(FY 2035) |
| Mission: | House the headquarters of the 6th Light Infantry Division | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2017 |
| HRS Score: | 50.00; placed on NPL in August 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in November 1991 | | |
| Contaminants: | Petroleum/oil/lubricants, heavy metals, solvents, paints, UXO, pesticides | | |
| Media Affected: | 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 burning and open detonation area, a former ordnance disposal site, solvent groundwater plumes, petroleum/oil/lubricant (POL) plumes, and pesticide-contaminated soil. EPA placed Fort Wainwright on the NPL in 1990. The Army and EPA signed a federal facility agreement in November 1991. The installation divided sites into five operable units (OUs). The installation established a technical review committee (TRC) in FY90. In FY97, Fort Wainwright converted the TRC into a restoration advisory board (RAB), which later adjourned in FY04. The Army completed a 5-year review in FY01. The entire installation achieved construction complete in FY02 and it closed one site in FY04.

The installation has signed five Records of Decision (RODs). The cleanup progress at Fort Wainwright for FY01 through FY04 is detailed below.

In FY01, the Army awarded a contract to continue the evaluation of potential impacts to the Chena River. The Army continued to negotiate an explanation of significant differences (ESD) for OU 3, covering product recovery of fuel that was discovered after the signing of the ROD, as well as increased costs and areas of contamination. The Army completed the first 5-year review and concluded that the remedies implemented to date were effective. The Army also awarded a contract to complete cleanup operations and site exit strategies (CLOSES) for several sites, resulting in a decrease in monitoring frequency. The restoration program managers approved operations and maintenance (O&M) plans for OU 3 and OU 5. The Army Military Munitions Response Program (MMRP) began. Previously, response activities related to unexploded ordnance (UXO) had occurred in support of the Installation Restoration Program (IRP). The installation completed an interim remedial action report (RAR) for OU 1.

In FY02, the Army completed the interim RAR for OU 3, and EPA signed the preliminary closeout report for Fort Wainwright. The installation, Army, and EPA signed the OU 3 ESD. All OUs have O&M plans in place with a format for an exit strategy. The

Army expanded the land use control and institutional control boundaries to meet the requirements in the RODs and restated them in the 5-year review. The installation began operating and optimizing product recovery at Birch Hill; groundwater modeling was used to identify locations where off-post contamination occurred. The installation completed a CLOSES at one site. The Army completed an inventory of closed, transferred, and transferring ranges and sites with UXO, discarded military munitions, or munitions constituents. The inventory identified nine MMRP sites; six were closed and three were transferred from the IRP.

In FY03, the installation evaluated the OU 3 product recovery system. The Army completed CLOSES evaluations at two sites and initiated the same for additional sites. The installation continued to evaluate each site's operation, maintenance and monitoring, and long-term monitoring plans. An evaluation of the Building 1168 (OU 2) Defense Reutilization and Marketing Office remediation systems continued. The installation reduced monitoring efforts at the Coal Storage Yard (OU 4) and at OU 5 in accordance with CLOSES evaluations.

In FY04, the installation completed CLOSES at six additional sites. The Army achieved site closeout at the OU 4. The installation implemented reductions in O&M, specifically monitoring requirements, on various sites, in large part due to the completed CLOSES evaluations. The installation reviewed the MMRP sites during the annual Installation Action Plan (IAP) Workshop and included them in the final FY04 IAP. The RAB adjourned at the recommendation of the community co-chair and community RAB members.

FY05 IRP Progress

The installation continued using the CLOSES evaluations to reduce O&M requirements. The installation investigated a potential removal action at the Birch Hill Tank Farm AST site. A site contaminated with polychlorinated biphenyls (PCBs) was discovered during a housing construction project. The installation conducted a preliminary site evaluation and removed some PCB-contaminated soils. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The installation conducted additional sampling at the Birch Hill Tank Farm aboveground storage tank (AST) site to determine if the site requires additional action. Therefore, the installation did not develop the ESD for the removal action at the site as the installation determined the ESD may not be necessary. A rebound of contaminants delayed the site closeout of former Building 1168 in OU 2, requiring additional sampling at this site.

FY05 MMRP Progress

The installation continued evaluation of MMRP sites during development of IAPs.

Plan of Action

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

IRP

- Determine whether additional action is required at the Birch Hill Tank Farm AST site in FY06.
- Conduct sampling and complete site closeout of former Building 1168 in OU 2 in FY06.
- Complete 5-year review and site closeout of additional POL site in FY06.
- Solicit community interest to determine if sufficient interest exists to warrant RAB reactivation in FY06.
- Continue using the CLOSES evaluations to reduce O&M requirements in FY06-FY07.
- Conduct remedial investigation/feasibility study at PCB-contaminated site (Communication Site) in FY06-FY07.

MMRP

- Conduct installationwide site inspection in FY06.

| | | | |
|----------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | NM621382097400 | Media Affected: | Groundwater and soil |
| Size: | 21,881 acres | Funding to Date: | \$ 35.0 million |
| Mission: | Stored, shipped, and received ammunition components and disposed of obsolete or deteriorated explosives and ammunition | Estimated Cost to Completion (Completion Year): | \$ 182.2 million(FY 2016) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2016 |
| IAG Status: | None | Five-Year Review Status: | The installation has not completed a 5-year review. |
| Contaminants: | UXO, PCBs, pesticides, heavy metals, asbestos, lead/PCB-based paint, Explosive compounds | | |



Progress To Date

In 1988, the BRAC Commission recommended closure of Fort Wingate. The installation was required to store, test, and demilitarize munitions. Restoration efforts have focused on land affected by ordnance-related wastes, unexploded ordnance (UXO), and other contaminants. The affected areas are the open burning and open detonation (OB/OD) ground, 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 FY94, the installation formed a BRAC cleanup team and a Restoration Advisory Board. In FY95, the installation revised its BRAC cleanup plan.

The installation has transferred over 5,400 acres to date. The cleanup progress at Fort Wingate for FY01 through FY04 is detailed below.

In FY01, the installation completed a remedial action at the western landfill, and remedial investigations for Buildings 9 and 537. The installation conducted a complete investigation of septic tanks and Building 542. The installation awarded a contract for asbestos remediation at the administrative buildings. The Army transferred Parcels 15 and 17 (907 acres) to the Bureau of Land Management. The installation installed a western boundary fence at the OB/OD area and continued asbestos studies and abatements for all the suspected buildings. The installation removed the western landfill. Groundwater sampling at Buildings 542 and 600 and the OB/OD areas continued.

In FY02, the installation demolished Building 11, which was contaminated with PCBs from paints. The U.S. Army Environmental Center's Independent Technical Review approved the installation of additional wells and sampling at the TNT Leaching Beds. The installation awarded a contract for characterization and removal of PCB-contaminated soils at Building 537. The installation submitted a post closure permit application for the OB/OD ground to New Mexico Environment Department for review and approval. The installation adopted a program to consider and incorporate cultural resources into property transfer and cleanup decisions.

In FY03, the installation completed groundwater sampling at the TNT Leaching Beds. The Army completed an inventory of closed, transferred, and transferring ranges and sites with UXO, discarded military munitions or munitions constituents. Seven Military Munitions Response Program (MMRP) sites were identified at this installation. The Army completed clearance for the OB/OD area western boundary fence.

In FY04, the installation completed quarterly groundwater sampling at the TNT Leaching Beds.

FY05 IRP Progress

Fort Wingate removed ash and soil from deactivated furnace area. The installation completed groundwater sampling at the OB/OD ground and completed groundwater investigations at the Eastern Landfill by installing four borings and two wells. The Army negotiated RCRA post-closure permit requirements and developed a work schedule and funding requirements for future cleanup.

FY05 MMRP Progress

The installation discussed future MMRP actions during the RCRA post-closure permit requirements negotiations.

Plan of Action

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

IRP

- Develop work plans for future cleanup in FY06-FY07.

MMRP

- Develop work plans for future MMRP cleanup in FY06-FY07.

| | | | |
|-------------------------|-------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | MN517002291400 | Estimated Cost to Completion (Completion Year): | \$ 7.6 million(FY 2015) |
| Size: | 83 acres | IRP/MMRP Sites Final RIP/RC: | FY 2002/None |
| Mission: | Design and manufacture advanced weapons systems | Five-Year Review Status: | Completed and Planned |
| HRS Score: | 30.83; placed on NPL in November 1989 | | |
| IAG Status: | Federal facility agreement signed in March 1991 | | |
| Contaminants: | POLs, VOCs, SVOCs, TCE, metals, cyanide | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 36.0 million | | |



Progress To Date

Fridley Naval Industrial Reserve Ordnance Plant (NIROP) designs and manufactures advanced weapons systems. Investigations conducted at this government owned, contractor operated installation identified trichloroethylene (TCE) in groundwater. The facility was placed on the NPL in November 1989 because of the TCE contamination in the groundwater, which discharges into the Mississippi River upstream from the Minneapolis drinking water plant. Site types include waste disposal pits and trenches, source areas beneath the main industrial plant, a foundry core butt disposal area, and sitewide groundwater contamination. Wastes and contaminants associated with these site types include petroleum/oil/lubricants (POLs), solvents, plating sludge, construction debris, and foundry sands. The installation signed a federal facility agreement in March 1991. Naval Sea Systems Command sold the NIROP site in June 2004. The installation formed a technical review committee in FY93 and converted it to a Restoration Advisory Board in FY95. The community relations plan was prepared in FY91 and was updated in FY97. An administrative record was also compiled, and an information repository established in FY95. The Navy also completed a 5-year review in FY04.

The installation has completed a Record of Decision (ROD) for Operable Units (OUs) 1, 2, and 3. In addition, it achieved response complete status for Sites 1 and 2. The cleanup progress at Fridley NIROP for FY01 through FY04 is detailed below.

In FY01, the installation completed the remedial investigation (RI) and the risk assessment for OUs 2 and 3. It also completed the groundwater treatment facility upgrade, and the work plan for the pilot scale enhanced bioremediation project for Anoka County Park. The installation completed a diffusion sampler study for groundwater sampling to be implemented upon further analysis requested by regulators. Implementation of the remedy for discharging National Pollutant Discharge Elimination System effluent into the Mississippi River continued.

In FY02, the installation continued remedial action operations of the sitewide groundwater remedy for OU 1. Regulators approved the RIs for OUs 2 and 3. A proposed plan for OUs 2 and 3 was produced, approved by regulators, and submitted for

public comment. Data quality objectives for future groundwater monitoring were established. The pilot scale enhanced bioremediation project was implemented. Hydrogeological evaluation of the pump and treat system effectiveness was conducted. The Navy has completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation signed RODs for OUs 2 and 3. Two additional rounds of sampling have been conducted to determine if pilot scale project is a success. The installation continued the operation of the OU 1 pump and treat groundwater containment system. Major portions of the 5-year review requirements were completed.

In FY04, Fridley NIROP completed the land use control remedial design. The installation completed a 5-year review for OU 1. It also continued operation of the OU 1 pump and treat groundwater containment system. The installation evaluated results of pilot scale enhanced bioremediation study and found that the pilot study was a limited success.

FY05 IRP Progress

Fridley NIROP continued operation of the OU 1 pump and treat groundwater containment system. The installation continued monitoring the enhanced bioremediation pilot study approved by Minnesota Pollution Control Agency and EPA. In addition, the installation conducted a first round of extended monitoring.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Continue operation of the OU 1 pump and treat groundwater containment system in FY06.
- Continue monitoring the enhanced bioremediation pilot study site in FY06.

- Implement enhanced bioremediation full-scale in Anoka County Park in FY07 if the pilot study is successful

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | OH597152435700 | Funding to Date: | \$ 10.7 million |
| Size: | 164 acres | Estimated Cost to Completion (Completion Year): | \$ 0.4 million(FY 2006) |
| Mission: | Provided logistical support to the military services by supplying electrical and electronic material | IRP/MMRP Sites Final RIP/RC: | FY 2002/None |
| HRS Score: | NA | Five-Year Review Status: | Completed and Planned |
| IAG Status: | None | | |
| Contaminants: | solvents, pile runoff (VOCs and SVOCs), and metals, Residual POLs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Gentile Air Force Station (AFS) provided logistical support to the military services by supplying electrical and electronic material. 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. The installation closed in December 1996. Sites identified at the station include underground storage tanks; areas of past industrial operations; and landfills 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 FY93, the installation's BRAC cleanup team (BCT) developed a BRAC cleanup plan for investigating sites and areas of concern (AOCs). The station formed a Restoration Advisory Board (RAB) in FY94, and it adjourned in FY05. The DLA's involvement in environmental restoration at the installation was terminated at the end of FY98 by a memorandum of agreement with the Air Force Real Property Agency. In FY04, the installation completed a 5-year review.

The installation has identified 22 sites and 48 AOCs. To date, one Record of Decision has been signed. All former Air Force property has been transferred. The cleanup progress at Gentile AFS for FY01 through FY04 is detailed below.

In FY01, Parcel B was transferred to the local redevelopment authority (LRA), and long-term management (LTM) began. The final removal action report was published and the draft decision document (DD) was started for Site SD001. The final second annual groundwater monitoring report for Site WP026 (R2) was published. Draft no further remedial action planned (NFRAP) DDs for four Installation Restoration Program (IRP) sites in Parcel E were prepared and sent out for regulatory review. Two other IRP sites in Parcel E were closed with signed NFRAP DDs. The draft final focused feasibility study (FFS) report was prepared. A pilot study was initiated for Parcel E soil and groundwater treatment at Sites LF008 (D1) and SS035 (C7).

In FY02, the FFS for Parcel E was finalized after making major revisions to the draft final version. The DD for Site SD001 was finalized and signed by the BCT as planned. The 2001 Annual LTM Reports for Sites WP026 and SS028 (S1) were

completed. Semiannual groundwater monitoring was also conducted at these two sites. The remedy-in-place milestone was reached at Sites LF008 and SS035 through the removal of soil contamination and ongoing groundwater monitoring. Two IRP sites (ST004 and SS029) were closed with NFRAP DDs signed by the BCT.

In FY03, the installation finalized the LTM work plan for Parcel E, installed monitoring wells, and conducted five rounds of groundwater monitoring at Sites LF008 and SS035. The fourth annual report for Site WP026 was finalized and semiannual groundwater sampling at Sites WP026, SS028, LF008, and SS035 was conducted. The installation signed an explanation of significant differences to remove commercial/industrial use restrictions at Sites RW004 (D4) and C6, thus enabling the removal of the restrictive covenant for Parcel C and making the parcel suitable for unrestricted use. The installation wrote an operating properly and successfully (OPS) determination for groundwater monitoring following a soil removal action.

In FY04, Gentile AFS completed the first 5-year review, and received EPA concurrence. The installation finalized the OPS determination for Sites LF008 and SS035 and received an OPS approval letter from EPA. Property transfer documents were finalized for Parcel E. The Agency for Toxic Substances and Disease Registry completed a public health assessment and determined there are no public health hazards. Remedial action operations (RA-O) at Sites LF008, WP026, SS028 and SS035 continued. The Air Force conducted an inventory of Military Munitions Response Program sites (MMRP). No MMRP sites were identified at this installation.

FY05 IRP Progress

The installation transferred the remaining 26-acre Parcel E to the LRA. All former Air Force property has now been conveyed. The installation continued RA-O at Sites LF008, WP026, SS028 and SS035 under a new performance-based contract (PBC). The installation also closed Site LF008 based on groundwater monitoring results. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The RAB was formally adjourned after the May meeting.

FY05 MMRP Progress

The Air Force has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Gentile Air Force Station are grouped below according to program category.

IRP

- Continue RA-O sampling and site closure acceleration activities of groundwater under new PBC at Sites LF008, WP026, SS028 and SS035 in FY06.
- Decommission all obsolete monitoring wells in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------|--------------------------------------------------------|----------------------------------|
| FFID: | CA957002445300 | Estimated Cost to Completion (Completion Year): | \$ 28.9 million(FY 2032) |
| Size: | 5,062 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2006 |
| Mission: | Provided tactical fighter operations support | Five-Year Review Status: | Completed, underway, and planned |
| HRS Score: | 33.62; placed on NPL in February 1990 | | |
| IAG Status: | Federal facility agreement signed in October 1990 | | |
| Contaminants: | POLs, VOCs, lead | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 96.9 million | | |



Progress To Date

George Air Force Base (AFB) provided tactical fighter operations support. EPA placed the installation on the NPL in February 1990 and the Air Force signed a federal facility agreement in October 1990. Environmental studies conducted at George AFB have identified the following site types: landfills, petroleum spill sites, underground storage tanks (USTs), waste storage and disposal units, and fire training areas. Interim actions at the installation have included removal of more than 80 USTs and contaminated soil, and cleanup and closure of a hazardous waste storage yard. In FY92, the installation formed a BRAC cleanup team (BCT) and converted its technical review committee to a Restoration Advisory Board (RAB). In December 1992, the installation closed. The installation completed a 5-year review in FY01.

Sites were grouped into three operable units (OUs). To date, Records of Decision (RODs) have been signed for OU 1 and OU 3. The cleanup progress at George AFB for FY01 through FY04 is detailed below.

In FY01, the installation updated the model for the OU 1 groundwater monitoring system. The OU 2 remedial investigation and feasibility study (RI/FS), proposed plan, and ROD were being finalized.

In FY02, the geologic conceptual site model (CSM) for the OU 1 groundwater treatment system and the draft OU 2 RI/FS were completed. Funding was approved for the removal of polycyclic aromatic hydrocarbons (PAHs) and lead shot at the second skeet range.

In FY03, the Air Force and EPA agreed on a risk-based closure of the second skeet range to unrestricted usage of the property. A remedial process optimization study was conducted in November 2002 to identify opportunities for enhancing the effectiveness and efficiency of remediation efforts.

In FY04, George AFB completed the hydrogeologic CSM for the OU 1 groundwater treatment system. The installation completed aquifer testing and is using the information to update the CSM. The installation converted three monitoring wells to extraction wells to enhance the cleanup systems for the OU 1 treatment system. In OU 2, the Air Force continued to remove

over 20,000 pounds of petroleum vapor per month and average over 1,000 gallons of free product per month. In OU 3, the Air Force continued to operate several soil cleanup systems. In addition, landfill monitoring and landfill cap maintenance continued. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation shut down the bioventing system at Site WP017. The remedial equipment was decommissioned and removed from the former site. The installation continued operating the treatment systems in OUs 1, 2, and 3, and continued landfill monitoring and landfill cap maintenance. The Air Force established OU 4, which includes 9 areas of concern. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The OU 1 groundwater treatment system remained in standby mode while groundwater fate and transport modeling was conducted. The Air Force initiated preparation of the second 5-year review. The OU 2 fuel plume was removed from the IAG; remediation is continuing under the State corrective action program.

The BCT met frequently and the RAB held an annual meeting.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Closure activities were delayed, pending further evaluation of requirements.

Plan of Action

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

IRP

- Finalize OU 2 corrective action plan in FY06.
- Restart optimized OU 1 pump and treat system

- in FY06.
- Finalize OU 4 ROD in FY06.
- Complete 5-year review in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | NY257002445100 | Funding to Date: | \$ 124.3 million |
| Size: | 3,638 acres | Estimated Cost to Completion (Completion Year): | \$ 29.5 million(FY 2036) |
| Mission: | Operate air refueling and long-range bombardment facility | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2006 |
| HRS Score: | 34.20; placed on NPL in July 1987 | Five-Year Review Status: | Completed and Planned |
| IAG Status: | Federal facility agreement signed in June 1990 | | |
| Contaminants: | VOCs, heavy metals, PCBs, grease, degreasers, caustic cleaners, dyes, penetrants, TCE, UXO | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

The mission of Griffiss Air Force Base (AFB) was to operate as an air refueling and long-range bombardment facility. EPA placed the installation on the NPL in 1987 and the Air Force signed a federal facility agreement in June 1990. Sites identified at the installation include landfills, underground storage tanks (USTs), fire training areas, disposal pits, and spill areas. Possible off-site groundwater contamination was also identified. Interim actions conducted at the facility between FY86 and FY91 included modification of a landfill cap and removal of contaminated soil and USTs from a tank farm, various disposal pits, and the area adjacent to an aircraft nosedock. In FY95, the installation completed an Environmental Baseline Survey and, in FY96, the installation completed an environmental impact statement. Griffiss AFB formed a BRAC cleanup team (BCT) and a Restoration Advisory Board (RAB) in FY95. The BRAC cleanup plan was completed the same year. The installation received technical assistance for public participation funding in FY99. The installation completed the first 5-year review in FY05.

Environmental studies identified 61 sites at Griffiss AFB. To date, the installation has signed 25 of the required 41 environmental RODs. The proposed plan (PP) was completed for Landfill (LF) 1 (LF001), and five no further action/institutional control RODs were also completed. RODs have now been issued for all landfills. The cleanup progress at Griffiss AFB for FY01 through FY04 is detailed below.

In FY01, the installation executed the LF 6 ROD (LF009). An additional five RODs were signed and six PPs were submitted. Interim remedial actions (IRAs) began at three sites. A contract to remediate petroleum-contaminated soil was awarded. IRAs for Building 789 and the Pumphouse 5 site (ST037) were completed.

In FY02, a treatability study (TS) commenced for four trichloroethylene (TCE) plumes. Remediation began for three of the five remaining landfills. Six PPs were submitted and approved. Three RODs were executed, and an additional three await EPA comments. The Apron bioventing system was installed and initiated. The installation rescheduled the feasibility study (FS) and remediation activities for the creeks (SD031 and SD032) in order to allow for floodplain sampling

that will evaluate the possibility of creating new wetlands.

In FY03, the installation completed two landfill closures, continued another, and initiated a fourth. Four hardfill areas received closure approval, and an explanation of significant differences was executed closing the groundwater component of four sites. The installation completed the FS for the two creeks and approved the associated PPs. The installation reconstructed the landfarming operation, which involved 80,000 cubic yards of contaminated soil. The installation completed remediation of the small arms range (OT061). Installation of the bioventing systems at Aprons 1 and 2 was completed. The installation removed 11,000 cubic yards of contaminated soil at the Tank Farms 1 and 3 sites. Griffiss AFB completed installation of the Pumphouse 1 (SS054) free product recovery system and closed 12 petroleum spill sites.

In FY04, Griffiss AFB initiated remediation of the final landfill, completed the LF 2/3 (LF002) and LF001 covers, and completed the TS for four TCE plumes. The installation executed the RODs for two creeks and awarded the remediation contract. The installation also issued the remedial investigation and FS results for Area of Concern 9 (SS062). The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation awarded the long-term monitoring and long-term operation performance-based contract (PBC). The installation completed three RODs and the first 5-year review. In addition, the installation commenced remediation of Three-Mile Creek (SD031) and submitted PPs for six additional sites. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Administrative issues delayed the PBC for the remediation of several TCE plumes. Vapor intrusion concerns delayed one ROD and administrative issues delayed another.

The RAB continued to meet semiannually and the BCT continued to meet at least quarterly.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Award PBC for the remediation of the TCE plumes in FY06.
- Complete 6 RODs in FY06.
- Continue the remediation of LF 6 and Three Mile Creek in FY06.
- Complete partial NPL deletion in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | IN557212447200 | Funding to Date: | \$ 19.5 million |
| Size: | 2,722 acres | Estimated Cost to Completion (Completion Year): | \$ 10.0 million(FY 2028) |
| Mission: | House a refueling wing; formerly housed a bombardment wing | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Completed |
| IAG Status: | None | | |
| Contaminants: | Household and industrial waste, spent solvents, fuels, waste oil, pesticides, lead, asbestos, radiation contamination, PCBs, and lead-based paint, munitions | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1991, the BRAC Commission recommended realignment of Grissom Air Force Base (AFB), which housed a refueling wing. When the installation was realigned in September 1994, the Air Force retained approximately 1,400 acres for military activities and returned 1,322 acres to the community for redevelopment. Grissom is a joint-use base, which uses both BRAC and Environmental Restoration Account funds to reach cleanup goals at the excess property and the reserve base, respectively. BRAC sites include a small arms firing range, a munitions burn/burial area, a grenade training range, a firing-in butt, oil-water separators, underground storage tanks (USTs), a buried B-58 aircraft, and various spill sites. In FY94, the installation completed a basewide Environmental Baseline Survey (EBS); subsequently, supplemental EBSs were developed for specific parcels. Also in FY94, the installation formed a BRAC cleanup team (BCT) and prepared a BRAC cleanup plan (BCP), which is updated via the BCP Annex each year. In FY95, the installation formed a Restoration Advisory Board.

Twenty-one sites have been identified at this installation. Of the seven BRAC Installation Restoration Program (IRP) sites identified, Records of Decision (RODs) have been signed for Fire Protection Training Areas (FPTAs) 1 and 2 (FT001 and FT002), the polychlorinated biphenyls (PCBs) site (SS037), two landfills (LF003 and LF004), and an abandoned underground storage tank site (ST009). The IRP site at Building 190 (SS190) is approaching the remedy in place (RIP) milestone. The cleanup progress at Grissom AFB for FY01 through FY04 is detailed below.

In FY01, the focused site assessment at the Central Heat Plant (CHP) was initiated. The remedial investigation and feasibility study (RI/FS) was started for the PCBs site. Removal actions were completed for the buried B-58 site. The decision document (DD) for the remedy at LF 2 (LF004) was signed. The DD for the abandoned UST site was in draft final form. Fieldwork was completed and the report was pending for the undocumented storage tank at Building 512. Environmental restoration to facilitate conveyance of 79 acres was completed. The Air Force completed clearance of the former grenade training range and the firing-in butt.

In FY02, ROD documents for FPTAs 1 and 2 were signed. The State approved the proposed remedies for both the flightline gas station (Building 424, Area of Concern (AOC) 48) and Building 14 (AOC 46). Investigation of the oil-water separator at former Building 122 was completed. Site investigation for the CHP was completed. Regulators approved the B-58 bomber radioactive waste burial site survey and the removal action report, which recommended no further action and unrestricted reuse.

In FY03, the installation initiated the supplemental remedial action (RA) for the BX Gas Station and the supplemental investigation at Building 747 (AOC 7). The installation awarded a performance-based contract (PBC) for the investigation and cleanup of the CHP. The draft institutional control management plan was completed. EPA concurred with the Air Force demonstration that the remedy at FPTAs 1 and 2 was operating properly and successfully. The BCT concurred with a groundwater monitoring plan for FPTAs 1 and 2, thus streamlining the groundwater monitoring at these sites. Mitigation measures were satisfied for two locations that are eligible for the National Registry of Historic Places, which allows the transfer and redevelopment of these areas. RIP environmental RODs were completed for two IRP sites and six AOCs.

In FY04, the installation completed the investigation at the CHP and the supplemental investigation of the closed-in-place USTs at Building 747. The installation completed the supplemental RA at Building 407 (AOC 4); the first round of post supplemental RA groundwater samples were non-detect for the contaminant of concern. The installation performed an investigation and discovered previously undocumented groundwater contamination south of Building 190. The Air Force Real Property Agency (AFRPA) conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified on the BRAC portion of the installation.

FY05 IRP Progress

The installation completed the demonstration that natural attenuation has remediated the petroleum contamination of groundwater at the flightline gas station and at Building 14. The corrective action plan for Buildings 14, 407, and 424 was satisfied. The Air Force completed the RA fieldwork for Building

747. In addition, the installation completed the groundwater RI for Building 190. The installation also optimized the FPTAs Groundwater Monitoring Plan to reduce long-term groundwater monitoring costs to the Air Force. 94 acres were transferred to the Grissom Redevelopment Authority. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical and administrative issues delayed achieving RIP for the CHP and Building 747, and delayed the selection of the groundwater contamination remedy for Building 190. The installation did not award the PBC because the sites were either nearing closeout or require additional investigation prior to awarding the contract.

FY05 MMRP Progress

AFRPA began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Complete the site closeout process for Buildings 14, 424, 407 and 747 in FY06.
- Complete the FS, select a remedy, and sign a ROD for the groundwater contamination at Building 190 in FY06.
- Complete the FS and remedial action phases of the CHP cleanup in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------|
| FFID: | GU917002753200, GU917002758300, GU917002758500, and GU917002757600 | Contaminants: | PCBs, POLs, solvents, pesticides, heavy metals |
| Size: | 15,306 acres | Media Affected: | Groundwater and soil |
| Mission: | Maintained and operated facilities; provided services and materials; stored and issued weapons and ordnance in support of the operating forces of the Navy and shore activities; provided services for Guam Naval Activities | Funding to Date: | \$ 117.2 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 35.3 million(FY 2017) |
| IAG Status: | IAG signed in FY93 | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| | | Five-Year Review Status: | Planned |



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 (FISC), Naval Ship Repair Facility (NSRF), and Public Works Center (PWC)] for realignment or closure in 1995. NSRF ceased operations in September 1997. The complex completed a joint community relations plan in FY92. The installation signed an interagency agreement in FY93. A local information repository was established in FY94. The complex converted its technical review committee to a Restoration Advisory Board in FY95. Operations that contributed to contamination were support, 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 four commands have 30 CERCLA sites, 26 RCRA sites, and 8 BRAC sites. The installation has achieved response complete at 44 sites. The Navy transferred 2,725 acres to the Government of Guam in FY00 and decided to retain NSRF. To date, the installation has signed no further action (NFA) decision documents (DDs) for five sites. The cleanup progress at Guam Apra Harbor Complex for FY01 through FY04 is detailed below.

In FY01, the installation completed the screening ecological risk assessment for PWC solid waste management unit (SMWU) 11 and the corrective measures implementation for NAVACTS SWMU 26. Additionally, the installation completed construction of the seawall and the landfill cap at NAVACTS Site 1 and fieldwork for the interim remedial action (IRA) at NAVACTS Site 4. It also conducted two rounds of groundwater monitoring at NAVACTS Site 31 and partially completed closure reports for NAVACTS SWMUs 16 and 17, FISC SWMU 12, and PWC SWMU 1.

In FY02, the installation completed remedial actions at NAVACTS Areas of Concern (AOCs) 1 and 3.

In FY03, the installation completed the site closeouts for NAVACTS SWMU 49 and PWC AOC 1 and signed NFA DDs

for NAVACTS SWMU 49 and PWC AOC 1. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY04, the installation completed a NFA DD for NAVACTS AOC 2, and held a PP public meeting for AOC 1 and AOC 3. The installation also negotiated restricted land use for Site 28 with regulators.

FY05 IRP Progress

Guam Apra Harbor Complex completed NFA DDs for NAVACTS AOC 1, AOC 3, and PP/draft DD for NAVACTS Site 28. The cost of completing environmental restoration at this installation has changed significantly due to technical and regulatory issues.

Regulatory issues delayed DD for NAVACTS Site 28.

A public meeting and two BRAC cleanup team (BCT) meetings were held. The BCT performed review of the PP and both EPA and Guam EPA (GEPA) attended the Navy public meeting providing cooperative regulator support. The Navy is working closely with EPA and GEPA to resolve land use control/institutional control language for the DD.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Guam Apra Harbor Complex are grouped below according to program category.

IRP

- Complete DD and remedial action work plan for NAVACTS Site 28 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | CA921402303800 | Funding to Date: | \$ 36.7 million |
| Size: | 669 acres | Estimated Cost to Completion (Completion Year): | \$ 0.8 million(FY 2006) |
| Mission: | Conducted Reserve training | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2003 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Metals, VOCs, SVOCs, fuel hydrocarbons, PCBs, PAHs, POLs, and pesticides | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

In December 1988, the BRAC Commission recommended closure of about 669 acres at Hamilton Army Airfield, as well as relocation of the airfield's mission. The installation has eight areas of concern: a former petroleum/oil/lubricant (POL) hill area, a hospital complex, five "out parcels" (A2, A3, A4, A5, and A6), and the main airfield parcel. Investigations at the main airfield parcel addressed tidal wetlands, a perimeter drainage ditch, underground storage tanks, burn pits, aboveground storage tanks, onshore and offshore fuel lines, a former sewage treatment plant, a pump station, an aircraft maintenance and storage facility, the east levee construction debris disposal site, a POL area, and a revetment area. Metals, petroleum hydrocarbons (PAHs), volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs) are the main contaminants of concern. In FY94, the installation formed a BRAC cleanup team and a Restoration Advisory Board (RAB).

In FY96, the Army transferred Out Parcels A2, A3, A5, and A6 to the City of Novato. In FY03, the Army transferred the hospital parcel to the City of Novato; Out Parcel A4 to a developer; and the Main Airfield Parcel to the State of California. In FY04, the Army transferred POL Hill and the levee parcels to the City of Novato, thereby completing all property transfers for this base. The Army completed two Records of Decision (RODs) in FY03. The cleanup progress at Hamilton Army Airfield for FY01 through FY04 is detailed below.

In FY01, the installation completed the sampling plan for the coastal salt marsh sites and collected additional samples. The Army provided the ROD for the airfield for public comment and completed closure reports for Out Parcel A4 and the hospital area.

In FY02, the Army completed some final remedial actions (RAs) outlined in the draft ROD for the airfield sites. The Army completed coastal salt marsh sampling, and prepared and submitted the feasibility study (FS) draft for review. The Army completed the finding of suitability to transfer (FOST) for Hospital Hill. The installation signed a no further action decision document for Out Parcel A4 and forwarded the FOST to U.S. Army Forces Command for signature. The installation prepared the draft closure report and corrective action plan (CAP) for

POL Hill. The RAB reviewed and provided comments on the draft ROD for the Main Airfield Parcel. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY03, the installation completed a combined ROD for the inboard and coastal salt marsh sites. The Army completed an FS for coastal salt marsh sites. The Army completed a finding of suitability for early transfer (FOSET) for 630 acres and transferred those acres. The Hospital Hill parcel was transferred to the City of Novato and Parcel A4 to a developer. The installation completed the closure report, CAP, and FOST for POL Hill. The Army completed the CTT range and site inventory and identified one low risk Military Munitions Response Program (MMRP) site that required no action. The RAB reviewed the ROD/RA plan and FOSET for the Main Airfield Parcel and the POL Hill FOST.

In FY04, the installation completed the FOST for the levee parcel. The Army transferred the POL Hill and levee parcels.

FY05 IRP Progress

Hamilton Army Airfield completed the remedial design (RD) and RA for the coastal salt marsh sites. The installation completed the remaining RD/RAs for inboard sites, except the target range. The Army conducted sampling that indicated that the skeet range was complete and did not require an RA. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed the RD/RA for the target range. Sampling indicated that the extent of contamination was greater than originally assumed.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

Plan of action items for Hamilton Army Airfield are grouped below according to program category.

IRP

- Complete RD/RA for the target range in FY06.
- Perform biological monitoring for the coastal salt marsh sites in FY06.
- Complete project documentation and closeout in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MA157172442400 | Funding to Date: | \$ 36.0 million |
| Size: | 826 acres | Estimated Cost to Completion (Completion Year): | \$ 10.4 million(FY 2020) |
| Mission: | Support Electronic System Center | IRP/MMRP Sites Final RIP/RC: | FY 2003/None |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | VOCs, chlorinated solvents, gasoline, jet fuel, tetraethyl lead, PCBs, mercury | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Hanscom Air Force Base (AFB) acts to support the electronic system center. EPA placed the installation on the NPL in May 1994. Operations at Hanscom AFB have involved generation, use, and disposal of numerous hazardous substances. Possible sources of contamination investigated include a former industrial wastewater treatment system, a former filter bed/landfill area, a jet fuel residue and tank sludge area, two landfills, three former fire training areas, a paint waste disposal area, a mercury spill area, the former aviation fuel handling and storage facilities, underground storage tanks (USTs), and fuel spill areas. In FY95, the installation converted its technical review committee to a Restoration Advisory Board. A 5-year review was completed for the Operable Unit 2 (OU 2) remedy in FY97. A 5-year review was completed for the Hanscom Field/Hanscom AFB Superfund site in FY02. Both of these reviews concluded that the remedies were protective of human health and the environment. In FY02, a 5-year review was also completed for two Massachusetts Contingency Plan (MCP) sites, which recommended continued monitoring.

Studies have identified 22 sites at the installation. Fourteen sites have been closed out and remedies are in place at eight remaining sites. To date, Records of Decision (RODs) have been signed for OU 3/Installation Restoration Program (IRP) Sites 6 and 21. An interim ROD was signed for OU 1. The cleanup progress at Hanscom AFB for FY01 through FY04 is detailed below.

In FY01, the installation finalized the ROD and completed the design and construction of the final remedy for OU 3/IRP Site 6. The interim ROD to convert the OU 1 system to an interim final remedy was finalized. The no further remedial action planned decision documents for two UST sites were also finalized. The feasibility study for OU 3/IRP Site 21 was completed, and the ROD for this site entered the signature phase. Regulator concurrence on the closeout of nine sites was received. The installation began remedial action operations (RA-O) at OU 1 and OU 3/IRP Site 6. RA-O at OU 2 (capped municipal waste landfill), the Army and Air Force Exchange Service (AAFES) service station, and base motor pool sites continued. The removal action at OU 3/IRP Site 21 also continued.

In FY02, the installation finalized the ROD, continued the removal action, and began the design and construction of the final remedy for OU 3/IRP Site 21. In addition, RA-O continued at OU 1, OU 2, OU 3/IRP Site 6, the AAFES service station, and base motor pool sites. The installation completed the second 5-year review of the Hanscom Field/Hanscom AFB Superfund Site. The review concluded that the remedies in place, or programmed, are expected to be protective of human health and the environment. The installation also completed a 5-year review of two MCP sites that recommended continued monitoring of both sites.

In FY03, the installation completed the design and construction of the final remedy for OU 3/IRP Site 21 and began RA-O. The remedy incorporated the previous removal action. It is also the final remedy required for the installation. In addition, RA-O continued at OU 1, OU 2, OU 3/IRP Site 6, the AAFES service station, and base motor pool sites.

In FY04, the installation continued RA-O at OU 1, OU 2, OU 3/IRP Site 6, OU 3/IRP Site 21, the AAFES service station, and base motor pool sites.

FY05 IRP Progress

The installation continued RA-O at OU 1, OU 2, OU 3/IRP Site 6, OU 3/IRP Site 21, the AAFES service station, and base motor pool sites. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Continue RA-O at OU 1, OU 2, OU 3/IRP Site 6,

OU 3/IRP Site 21, AAFES service station, and base motor pool sites in FY06

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|-------------------------------------|-------------------------------------|--------------------------|
| FFID: | NE79799F041100 | Estimated Cost to Completion | \$ 47.5 million(FY 2013) |
| Size: | 48,753 acres | (Completion Year): | |
| Mission: | Produce, load, and store ammunition | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 1999 |
| HRS Score: | 42.24; placed on NPL in June 1986 | Five-Year Review Status: | Planned |
| IAG Status: | IAG (signed in 1998) | | |
| Contaminants: | UXO, VOCs, PAHs, heavy metals | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 74.9 million | | |



Progress To Date

Operations at the Blaine Naval Ammunition Depot (NAD) subsite 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 area, which includes soil (OU 4), the vadose zone (OU 8), and groundwater (OU 14); an OU for the naval yard dump, the explosives disposal area, and the bomb and mine complex (OU 16); and an OU for a 44,500-acre area of the former NAD not included in the other OUs (OU 15). EPA placed the property on the NPL in June 1986 and the Army and EPA signed an interagency agreement in FY98. USACE formed a Restoration Advisory Board at this property.

To date, EPA has signed two Records of Decision (ROD), one for removal of explosives and metal contaminated surface soil, and a second in FY02 for removal of carcinogenic polyaromatic hydrocarbons (cPAH)-contaminated surface soil. The Army approved a Military Munitions Response Program (MMRP) project in FY96. The cleanup progress for the Hastings Groundwater Contamination Site for FY01 through FY04 is detailed below.

In FY01, USACE submitted the draft ROD for cPAH-contaminated surface soil (OUs 4, 15, and 16) to the regulators. The cPAH predesign investigations of residential properties were completed. USACE completed the remedial design (RD) and soil removal action at the OU 16 bomb and mine complex, as were the RDs for the OU 15 removal actions (Area 10 soil vapor extraction [SVE] and pistol/rifle range soil removal). USACE completed the performance evaluation of the OU 8 Phase II SVE operating systems.

In FY02, USACE completed the OU 4 proposed plan (PP) and ROD for the cPAH-contaminated soils at the NAD residential properties. The Army and EPA signed the residential cPAH ROD, completed design, and began soil remediation. USACE completed the OU 15 pistol range removal action and constructed the SVE system at Area 10. The Army approved the removal action to provide alternate water to residents with contaminated groundwater. The Army completed the initial 5-year review.

In FY03, USACE completed the cPAH remedial action (RA) for the residential properties and installed water supply wells for residents with contaminated groundwater. USACE completed investigations to support the design of the OU 14 groundwater remediation system and initiated groundwater modeling based on the investigation results. A feasibility study (FS) to document completed removal actions for the OU 16 sites was initiated. USACE initiated discussions with the regulators concerning cPAH cleanup levels for the non-residential properties.

In FY04, USACE completed the explanation of significant differences, which modified the 2002 cPAH ROD to include remediation of the non-residential properties. They completed the RD for the cPAH contaminated soils at the non-residential properties and initiated the RA. USACE completed the groundwater FS and continued groundwater modeling optimization. USACE supported the Department of Justice (DOJ) with litigation against a potentially responsible party (PRP). Operation of the SVE system at Area 10 (OU 15) continued. USACE completed the ordnance and explosive recurring review work plan and the site visit.

FY05 IRP Progress

USACE completed remediation of cPAH-contaminated soils at the non-residential properties. Also, USACE completed the installation of wells for aquifer pumping tests. Test data will be used to enhance modeling efforts and facilitate design of groundwater extraction systems. USACE continued technical and legal support to DOJ in the ongoing litigation and made progress towards settlement with a PRP. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Technical issues delayed the PP for groundwater remediation. Regulatory issues delayed completion of the OU 16 FS and the OU 15 risk assessment.

FY05 MMRP Progress

Completed the munitions and explosives of concern (MEC) recurring review report and submitted it for regulatory review.

Plan of Action

Plan of action items for Hastings Groundwater Contamination Site are grouped below according to program category.

IRP

- Resolve issues related to the reuse of contaminated water for power plant operations in FY06.
- Document the groundwater reuse in a memo and receive plan approval from the State regulators in FY06.
- Submit the final OU 16 FS and OU 15 risk assessment for regulatory review in FY06.
- Continue groundwater model evaluation of remediation alternatives in FY06.
- Initiate preliminary RA design efforts in FY06.
- Continue supporting DOJ in settlement efforts or litigation in FY06.

MMRP

- Complete the recurring MEC review report in FY06.

| | | | |
|-------------------------|-----------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | UT857172435000 | Estimated Cost to Completion (Completion Year): | \$ 316.5 million(FY 2027) |
| Size: | 6,698 acres | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2014 |
| Mission: | Provide logistics support for weapons systems | Five-Year Review Status: | Completed |
| HRS Score: | 49.94; placed on NPL in July 1987 | | |
| IAG Status: | IAG signed in April 1991 | | |
| Contaminants: | Solvents, sulfuric acid, chromic acid, metals, petroleum wastes | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 219.7 million | | |



Progress To Date

The mission of Hill Air Force Base (AFB) is to provide logistics support for weapons systems, to host two fighter wings and to operate the Utah Test and Training Range (UTTR). EPA placed the installation on the NPL in July 1987 and the Air Force signed an interagency agreement in April 1991. 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. The installation formed a Restoration Advisory Board (RAB) in FY95. The installation conducted 5-year reviews in FY97 and FY03.

Since FY87, 111 sites have been identified. Forty-two of these sites have been grouped into 12 operable units (OUs). To date, the installation has signed Records of Decision (RODs) for seven OUs (25 sites). The cleanup progress at Hill AFB for FY01 through FY04 is detailed below.

In FY01, the base reduced on-site treatment costs through partnerships with local sewer districts. Hill AFB completed final remedial actions (RAs) at five sites and closed six sites. Five RAB meetings were held, and regulatory and RAB participation in numerous community meetings continued.

In FY02, the installation completed an RA and closed one site. The installation continued to partner with regulatory agencies and to foster RAB involvement. The RAB met quarterly, and four RAB training meetings and site tours were held. RAB members attended two information fairs in affected communities. Updates were provided to seven different city councils and regular meetings with state and federal regulators kept project managers informed and involved.

In FY03, the installation conducted a 5-year review and installed remedial systems at two sites. In addition, one site was closed and a feasibility study (FS) was completed for OU 8. Partnering with regulatory agencies and fostering RAB involvement continued. Four RAB meetings and four RAB training sessions were held. Regulatory and RAB participation occurred in numerous community meetings.

In FY04, Hill AFB completed a remedial investigation (RI) and FS at the two sites composing OU 5 and an Engineering Evaluation/Cost Analysis and Removal Action at two sites in OU 9. The installation also completed response actions at 32 areas of concern (AOCs) and closed 7. The Air Force continued to make significant progress towards signing an innovative cleanup agreement for the UTTR. The base also developed geospatial-based land use controls, a lease tracking database, and geographic information system tools to facilitate data analysis. The installation continued partnering with regulatory agencies and the RAB. Hill AFB hosted quarterly RAB meetings, two RAB work group meetings, and five RAB training tours and site visits. Five public information sessions and eight presentations to city councils from communities around the base were conducted.

FY05 IRP Progress

Hill AFB achieved four remedies in place, three response completes (RC), closed out one site, and reduced the risk at OU 9. The installation also completed the study phase for four sites. Other notable activities included signing a ROD for OU 8, installing a groundwater extraction well system to prevent the further spread of the plume at OU 8, implementing a bio-polishing technology test at OU 2, and constructing an in-ground treatment system at OU 12. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Hill AFB achieved 15 out of 20 planned RCs for AOCs at the UTTR. Weather issues delayed RC at the five other AOCs. Regulatory issues delayed the RI/FS at OU 9 and additional source area characterization delayed the RI/FS at OU 12.

The RAB held four quarterly RAB meetings, three working group meetings, and five training sessions. The installation held 4 public meetings and made 11 presentations to city councils and planning boards representing cities adjacent to the base.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Complete the ROD for OU 5 in FY06.
- Achieve RC at 25 additional AOCs at the UTTR in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|-------------------------|---------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | FL457212403700 | Estimated Cost to Completion (Completion Year): | \$ 5.0 million(FY 2016) |
| Size: | 2,938 acres | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2016 |
| Mission: | Housed the Air Combat Command 31st Fighter Wing | Five-Year Review Status: | Planned |
| HRS Score: | 42.24; placed on NPL in February 1990 | | |
| IAG Status: | Federal facility agreement signed in March 1991 | | |
| Contaminants: | VOCs, cyanide, pesticides, solvents, PCBs, Heavy metals | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 32.3 million | | |



Progress To Date

Homestead Air Force Base (AFB) housed the Air Combat Command 31st Fighter Wing. EPA placed the installation on the NPL in February 1990 and the Air Force signed a federal facility agreement in March 1991. In July 1993, the BRAC Commission recommended that Homestead AFB be realigned.

Subsequently, the 31st Fighter Wing was deactivated, and all other operations except Air Force Reserve activities were relocated. Homestead AFB is a joint-use base that uses both BRAC and Environmental Restoration Account funds to reach cleanup goals. Sites identified at the installation include the JP-4 jet fuel leak area, a landfill, a polychlorinated biphenyls (PCBs) spill area, underground storage tanks (USTs), aboveground storage tanks, and oil-water separators. Interim actions have included removal of USTs and contaminated soil, groundwater extraction and treatment, and removal of oil-water separators. The installation formed a Restoration Advisory Board (RAB) in FY94, which was chartered in FY96. The installation has also formed a BRAC cleanup team (BCT). In FY03, the installation completed its first 5-year review.

In FY94, an Environmental Baseline Survey identified more than 540 potentially contaminated sites. By FY95, 400 sites had been closed and in FY96 the remaining sites were consolidated into 30 operable units (OUs) and 5 major fuel areas. To date, Records of Decision (RODs) have been signed for OUs 2, 11, 18, 26, 28, and 29. The cleanup progress at Homestead AFB for FY01 through FY04 is detailed below.

In FY01, interim remedial actions (RAs) were completed for OUs 20/21, 30, and 31. Building 711 was closed out. The installation held quarterly BCT meetings.

In FY02, the feasibility study and proposed plan for OU 11 and the RAs for OUs 20/21, 30, and 31 were completed. The RA for OU 11 was initiated with the completion of the remedial design. An evaluation of the groundwater analytical data at OU 26 showed a cyclical upswing in contaminant levels that may be tied to seasonal groundwater levels. This indicated the presence of a continuing source of solvent contamination. An additional source removal was undertaken along with the addition of a biomass amendment to stimulate microbial action. The RAB met quarterly, which allowed the Air Force and regulators to update the community on the program's status.

In FY03, the installation completed its first 5-year review and obtained regulatory concurrence. The Air Force and EPA signed the ROD for the canal portion of OU 11, which received concurrence from the State. Responsibility for obtaining a ROD for the terrestrial portion of OU 11 is being transferred to Air Force Reserve Command (AFRC). The installation initiated the RA for OU 11.

In FY04, the installation completed canal remediation at OU 11. The sampling schedule for the long-term monitoring sites was negotiated and OU 22 was moved from the Installation Restoration Program (IRP) to the State Petroleum Program. OUs 11 and 18 were transferred from the Air Force Real Property Agency (AFRPA) to the AFRC, the 482nd Fighter Wing, and OUs 14, 20/21, 22, 26, and 28 through OU 31 were separated into their own parcel. AFRPA conducted an inventory of Military Munitions Response Program (MMRP) sites. No MMRP sites were identified on the BRAC portion of the installation.

FY05 IRP Progress

The installation obtained operating properly and successfully documentation from EPA for OU 26 and updated the solid waste management unit inventory to reflect current ownership in preparing for the renewal of the RCRA permit.

The installation did not complete the ROD for OUs 20/21, 30, and 31 due to land use control/institutional control (LUC/IC) issues with the regulators as well as a change in the maximum contaminant level for arsenic. The installation did not complete the ROD for the terrestrial portion of OU 11 due to LUC/IC issues with the regulators concerning residual arsenic in the soil.

The BCT and RAB continued to meet semiannually.

FY05 MMRP Progress

AFRPA has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete the ROD for OUs 20/21, 30, and 31 in FY06.
- Complete the ROD to close out the terrestrial portion of OU 11 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | CA917002278400 | Funding to Date: | \$ 317.6 million |
| Size: | 934 acres | Estimated Cost to Completion (Completion Year): | \$ 127.6 million(FY 2010) |
| Mission: | Repaired and maintained ships | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | 48.77; placed on NPL in November 1989 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in September 1990 and revised in January 1992 | | |
| Contaminants: | Heavy metals, PCBs, petroleum hydrocarbons, VOCs, SVOCs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

In July 1991, the BRAC Commission recommended closure of Hunter's Point Annex-Treasure Island Naval Station. The station ceased operations on April 1, 1994, and is now in caretaker status and is the responsibility of the Naval Facilities Engineering Command's Southwest Division. Parts of the installation have been leased to private parties. Site types include landfills and land disposal areas, containing primarily heavy metals and volatile organic compounds (VOCs), and radioactive materials, primarily cesium and radium. The installation was placed on the NPL in November 1989, and signed a federal facility agreement in September 1990 and was revised in January 1992. A BRAC cleanup team (BCT) was formed in FY94. The installation's technical review committee was converted to a Restoration Advisory Board. The installation's FY89 community relations plan was revised in FY97 and in FY04. The BCT updates the Site Management Plan quarterly.

To date, environmental studies at the installation have identified 78 CERCLA sites. The installation completed a Record of Decision (ROD) for no further action at Parcel A. The installation has completed conveyance of Parcel A to the San Francisco Redevelopment Agency (SFRA). The cleanup progress at Hunter's Point Annex Treasure Island for FY01 through FY04 is detailed below.

In FY01, the NEPA ROD was signed. The installation completed the FOST for Parcel A and tendered the parcel to the City of San Francisco. Additionally, the installation implemented a time-critical removal action (TCRA) to address the contaminated soil sites and Parcels C and D and continued a removal action to excavate, and dispose of off-site, low-level radioactive soil and debris from three Parcel E buildings and one Parcel D building. The installation installed a 14-acre interim cap at the Parcel E industrial landfill.

In FY02, the installation completed TCRA closeout reports for Parcels C and D. A Parcel D draft feasibility study (FS) was completed. The Navy has completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this time.

In FY03, the installation completed the Parcel A draft final finding of suitability to transfer (FOST). The installation also completed the Parcel B Risk Management Review. The installation successfully completed innovative groundwater cleanup technology under treatability studies (TSs) for the plumes and data gap sampling for Parcels C and E in FY03.

In FY04, the FOST for Parcel A was finalized at the end of September. Consensus was reached by the BCT to amend the existing ROD with a Tech Memo in Support of a ROD Amendment (TMSRA) at Parcel B. The installation achieved significant VOC contaminant reduction through zero-valent iron (ZVI) in-situ treatments under a TS in Parcel C. In Parcel D, a removal action was completed in which contaminated soil was removed and soil stockpiles were sampled and removed. Parcel E was divided, with a Parcel E-2 created as a new operable unit comprising the industrial landfill and adjacent areas. Work began on a remedial investigation (RI)/FS for parcel E-2. In the remainder of Parcel E, two data gaps investigations were performed and summarized in a validation study report. A major source of Polychlorinated Biphenyls (PCB) contamination to the bay was identified. In addition, the base-wide Historical Radiological Assessment (HRA) was finalized, identifying 91 rad-impacted areas. The Navy has identified no MMRP sites at this time.

FY05 IRP Progress

Hunter's Point Annex-Treasure Island Naval Station conveyed Parcel A to the SFRA. The installation finalized the risk assessment methodologies with the regulatory agencies and the SFRA, which enabled the TMSRA and FS to proceed. Additional sites on Parcels B and C received treatment with ZVI or through bioremediation. Removal actions began along the bay shoreline in Parcels E and E-2 to remove radioactive contaminants and PCBs. In addition, the installation completed TMSRA on Parcel B and issued a new proposed plan (PP) to support a ROD amendment. The installation completed FSs on Parcel C, D, and F, and an RI/FS on Parcel E-2. FSs for Parcels C and D were prepared in accordance with requirements in the Conveyance Agreement. The installation finalized the validation study for Parcel F and initiated the FS. The installation completed three removal actions on Parcel E. The installation also conducted radiological surveys identified in the HRA. The cost of completing environmental restoration at

this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

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 TMSRA on Parcel B and issue a new PP to support a ROD amendment in FY06.
- Complete FS and FS Radiological Addenda on Parcels C, D, and F, and an RI/FS on Parcel E-2 in FY06.
- Complete four removal actions on Parcel E and E-2 in FY06.
- Continue radiological surveys identified in the HRA in FY06.

MMRP

- Continue coordinating with the Naval Ordnance Safety and Security Activity, as needed in FY06.

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|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| FFID: | MD317002410900 | Contaminants: | Waste propellants, explosives, acids, paints, solvents, heavy metals, low-level radioactive material, TCE, industrial wastewater |
| Size: | 3,423 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Provide services in energetics through engineering, operational support, manufacturing technology, and production, and conduct research, development, and testing of energetic and ordnance device | Funding to Date: | \$ 31.3 million |
| HRS Score: | 50.00; placed on NPL in February 1995 | Estimated Cost to Completion (Completion Year): | \$ 61.1 million(FY 2016) |
| IAG Status: | Federal facility agreement signed in FY01. | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2016 |
| | | Five-Year Review Status: | Planned |



Progress To Date

Indian Head Naval Surface Warfare Center (NSWC) provides services in energetics for all warfare centers, including engineering, fleet and operational support, manufacturing technology, limited production, and industrial base support. It produces and handles complex chemicals to accomplish this mission. Lead, silver, and mercury are the primary contaminants of concern. A technical review committee was formed in FY93 and converted to a Restoration Advisory Board in FY95. The installation was placed on the NPL in February 1995. The installation prepared a community relations plan and established an information repository. The site management plan has been developed and updated. In FY98, the administrative record was converted to an electronic format, which is updated periodically. A federal facilities agreement (FFA) was completed in FY01. The Indian Head Installation Restoration (IR) partnering team meets approximately 10 times a year and has been highly successful in facilitating agreements between the Navy and regulators.

The installation has identified 66 IR and 24 Military Munitions Response Program (MMRP) sites. Records of Decision (RODs) have been completed for Sites 12, 13, 25, 39, 42, 44, and 45. To date, the installation has signed a no further action (NFA) ROD, or equivalent decision document (DD) for Sites 3, 5, 9, 13, 20, 25, 32, 33, 34, 39, 40, 44, 45, 46, 48, 51, 52, 58, 59, 61, and solid waste management unit (SWMU) 74. The cleanup progress at NDWIH for FY01 through FY04 is detailed below.

In FY01, the installation reached an FFA with EPA. The remedial design (RD) for Site 12 was completed and the removal action initiated through extensive partnering with regulators. The 65 percent RD for Site 41 was completed. Fieldwork for the Mattawoman Creek baseline risk assessment was completed. A rapid sediment screening technique was implemented to assist with work plan development, and a toxicity identification evaluation demonstration was conducted to gather toxicity data on discharges to the creek.

In FY02, the installation completed the desktop audit of 28 FFA areas of concern (AOCs). A DD recommended no action for 17 AOCs. The relative risk of Site 28 was re-evaluated following sampling, moving it to the high-risk category and the installation initiated a remedial investigation (RI). Removal actions for Sites

12 and 41 were started. The NFA ROD for Site 44 was signed. The Navy completed an inventory of all MMRP sites. MMRP sites were identified at this installation.

In FY03, the installation completed the removal action for Site 12. The NFA documents were signed for Sites 32, 34, 51, and 52. In addition, the pilot study using a hydrogen-reducing compound was implemented at Site 57. The lessons learned for Site 12 were compiled and included information on erosion control measures and selection of fill material. The installation developed a range inventory and created 24 new MMRP sites. Additionally, the installation initiated preliminary assessments (PAs) for all MMRP sites.

In FY04, the installation completed RIs for Sites 6, 11, 13, 17, 21, 25, 28, 39, 45, and 47. NDWIH began long-term monitoring at Site 12, and completed an RI of the Lab Area, which includes Sites 15, 16, 49, 50, 53, 54, and 55. It also completed the Mattawoman Creek ecological risk assessment, a feasibility study, and RD for Site 42. RODs for Sites 12, 13, and 25 and NFA DDs for Sites 5, 40, and SWMU 74 were signed. The installation improved techniques by using desktop evaluations for several sites to reach decisions for NFA. The installation completed the draft final PA reports for the Indian Head main facility and Stump Neck Annex MMRP sites.

FY05 IRP Progress

Indian Head Naval Surface Warfare Center (NSWC) completed baseline ecological risk assessments (BERA) for Sites 11, 17, and 47 and initiated removal/actions at Sites 17 and 42. The installation also initiated site screening process investigations for Sites 2, 3, 4, 7, 8, 9, 18, 19, 20, 23, 24, 26, 27, 33, 36, 38, 43, 46, 48, and SWMUs 14 and 30. The installation completed site-screening investigation fieldwork for Sites 2, 4, 7, 18, 23, 43, 36, and 38. The installation signed NFA DDs for Sites 3, 9, 20, 33, 39, 45, 46, 48, 58, 59, and 61. Lastly RODs for Sites 39, 42, and 45 were signed. Site 24 was recommended to undergo an RI.

Regulatory issued delayed the signing of NFA DDs for Sites 8 and 56; and the Lab Area removal action. Technical and regulatory issues delayed the Site 1 screening process investigation.

FY05 MMRP Progress

Indian Head NSWC completed PAs, site recommendations, site prioritization, and cost analysis documents for MMRP sites.

Plan of Action

Plan of action items for Indian Head Naval Surface Warfare Center are grouped below according to program category.

IRP

- Complete remedial action at Site 42 and removal actions at Sites 6, 17, and 57 in FY06.
- Complete site screening process (SSP) investigations for Sites 1, 2, 4, 7, 8, 18, 19, 23, 26, 27, 36, 38, 43, and SWMUs 14 and 30 in FY06.
- Complete BERA for Lab Area in FY06.
- Sign RODs for Sites 11, 17, and 21 in FY06.

MMRP

- Complete removal action at UXO 32 in FY06.

| | |
|-------------------------|--------------------------------------------|
| FFID: | IA721382044500 |
| Size: | 19,011 acres |
| Mission: | Load, assemble, and pack munitions |
| HRS Score: | 29.73; placed on NPL in August 1990 |
| IAG Status: | IAG signed in December 1990 |
| Contaminants: | Explosives, heavy metals, Rad, VOCs |
| Media Affected: | Groundwater, surface water, sediment, soil |
| Funding to Date: | \$ 89.4 million |

| | |
|--------------------------------------------------------|--------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 16.4 million(FY 2039) |
| IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2017 |
| Five-Year Review Status: | Completed |



Progress To Date

In 1941, the Army constructed the Iowa Army Ammunition Plant (IAAP) to load, assemble, and pack various conventional ammunition and fuzing systems. 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 installation has three operable units (OUs): soil (OU 1), groundwater (OU 3), and overall (OU 4). 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 Army excavated and incinerated pesticide-contaminated soil off-site and excavated explosives-contaminated sumps, and also removed contaminated soil and capped five landfill cells. The installation funded a project connecting local residences to a public water supply. Contaminated soil was removed from around production buildings at Lines 5A/5B and the West Burn Pads Area. Evaluations related to past Atomic Energy Commission activities have been conducted. The installation formed a Restoration Advisory Board (RAB) in FY97. The Army completed a 5-year review in FY05.

Environmental studies have identified 52 sites at the installation. Of those sites, 42 require further action. To date, the installation has completed one interim Record of Decision (ROD) and one final ROD to address soil contamination. Three Atomic Energy Commission sites have been accepted into Formerly Utilized Sites Remedial Action Program (FUSRAP). The cleanup progress at IAAP for FY01 through FY04 is detailed below.

In FY01, the installation completed soil removal at the west burn pads. It also successfully implemented a study of off-post groundwater and remedial investigation (RI) activities for the Line 800 pink water lagoon. Treatment of explosives-contaminated soil from the west burn pads area was completed, and metals treatment for the same soil was initiated. Evaluations related to past Atomic Energy Commission

activities began. The Army reviewed various sites for possible inclusion in the FUSRAP. The installation's RAB received training on radiological contaminants, reviewed project activities, and helped establish project priorities.

In FY02, the Army removed soil contaminated with VOCs from the former fuel station. Congress designated the installation for inclusion into the FUSRAP to address impacts from former Atomic Energy Commission industrial activities. Funds were provided to conduct an aerial radiological survey. The Army continued to study off-post groundwater and prepared the RI activities for the Line 800 pink water lagoon. The Army completed the metals treatment for soil from the west burn pads area.

In FY03, the installation continued the off-post groundwater characterization and completed a supplemental soil removal at the fire-training pit. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY04, the Army awarded a performance-based contract to address the entire Installation Restoration Program (IRP) effort at IAAP. The Army resolved the formal dispute with EPA. The installation removed soil contaminated with VOCs from the former fuel station and received a no further action certificate from the State of Iowa. The Army completed the Phase 4 soil removal at Line 9. The installation determined that Lines 4A/B, Line 8, and the Roundhouse Polychlorinated Biphenyls (PCBs) Site required no further soils action during Phase 4 soil efforts. The Army released the proposed plan for off-post groundwater for public review and also submitted the draft ROD to regulators. The Army completed the CTT range and sites inventory. The Army has identified three Military Munitions Response Program (MMRP) sites at this installation. The installation's RAB received training on hydrogeology, radiological contaminants, and ecological risk assessments (ERAs).

FY05 IRP Progress

The installation completed the remedial design (RD) for OU 1 and supplemental RI sampling for OU 4. Additionally, the installation conducted the off-site groundwater pilot study and

began the on-site groundwater treatability study. The Army completed the first 5-year review.

Regulatory issues delayed the baseline ERA. Technical issues delayed the soil treatment at Site IAAP 020. Technical and regulatory issues delayed the implementation of point source controls at Brush Creek.

The installation's RAB received training on endangered species, well monitoring, and the CERCLA process. The RAB also reviewed project activities.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Treat soil at Site IAAP 020 in FY06.
- Complete soil removals at OU 1 and baseline ERA in FY06.
- Finalize RD for off-site groundwater in FY06.
- Complete the supplemental RI for OU 4 soils in FY06.
- Implement Brush Creek point source controls in FY06.

MMRP

- Initiate site investigations at three MMRP sites in FY06-FY07.

| | | | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| FFID: | FL417002441200 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 3,820 acres | Funding to Date: | \$ 86.3 million |
| Mission: | Maintain and operate facilities; provide services and materials to support aviation activities and aircraft overhaul operations | Estimated Cost to Completion (Completion Year): | \$ 24.9 million(FY 2021) |
| HRS Score: | 31.02; placed on NPL in November 1989 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2013 |
| IAG Status: | Federal facility agreement signed in October 1990 | Five-Year Review Status: | Completed and planned |
| Contaminants: | Waste solvents, and caustics, cyanide, heavy metals, POLs, low-level radioactive wastes, oil, paint, PCBs, pesticides, phenols, radioisotopes | | |



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. EPA placed the installation on the NPL in November 1989 and the installation signed a federal facility agreement in October 1990. 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 installation's technical review committee, which formed in FY88, was converted to a Restoration Advisory Board in FY95. In FY91, the installation completed its community relations plan and established an administrative record and an information repository. The installation completed 5-year reviews in FY01 and FY05.

To date, the installation contains 55 CERCLA sites, 24 underground storage tank (UST) sites, and 5 RCRA solid waste management units. Jacksonville NAS has identified 84 sites. The installation has completed Records of Decision (RODs) for Operable Units (OUs) 2 and 3, point source of contamination 16 (PSC 16), and PSC 21. In addition, an interim ROD has been completed for one site. The installation also completed no further action (NFA) designation for UST 13 and Area A at UST 17. The cleanup progress at Jacksonville NAS for FY01 through FY04 is detailed below.

In FY01, the installation continued efforts to obtain a RCRA closure permit for Hangar 1000 and the T-56 wash area. The remedial investigation/feasibility study (RI/FS) for Hangar 1000, PSC 46, PSC 47, and PSC 51 was underway. The remedial designs for three sites were completed and the installation initiated an investigation at UST 14. Monitoring at T-56, the plating shop, and SWMU 1 was underway. Operations and maintenance began at the UST 15 remedial system. The installation completed a 5-year review as planned.

In FY02, the installation completed a site assessment report (SAR) for UST 14. The remedial action (RA) for PSCs 11 (Building 780) and 48, and UST 15 continued. RAs began for

PSCs 11 (Areas B, C, D) and 15 (Area G), and UST 14. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, Jacksonville NAS completed SARs at the petroleum contaminated areas (PCAs) 5, 18, 19, 23, 221, and completed soil excavation at PCAs 5 and 14. The installation continued the RA for PSCs 11 (Building 780 and Area B), 15 (Area G) and 48; PCAs 4, 14, and 16, and USTs 14 and 15. The installation completed the RI/FS for PSCs 46 and 51.

In FY04, the installation completed RI/FS for PSCs 52 and 11 (Areas A and E). The installation completed the treatability studies (TSs) for PCAs 4, 14, and 16. The 5-year review progressed. The installation added and approved a site for the MMRP.

FY05 IRP Progress

Jacksonville NAS completed RODs for PSCs 46 and 51. The installation completed the 5-year review and completed optimizations of PSCs 11 (building 780), 26, and 48 (Building 106). The installation continued RAs at PSC 46 and continued a TS at PSC 47. Lastly, the installation received NFA statistics on PCA 14. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

Jacksonville NAS developed the cost to complete cleanup for the identified MMRP site.

Plan of Action

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

IRP

- Complete ROD for PSC 11 Area A in FY06.
- Complete proposed plan and ROD for PSC 52 in FY06.
- Complete TS at PSC 47 in FY06.
- Complete RA at PSC 46 in FY06.

- Excavate contaminated soils at PCA 16 and PSC 46 in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | IN521382045400 | Funding to Date: | \$ 26.6 million |
| Size: | 55,270 acres | Estimated Cost to Completion (Completion Year): | \$ 8.6 million(FY 2035) |
| Mission: | Performed production acceptance testing of ammunition, weapons, and their components | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2003 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Solvents, petroleum products, VOCs, PCBs, heavy metals, depleted uranium, UXO | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

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, although included in the 1995 BRAC program, is known to be heavily contaminated with unexploded ordnance (UXO). The Army plans to retain the site indefinitely for use as a wildlife sanctuary and other government uses. 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 the installation include depleted uranium, heavy metals, UXO, solvents, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and petroleum hydrocarbons. Interim remedial actions have included a landfill cap, removal of USTs, and excavation of contaminated soil. In FY94, the installation formed a BRAC cleanup team and a Restoration Advisory Board (RAB). During FY96, the installation issued an updated community relations plan. The Army procured a technical assistance for public participation (TAPP) contract to support the RAB in FY99.

To date, the Army has transferred the Defense Reutilization and Marketing Office (DRMO) area, the Airfield parcel, the Western Wooded parcel, and the central cantonment area (total of approximately 2,500 acres). The installation has signed one Record of Decision (ROD). The cleanup progress at Jefferson Proving Ground for FY01 through FY04 is detailed below.

In FY01, the installation signed the finding of suitability to transfer (FOST) and sent the deed to Army headquarters for signature for the transfer of the DRMO area. The Army completed the transfer of the central cantonment area (approximately 1,200 acres). The installation continued to work with competing local interests to resolve the transfer of a 300-acre western parcel. Additional remedial investigation (RI) fieldwork continued at selected sites.

In FY02, the installation completed the RI of the area south of the firing line and submitted the final document to the regulators. The installation forwarded a revised FOST for the Airfield Area through channels to Headquarters, Department of

the Army for approval and signature. The Army completed the transfer of the DRMO parcel area. The installation completed a draft FOST for the Northeastern parcel and made it available for public review. Additional RI fieldwork at selected sites continued. The installation completed fieldwork for the last UXO clearance south of the firing line. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with UXO, discarded military munitions or munitions constituents. The RAB held quarterly meetings and the community TAPP provider reviewed the draft final RI.

In FY03, the installation completed the feasibility study (FS) for the area south of the firing line. The Army signed the FOSTs for the Airfield Area and Northeastern Area. The Army distributed a draft FOST for the Western Wooded parcel for public review. The Army completed the inventory of CTT ranges and sites and identified 15 Military Munitions Response Program (MMRP) sites. The community TAPP provider reviewed the draft FS.

In FY04, the Army transferred the Airfield parcel. The installation completed the proposed plan for the area south of the firing line. The installation drafted an ROD for the area south of the firing line and provided it for public review and comment. The Army signed a letter of assignment for the transfer of the Western Wooded parcel to Jefferson County via the National Park Service.

FY05 IRP Progress

The installation requested Nuclear Regulatory Commission concurrence to commence 5-year site characterization of depleted uranium area. Additionally, the installation completed the ROD and remedy in place for areas south of the firing line. The installation commenced the long-term groundwater monitoring of sites covered under the ROD.

Regulatory issues delayed the transfer of the Northeast parcel.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Transfer Northeast parcel in FY06.
- Commence 5-year site characterization of depleted uranium area in FY06.
- Complete soil remediation of open burn unit in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | CA99799F546700 | Funding to Date: | \$ 0.6 million |
| Size: | 176 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2007) |
| Mission: | Conduct research and develop aeronautics, rocketry, and space exploration technology | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| HRS Score: | 50.00; placed on NPL in October 1992 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | IAG between NASA and EPA signed in FY92 | | |
| Contaminants: | VOCs and various inorganic chemicals | | |
| Media Affected: | Groundwater | | |



Progress To Date

EPA placed the California Institute of Technology Jet Propulsion Laboratory (JPL), which developed aeronautics, rocketry, and space exploration technologies, on the NPL in October 1992. NASA and EPA signed an interagency agreement in FY92. Sampling the drinking water wells for the city of Pasadena revealed that they were contaminated with volatile organic compounds (VOCs), including trichloroethane, trichloroethylene (TCE), and tetrachloroethylene (PCE). NASA transferred Superfund cleanup oversight for the JPL property to the Navy in FY00. NASA, the current facility owner, manages CERCLA responsibilities for JPL.

The laboratory property was divided into three operable units (OUs): on-site groundwater contamination (OU 1), on-site contamination sources (OU 2), and off-site groundwater contamination (OU 3). OU 2 has a signed Record of Decision (ROD). In FY99, the groundwater hydrology modeling of Raymond Basin was completed. In addition, NASA and the Jet Propulsion Laboratory completed the final remedial investigations (RIs) for OU 1, OU 2, and OU 3. The cleanup progress at the JPL for FY01 through FY04 is detailed below.

In FY01, the Navy completed the proposed plan (PP) and held public meetings for OU 2. The Navy completed a draft ROD. NASA, U.S. Army Corps of Engineers (USACE), the Department of Justice, and the California Institute of Technology signed the final confidentiality agreement. Cost-sharing negotiations continued. The Navy performed sampling, analysis, and fieldwork in support of the RI/feasibility study (FS) for OU 1 and OU 3. The Navy also completed pilot studies for removal of perchlorate and VOCs from groundwater at OU 1, including a pilot study to remove perchlorate through a fluidized bed reactor. The soil vapor extraction (SVE) pilot study at OU 2 began with the potential for expansion to a remedial action (RA) as part of the final remedy.

In FY02, the Navy completed the ROD and draft remedial design (RD) for OU 2. Preparation work for the OU 2 RA began with the installation of three new SVE wells. The Navy completed Phase I of the SVE pilot test and completed a draft engineering evaluation and cost analysis (EE/CA) for the RA design in OU 3. Further ex situ perchlorate pilot tests were performed for OU 1. The Navy began work on the OU 1 and

OU 3 FS, and completed an expanded groundwater model for OU 1 and OU 3.

In FY03, NASA completed a final draft of the EE/CA for the RA at OU 3. The RD for OU 2 was finalized and the RA for OU 2 was installed and implemented. Additional ex situ perchlorate pilot tests were completed and an in situ perchlorate pilot test continued at OU 1.

In FY04, NASA completed the draft FS and began the RD/RA phase for an expanded treatability system at OU 1. A RI addendum plan was prepared and implemented to further investigate the extent of the chemical plume in OU 3. The RA phase for a new 2,000 gallons per minute ion exchange water treatment system in OU 3 was also completed. USACE has identified no Military Munitions Response Program (MMRP) work at this property.

FY05 IRP Progress

NASA completed a final FS and draft PP for OU 1. Also, NASA completed a draft FS and final EE/CA for OU 3. NASA installed additional monitoring wells, completed a final RI addendum report, and began the RD/RA phase for OU 3. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues. This will be the last narrative for JPL as a FUDS property.

FY05 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) work at this property.

Plan of Action

Plan of action items for Jet Propulsion Laboratory are grouped below according to program category.

IRP

There are no IRP actions scheduled for FY06 or FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | IL521382046000 | Media Affected: | Groundwater and soil |
| Size: | 4,677 acres | Funding to Date: | \$ 101.5 million |
| Mission: | Manufacture, load, assemble, and pack munitions and explosives | Estimated Cost to Completion (Completion Year): | \$ 16.8 million(FY 2012) |
| HRS Score: | 35.23 (Loading, Assembling, and Packing Area); placed on NPL in March 1989; 32.08 (Manufacturing Area); placed on NPL in July 1987 | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2007 |
| IAG Status: | IAG signed in June 1989 | Five-Year Review Status: | Completed and planned |
| Contaminants: | Explosives, heavy metals, VOCs, PCBs | | |



Progress To Date

The Army constructed Joliet Army Ammunition Plant (AAP) in the early 1940s. It was then one of the largest munitions and explosives manufacturers in the Midwest. Installation operations included manufacturing explosives, and loading, assembling, and packing (LAP) munitions for shipment. EPA placed the 9,159-acre Manufacturing Area and the 14,385-acre LAP Area on the NPL in July 1987 and March 1989, respectively. The installation consolidated all sites into two operable units (OUs), one for groundwater contamination and another for contamination of soil. The installation signed an interagency agreement in June 1989. In FY95, the installation formed a Restoration Advisory Board. In FY04, the installation completed 5-year reviews for soil and groundwater OUs.

Environmental studies conducted between FY78 and FY88 identified 53 sites at Joliet AAP. The Army has transferred over 20,950 acres, including 15,000 acres to the U.S. Forest Service, in compliance with congressional legislation, and almost 2,820 acres to the State of Illinois for industrial park reuse. The Army also completed an installation-wide Record of Decision (ROD) in FY99. The most significant cleanup activities completed through FY00 were excavation and treatment of contaminated soil. The cleanup progress at Joliet AAP for FY01 through FY04 is detailed below.

In FY01, the installation used innovative technologies to reduce the cost to complete bioremediation of 35,000 tons of explosives-contaminated soil. The groundwater remedy was underway, as were management group work and actions to facilitate preparation of the final ROD for the future U.S. Department of Agriculture (USDA) lands. The installation conveyed 218 acres of remediated property to the State of Illinois for partial industrial reuse.

In FY02, the installation completed bioremediation of an additional 36,000 tons of explosives-contaminated soil. Four hundred fifty-five acres were conveyed to Will County, Illinois. The Army initiated the ROD for future USDA lands. The Army initiated an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance (UXO), discarded military munitions, or munitions constituents that identified Military Munitions Response Program (MMRP) sites at this installation. Two sites were cleared of UXO. The Army resumed

excavation of explosives-contaminated soil from the TNT production area and excavated over 40,000 tons. In addition, prior to the last tenant leaving the installation, the installation swept their function test area and removed UXO debris prior to acceptance of the property by Joliet AAP.

In FY03, the installation excavated an additional 40,000 tons of explosive-contaminated soil from the TNT production area and bioremediated 36,000 tons of soil. The Army completed the third land transfer to the State of Illinois for Island City Industrial Park. The Army initiated a site investigation (SI) at four MMRP sites. A multi-agency group, which includes the Army, EPA, Illinois EPA, USDA, the Forest Service, U.S. Fish and Wildlife Service, and the Illinois Department of Natural Resources, reached agreement on the cleanup goals for Joliet AAP lands transferred to USDA.

In FY04, the installation completed 5-year reviews for soil and groundwater OUs. The Army transferred 305 acres to the State of Illinois; the remaining balance of land slated for the Island City Industrial Park. The installation completed a feasibility study, proposed plan, and ROD for lands transferred to USDA and initiated a transfer of 2,440 acres to USDA. The installation excavated and bioremediated an additional 36,000 tons of explosives-contaminated soil. Additionally, the installation initiated the SIs for MMRP sites.

FY05 IRP Progress

Joliet AAP completed remedial action (RA) in the TNT Area. The Army transferred 304 acres of Deer Run Industrial Park to the State of Illinois in addition to 2,630 acres to USDA. The Army began RA for future USDA lands. The Army initiated a performance-based contract (PBC) for landfills and groundwater. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The installation completed a SI of MMRP sites. The Army procured a PBC addressing landfills and groundwater which will also include optional line items to conduct post-SI actions at the four MMRP sites.

Plan of Action

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

IRP

- Transfer additional 255 acres to State of Illinois in FY06.
- Transfer additional 725 acres to USDA in FY06.
- Continue RA at Soil Remediation Unit 1 sites in FY06-FY07.
- Develop long-term management program for groundwater in FY06-FY07.

MMRP

- Complete remedial design for three MMRP sites in FY06-FY07.
- Implement interim RA for one MMRP site in FY06-FY07.

| | | | |
|------------------------|---------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MI557002476000 | Funding to Date: | \$ 56.3 million |
| Size: | 4,953 acres | Estimated Cost to Completion (Completion Year): | \$ 16.7 million(FY 2028) |
| Mission: | Conducted long-range bombardment and air refueling operations | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Underway and planned |
| IAG Status: | None | | |
| Contaminants: | Petroleum, pesticides, heavy metals, solvents | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1993, the BRAC Commission recommended closure of K.I. Sawyer Air Force Base (AFB), deactivation of the 410th Wing, and transfer of the base's mission. In September 1995, the installation closed. Environmental studies have been in progress at the installation since FY84. Sites identified through environmental studies conducted at the installation include landfills, fire training areas, 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. Interim remedial actions (RAs) have 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 (ST004), and installation of bioventing systems. In FY94, a Restoration Advisory Board (RAB) was formed and the installation received a technical assistance for public participation (TAPP) grant for work performed in FY99. TAPP funding was used for the technical review of documents for ST004, the Fire Training Area 1 (FT006), and Landfill 1 (LF001). The final RA plan (RAP) was completed for LF001 and a draft RAP was completed for ST004. In addition, RAs were completed at LF001. The installation initiated its first 5-year review in FY05.

Twenty-seven sites have required additional investigation at this installation. To date, no further action closure documents have been completed for 21 sites. The cleanup progress at K.I. Sawyer AFB for FY01 through FY04 is detailed below.

In FY01, the installation installed a soil vapor extraction (SVE) system to remediate solvent- and fuel-contaminated soil at FT006. Operation of treatment systems and groundwater monitoring continued and a draft screening-of-remedial-alternatives document was completed. Soil was tested at the Defense Fuels Supply Point (DFSP) at Escanaba (Site OT013) to better define areas of contamination. Escanaba is located approximately 50 miles from K.I. Sawyer AFB.

In FY02, operation of the treatment systems and groundwater monitoring continued. A basewide RAP was submitted to the State as planned. Remedial design (RD) was completed and RA construction (RA-C) began for the removal of contaminated soil and the installation of a soil venting system at OT013. RD was also completed and RA-C was initiated for the alteration and upgrade of the fuel recovery trench at ST004.

In FY03, the installation attained response complete at two sites, FR026 (Firing and Machine Gun Range) and XE027 (EOD Range). The installation also transferred 93 acres to the County of Marquette. A remedial process optimization review was planned for FY04 to identify opportunities for enhancing the effectiveness and efficiency of remediation efforts.

In FY04, the installation completed the RA-C at OT013 and the modification of the ST004 interceptor trench. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed closure sampling for the SVE system at FT006 in anticipation of system shutdown and decommissioning. The closeout sampling protocol was also initiated at Drainage Pond 2 (DP002). The installation developed a shutdown plan at OT013. Groundwater monitoring continued at various sites. Transfer of the remaining property at K.I. Sawyer was completed; only the property at the DFSP at Escanaba (40 acres) remains to be transferred. The installation also initiated the first 5-year review.

The installation combined Escanaba Areas 1 and 2 after the Department of the Interior withdrew its request for the property, in order to deed both parcels together in FY06. The installation did not close out FT006 because additional monitoring was required to ensure that contaminant concentrations were below acceptable levels. The Air Force determined that a performance-based contract was not the best approach for the installation.

The RAB held an annual meeting.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Deed combined Escanaba Areas 1 and 2 in FY06.
- Close out FT006 in FY06.
- Close out DP002 in FY06.
- Optimize the groundwater monitoring plan in FY06.
- Complete the first 5-year review in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|-------------------------|------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | TX657172433300 | Estimated Cost to Completion (Completion Year): | \$ 131.1 million(FY 2020) |
| Size: | 3,997 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2006 |
| Mission: | Provide depot-level aircraft and engine repair | Five-Year Review Status: | Underway and planned |
| HRS Score: | N/A | | |
| IAG Status: | None | | |
| Contaminants: | Metals, VOCs, SVOCs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 245.5 million | | |



Progress To Date

In July 1995, the BRAC Commission recommended closure and realignment of Kelly Air Force Base (AFB). The Defense Distribution Depot, San Antonio, closed in July 2001, and the airfield and all associated support activities were realigned to Lackland AFB, Texas. Sites identified at the installation include landfills, spill sites, former fire training areas, low-level radioactive waste sites, underground storage tanks, aircraft maintenance areas, sludge lagoons, and sludge-spreading beds. The installation formed a Restoration Advisory Board (RAB) in FY94. In FY96, a BRAC cleanup team was formed and the first BRAC cleanup plan was issued. In FY99, the installation received technical assistance for public participation (TAPP) funding that allowed the RAB to review the basewide groundwater assessment and the Agency for Toxic Substances and Disease Registry (ATSDR) public health assessment.

Investigations identified 52 Installation Restoration Program (IRP) sites and several areas of interest at the installation. This includes 35 IRP sites that have been identified on the non-realigned portion of this installation. Sites were separated into five zones. Two range sites have also been identified. To date, the installation has transferred approximately 322 acres to the local redevelopment authority (LRA). The cleanup progress at Kelly AFB for FY01 through FY04 is detailed below.

In FY01, the installation was closed and realigned. Seventeen IRP sites in Zone 1 and parts of Zone 5 were realigned to Lackland AFB. The installation removed an inactive electroplating facility suspected of being a major source of groundwater contamination for Zone 3. The Site S-4 interim remedial action groundwater cleanup system was completed. The draft final Zone 4 soil and off-base shallow groundwater plume remedial investigation were submitted for regulatory review. Input from the community and the San Antonio City Council regarding a community-based solution for off-base shallow groundwater contamination was received.

In FY02, the installation removed inactive portions of the former industrial wastewater treatment plant (IWTP). Also, a permeable reactive barrier to contain groundwater at the base boundary and a bioaugmentation system to treat the warehouse area groundwater source were installed. The installation submitted the Zones 4 and 5 draft final corrective

measures studies (CMSs) for the off-base shallow groundwater contamination to regulators. Groundwater containment trenches were installed at a former evaporation pit and at a fuel spill site. Soil removal was completed and another groundwater containment trench begun at an IRP site. A bioaugmentation remedy was installed on East Kelly, and excavation of acidic tar materials began at the far south side of the base. The last aboveground fuel storage tank was demolished and the soil removed as needed. Construction of a groundwater treatment plant on the north end of the base began. Five RAB meetings were held. Three TAPP reviews were conducted to review proposed cleanup plans for two sites and an ATSDR public health assessment. Several other partnerships were established with the community and regulatory agencies to address public health issues.

In FY03, the installation awarded design and construction contracts for two permeable reactive barriers in off-base residential areas. Petroleum storage tank removals were completed and one tank site was closed. Ten no further action (NFA) determinations were approved for radiological sites. The installation decontaminated and demolished building and interior sewer lines for low-level radiological contamination. Twenty-six low-level radiological sites were closed. The installation submitted and obtained conditional approval of shallow groundwater CMSs. Additional protective measures were completed through a unique partnership with several agencies. Demonstration projects for injection technology were conducted and 6.5 acres were transferred by deed to the LRA.

In FY04, the installation transferred 107 acres to the LRA. The installation installed Zone 5 and began construction of Zone 4 off-base shallow groundwater remedies. The installation also completed the demolition and cleanup of the former IWTP and began construction of the final IRP groundwater and soil remedies in Zone 2. Additionally, the installation completed installation of final IRP groundwater remedies in Zone 3. The community relations plan was updated to indicate the status of remediation efforts and identify ongoing opportunities for community involvement. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The Air Force completed installation of the Zone 4 off-base shallow groundwater remedies. The installation submitted the closure report for the former IWTP. Discussions between the installation and regulators continued on the ecological risk report for Leon Creek. The installation completed construction of the final IRP groundwater and soil remedies in Zone 2.

The RAB continued to meet quarterly; the BCT continued to meet once a month.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Safety determination actions and investigation activities were delayed, pending further evaluation of requirements.

Plan of Action

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

IRP

- Continue long-term monitoring and operations of remedial systems in FY06.
- Continue discussions on ecological risk report for Leon Creek in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | WA017002341900 | Funding to Date: | \$ 32.6 million |
| Size: | 340 acres | Estimated Cost to Completion (Completion Year): | \$ 13.7 million(FY 2031) |
| Mission: | Test, prove, overhaul, and issue torpedoes | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| HRS Score: | 32.61; placed on NPL in October 1989 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in FY90 | | |
| Contaminants: | VOCs, heavy metals, petroleum hydrocarbons, herbicides, fuel, PCBs, pesticides | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

In September 1995, the BRAC Commission recommended realignment of Keyport Naval Undersea Warfare Center (NUWC). The center's responsibility for maintaining combat system consoles and its general industrial workload were moved to Puget Sound Naval Shipyard. Operations at the installation, including plating, torpedo 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. A technical review committee was formed in FY89 and converted to a Restoration Advisory Board in FY95. EPA placed the installation on the NPL in October 1989 and the Navy signed a federal facility agreement in FY90. A community relations plan was completed in FY90 and updated in FY00. The installation completed a 5-year review in FY00 and FY05.

To date, environmental investigations have identified 13 sites at this installation. The installation completed a Record of Decision (ROD) for Operable Units (OUs) 1 and 2. The cleanup progress at Keyport Naval Undersea Warfare Center for FY01 through FY04 is detailed below.

In FY01, the installation finalized the Site 23 time critical removal actions report. Operations and maintenance continued at OU 1. Long-term management (LTM) conducted at OUs 1 and 2 identified sediment issues that required resolution with regulators.

In FY02, the installation continued remedial action (RA)-operations (RA-O). The results from that monitoring period provided data satisfying the sampling requirements set forth in the ROD for OU 1. Negotiations with state regulators began for the contingency actions for off-base domestic wells. LTM sampling was performed for OUs 1 and 2. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed a contingency plan for off-base domestic wells for OU 1. In addition, it continued RA-O at OU 1 and LTM at OUs 1 and 2.

In FY04, the installation continued RA-O at OU 1 and LTM at OUs 1 and 2 and initiated the second 5-year review.

FY05 IRP Progress

Keyport Naval NUWC continued RA-O at OU 1 and LTM at OUs 1 and 2. The installation initiated an optimization study of OU 1, and completed the second 5-year review. Additionally, the installation resolved sediment issues.

FY05 MMRP Progress

The installation identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Keyport Naval Undersea Warfare Center are grouped below according to program category.

IRP

- Continue RA-O at OU 1 in FY06.
- Continue LTM at OUs 1 and 2 in FY06.
- Complete optimization study of OU 1 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MO721382048900 | Estimated Cost to Completion (Completion Year): | \$ 65.9 million(FY 2035) |
| Size: | 3,935 acres | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| Mission: | Manufacture, store, and test small-arms munitions | Five-Year Review Status: | Completed |
| HRS Score: | 33.62; placed on NPL in July 1987 | | |
| IAG Status: | IAG signed in September 1989 | | |
| Contaminants: | Explosives, heavy metals, solvents, VOCs, POLs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 119.8 million | | |



Progress To Date

Operations at the Lake City Army Ammunition Plant (AAP), a government-owned, contractor-operated facility, include the manufacture, storage, and testing of small-arms munitions. Principal site types at the installation include abandoned disposal pits, sumps, firing ranges, old lagoons, old dumps, and closed RCRA lagoons and burning grounds. Sampling at seven representative areas identified groundwater contaminated with volatile organic compounds (VOCs), explosives, and heavy metals. EPA placed Lake City AAP on the NPL in July 1987, and EPA and the Army signed an interagency agreement in September 1989. The installation formed a Restoration Advisory Board (RAB) in FY97.

Environmental studies identified 73 sites at the installation, which have been consolidated into 35 sites for further investigation. The Army completed two Records of Decision (RODs). The cleanup progress at Lake City AAP for FY01 through FY04 is detailed below.

In FY01, the installation awarded the contract for remediation of lead-contaminated soil in the Area 18 Operable Unit (OU). The Army completed a design for a removal action at Northeast Corner OU (NECOU) Area 16 abandoned landfill, which involved a landfill cover and leachate collection trench. Additional data collection and treatability studies were underway for a complete Installation Wide OU (IWOU) interim action remedial investigation and feasibility study (RI/FS), proposed plan, and ROD.

In FY02, the Army completed an environmental database for all of the OUs, resulting in improved work planning, cost reduction, and better management decisions. Characterization work continued in the NECOU and Area 18 OUs.

In FY03, the installation completed permeable reactive wall plume delineation activities, which included the collection and review of data, and prepared a summary report. The field characterization work plan for the IWOU was completed. The Army installed monitoring wells to confirm and monitor VOC plumes in NECOU. The installation completed source characterization sampling, completed field screening, and installed approximately 35 of the 70 total monitoring wells. The installation initiated the installation of the remaining 35 wells

and began soil sampling. Sampling of Area 18 monitoring wells was completed. The installation continued pump and treat operations to contain contaminated groundwater. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY04, the installation continued operation of the pump and treat system to contain contaminated groundwater and executed a transition plan from total environmental restoration contract to performance-based contract (PBC). The PBC contractor completed work plans for sampling characterization activities in all OUs. Sampling activities began in Area 18. The installation began the IWOU RI/FS. The PBC contractor developed a schedule for completion of remedies in place by FY07. The installation completed a new groundwater model and developed a groundwater management strategy. Sampling was completed to validate the public health risk assessment for the active firing range. The installation prepared a draft engineering evaluation and cost analysis (EE/CA) for the non-time critical removal action for five "housekeeping" sites. The Army completed the CTT ranges and sites inventory and identified one closed Military Munitions Response Program (MMRP) site. The installation hosted four RAB meetings and one RAB workshop.

FY05 IRP Progress

Lake City AAP completed removal actions at three of the five "housekeeping" sites. The installation completed RI activities. The installation executed the pilot tests in Area 18 and NECOU. The installation updated the sitewide groundwater model and monitoring plan. Two additional offsite wells were constructed and sampled. The Army completed the characterization of and EE/CA for the inactive sumps. Additionally, pump and treat operations continued. The installation completed its first 5-year review. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Continue operation of the pump and treat system to contain contaminated groundwater in FY06.
- Complete removal actions at Area 31, inactive sumps, and the Area 10 Sand Piles in FY06.
- Complete RI activities in FY06.
- Complete FSs for all three OUs in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------|-------------------------------------|--------------------------|
| FFID: | NJ217002727400 | Estimated Cost to Completion | \$ 42.3 million(FY 2046) |
| Size: | 7,382 acres | (Completion Year): | |
| Mission: | Perform technology development and engineering | IRP/MMRP Sites Final RIP/RC: | FY 2000/FY 2012 |
| HRS Score: | 50.53; placed on NPL in July 1987 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in October 1989 | | |
| Contaminants: | Fuels, PCBs, solvents, TCE, waste oils | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 52.8 million | | |



Progress To Date

Historical operations at Lakehurst Naval Air Engineering Station (NAES) involved handling, storage, and onsite disposal of hazardous substances. EPA placed the installation on the NPL in July 1987, and the Navy signed a federal facility agreement in October 1989. In FY01, the installation completed a 5-year review.

To date, 45 potentially contaminated sites have been identified. As of FY99, the installation completed Records of Decision for all sites. The cleanup progress at Lakehurst NAES for FY01 through FY04 is detailed below.

In FY01, a treatability study of bimetallic nanoscale particle (BNP) technology was completed to determine its effectiveness for treating Area I and J groundwater. This treatment is in addition to the ongoing natural restoration. The installation completed the 5-year review addressing soil at Sites 13, 16, 17, 28, 31, and 32 and groundwater at Areas A-E and H-K. A new soil vapor extraction (SVE) well was added to the Site 13 SVE system. Oxygen release compound (ORC) was injected at Sites 13, 16, 17, and 32 to accelerate remediation of groundwater in these areas.

In FY02, the evaluation of ORC injected at Sites 13, 16, 17, and 32 was completed. The initial round of ORC injection was not effective in reducing groundwater contaminant levels to meet applicable or relevant and appropriate requirements. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. Six MMRP sites were identified at this installation.

In FY03, the installation continued operation and maintenance (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. The installation began using BNP to treat areas of higher level groundwater contamination in Areas I and J. The installation submitted a list of ranges at Lakehurst NAES to be addressed under the MMRP. A preliminary site survey, conceptual models, and draft preliminary assessments (PAs) have been completed for these ranges.

In FY04, the installation obtained a no further action determination for Site 28, which will be included in the construction completion report for Lakehurst NAES. It also completed nanoscale particle treatment of higher level groundwater contamination in Areas I and J (in addition to natural restoration) to demonstrate that all remedies are operating properly and successfully and continue with the NPL construction completion process. Lakehurst NAES added a sparge well and thermal oxidizer to existing soil vapor treatment system at Site 13 and reduced sampling requirements for 3 existing pump and treat systems. The installation completed the draft final PAs for four sites.

FY05 IRP Progress

Lakehurst NAES conducted treatability testing of in situ chemical oxidation for treatment of groundwater at Site 16. The installation continued O&M, monitoring, data interpretation, and reporting for three pump and treat systems, four SVE/bioventing/sparge systems, six spray irrigation systems, and one natural restoration site.

Regulatory issues expanded BNP treatment in Areas I and J.

FY05 MMRP Progress

Lakehurst NAES distributed draft final PAs to regulators for review and comment. The installation conducted data collection, a site visit, and prepared a PA for the Lakehurst Proving Grounds.

Plan of Action

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

IRP

- Complete 5-year review in FY06.
- Expand treatment of groundwater in Areas I and J using BNP in FY06.
- Continue 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 FY06-FY07.

- Expand/add sparge systems at Sites 13, 16, 17, and 32 to accelerate source area groundwater remediation in FY06-FY07.

MMRP

- Distribute final PAs for Lakehurst Proving Ground Site and Small Range Sites in FY06.
- Submit draft site investigation reports for MMRP sites in FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | VA357212447700 | Funding to Date: | \$ 68.6 million |
| Size: | 3,152 acres | Estimated Cost to Completion (Completion Year): | \$ 11.1 million(FY 2015) |
| Mission: | Air Combat Command Headquarters, 1st Fighter Wing, 74th Tactical Control Facility, 480th Reconnaissance Technical Group, and NASA Langley Research Center | IRP/MMRP Sites Final RIP/RC: | FY 2014/FY 2014 |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | Petroleum products, chlordane, PCBs, heavy metals, solvents | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Langley Air Force Base (AFB) has been an airfield and an aeronautical research center since 1917 and is the home base of the 1st Fighter Wing and Headquarters Air Combat Command. The base was placed on the NPL in May 1994. Sites at this installation include landfills, underground storage tanks, a bulk fuel distribution system, and storm sewers. Investigations have determined that contaminants are migrating into Tabbs Creek, the Back River, and ultimately the Chesapeake Bay. The installation formed a Restoration Advisory Board. A 5-year review was completed in FY01 and FY04 for Spill Site 61 (SS 61).

To date, the Air Force has identified 57 sites at the installation. To date, six bilaterally signed Records of Decision (RODs) and two unilaterally signed RODs have been signed. The cleanup progress at Langley AFB for FY01 through FY04 is detailed below.

In FY01, the decision document for no further action on Site SS 24 was signed. Remedial investigations (RIs) were completed for seven sites. Feasibility studies (FSs) were completed for 13 sites. Proposed plans (PPs) were completed for 14 sites, and 5 sites were closed.

In FY02, the installation completed remedial designs (RDs) for seven sites. The installation also completed an RI for Site SS 63 and a PP for Site OT 55. All FY02 annual requirements were met to prepare for the 5-year review at SS 61. The WP 02 and WP 14 site FSs were completed. Dispute resolution was invoked concerning the institutional control language used for Langley Environmental Restoration Program sites.

In FY03, the installation completed a site inspection (SI) for Area of Concern 66 (AOC 66), AOC 67, and AOC 68; and an FS for Sites Landfill (LF) 17, OT 55, and SS 63. Remedial actions (RAs) for Sites LF 05, LF 07, LF 12, and LF 18 as well as RDs for Sites WP 02 and WP 14 were also completed. In addition, the Air Force closed Site OT 55 and met all FY03 annual requirements to prepare for the 5-year review at Site SS 61. The installation initiated a no further RA planned determination for Site OT 55 as recommended by the RI/FS.

In FY04, Langley AFB completed a 5-year review on Site SS 61. In order to put all sites on the same schedule, Sites LF 05, 07, 10, 12, 18, and FT 41 were added to the 5-year review. Long-term monitoring for Sites LF 05, 07, 12, 18, and FT 41 was completed. The installation also completed SIs for three AOCs, an FS for three sites, and RA-construction (RA-C) for one site.

FY05 IRP Progress

Langley AFB awarded a 5-year basewide guaranteed fixed price performance-based contract (PBC). The contract includes FS to site closure for Sites WP 08, LF 17, OT 25, SS 63, and LF 70 as well as long-term monitoring at Sites LF 05, 07, 12, 18, FT 41, SS 61, and OT 64. The installation also developed a NPL delisting strategy as part of the PBC. Langley AFB began RA at Site LF 10 (western lobe) and LF 11 and changed the remedy at Site LF 01 due to proximity to the airfield and numerous buried utilities. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The Defense and State Memorandum of Agreement Cooperative Agreement with the State of Virginia was updated and identified levels of effort by the State through June 2012 in support of the Installation Restoration Program (IRP).

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Complete FS, PP, ROD, RD, RA, and RA work plan for IRP Sites LF 17 and OT 25 in FY06.
- Finalize preliminary remediation goals discussion, complete FS, PP, ROD and RAWP/RD for Site SS 63, Back River Sediments in FY06
- Complete FS, PP, and ROD for AOC LF 70 in FY06.

- Complete FS, PP, and ROD for Site OT 64, base groundwater in FY06.
- Continue LTM in FY06.
- Complete RA at Sites LF 10 and 11 in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| FFID: | PA321382050300 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 18,683 acres | Funding to Date: | \$ 115.1 million |
| Mission: | Store, maintain, and decommission ammunition; rebuild and store tracked and wheeled vehicles; rebuild, store, and maintain missiles | Estimated Cost to Completion (Completion Year): | \$ 13.2 million(FY 2016) |
| HRS Score: | 34.21 (Southeastern Area); placed on NPL in July 1987; 37.51 (Property Disposal Office); placed on NPL in March 1989 | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| IAG Status: | IAG signed in February 1989 | Five-Year Review Status: | Completed and planned |
| Contaminants: | VOCs, POLs, PCBs, heavy metals, explosives, asbestos | | |



Progress To Date

Letterkenny Army Depot contains various contaminated sites resulting from its ammunition and vehicle maintenance missions. Sites include disposal lagoons and trenches, oil burn pits, an open burning and open detonation area, an explosives washout plant, two scrap yards, landfills, industrial wastewater treatment plant lagoons, and industrial wastewater sewer lines. EPA has placed two areas of Letterkenny on the NPL: the southeastern (SE) area in July 1987 and the Property Disposal Office (PDO) in March 1989. Both sites are in the southern part of the installation. The Army and EPA signed an interagency agreement in February 1989. The installation has concentrated its remedial efforts on source removal methods, including excavation, low-temperature thermal treatment, and backfilling and capping of soil in the industrial wastewater treatment plant lagoons and the three K-Areas; emergency repairs to leaking industrial wastewater sewers; removal of the PDO fire training pit; and emergency removal of playground soil at the PDO area and of sediment contaminated with polychlorinated biphenyls (PCBs) in the Rocky Spring springhouse. In FY96, the Army established a BRAC cleanup team, the community formed a local redevelopment authority, and the installation established a Restoration Advisory Board (RAB). The Army completed a 5-year review for the SE area in FY02.

The installation has signed five Records of Decision (RODs) to date. The Army has transferred approximately 890 acres to date. The cleanup progress at Letterkenny for FY01 through FY04 is detailed below.

In FY01, the enhanced biodegradation project at Building 37 continued. The Army completed the Phase II limited depth transfer proposed plan (PP) and ROD. The installation completed the draft RI and risk assessments for SE Operable Units (OUs) 2 and 4. The Army completed the soil removal at the truck open storage area and the emergency soil removal at SE OU 9 Landfill J, and awarded the PDO scrap yard soil removal contract.

In FY02, the installation completed a Phase II limited depth transfer and decontaminated Buildings 651 and 652. The Army completed the SE area 5-year review. The installation completed the soil removal action for PDO OU 5 and the Defense Reutilization and Marketing Office scrap yard PCBs.

The installation initiated the focused feasibility study (FFS), PP, and ROD for SE OU 11 and SE OU volatile organic chemical (VOC)-contaminated groundwater. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. No Military Munitions Response Program (MMRP) sites were identified at this installation.

In FY03, the installation signed a finding of suitability to lease. Groundwater sampling results of Phase III parcels demonstrated that the Phase III parcels were clean. The Phase III finding of suitability to transfer (FOST) was signed. The installation conducted a tour of the installation sites for the RAB. Letterkenny Army Depot was announced as the 2002 winner of the Secretary of the Army's Environmental Award for Environmental Restoration.

In FY04, the Army transferred the Phase III BRAC property. The installation initiated the removal of lead contaminated soil at Old PDO Scrapyard. The installation continued groundwater sampling for PDO OU 2.

FY05 IRP Progress

The Army signed a ROD for SE OU 4. The installation submitted RODs for Phase IV and SE OU 10 for regulatory review.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Install and sample additional wells in SE OUs 3, 6, and 11 to address groundwater plume delineation issues in FY06.
- Complete the FFS and remedial design phase for the on- and off-post contaminated groundwater (SE OUs 3, 6 and 11) in FY06.
- Sign ROD and FOST for Phase IV parcels in FY06.
- Complete the Phase IV parcels property transfer in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

Depot

| | | | |
|------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | KY421382050900 | Funding to Date: | \$ 28.2 million |
| Size: | 780 acres | Estimated Cost to Completion (Completion Year): | \$ 3.1 million(FY 2005) |
| Mission: | Conducted light industrial operations, including paint stripping, metal plating, etching, and anodizing | IRP/MMRP Sites Final RIP/RC: | FY 2005/None |
| HRS Score: | N/A | Five-Year Review Status: | Completed |
| IAG Status: | None | | |
| Contaminants: | VOCs, SVOCs, heavy metals, PCBs, pesticides, herbicides, and asbestos | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

In December 1988, the BRAC Commission recommended closure of the Lexington Facility, Lexington-Bluegrass Army Depot (LBAD). The Army leased the installation to the Commonwealth of Kentucky in FY94 and the installation closed as scheduled in FY95. For transfer, the Army divided LBAD into two parcels: the 211-acre public benefit conveyance (PBC) and the 564-acre economic development conveyance (EDC). Past studies at LBAD identified 64 sites that required further investigation at the installation. A RCRA facility assessment identified 30 solid waste management units (SWMUs) and 2 areas of concern (AOCs). Site types include: landfills (new, old, and industrial and sanitary waste disposal), industrial waste lagoons, industrial wastewater treatment plants, and groundwater. The Army performed a RCRA facility investigation (RFI) from October 1991 to February 1993 and remediated affected areas under an April 1994 RCRA corrective action order. In FY94, the installation formed a BRAC cleanup team. EPA and the Kentucky Department of Environmental Protection (KDEP) concurred on the Phase I RFI and corrective measures study (CMS) documents in FY97 by moving 16 of the unresolved SWMUs and AOCs, including groundwater, into a second phase (Phase II) RFI for further evaluation. Sampling data from the initial phase of the RFI showed contaminated groundwater, soil, and sediment at 29 sites. In FY98, LBAD established a Restoration Advisory Board. The installation completed version III of the BRAC cleanup plan in FY99.

The cleanup progress at LBAD for FY01 through FY04 is detailed below.

In FY01, the Army completed the Phase IIB transfer of five buildings and railroad infrastructure without underlying land to the Commonwealth of Kentucky. LBAD and KDEP agreed on cleanup standards for lead. The installation completed a statement of basis (SB) for the Vehicle Wash Rack I site, soil adjacent to Building 27, and the underground emergency holding tank site.

In FY02, the Army excavated the Defense Reutilization and Marketing Office storage yard pavement due to polychlorinated biphenyl (PCB) contamination. LBAD and KDEP agreed on a sitewide arsenic resolution. The Army prepared a draft finding of suitability to transfer for the PBC to be transferred for

recreational purposes and submitted it to KDEP and EPA for preliminary review. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. No Military Munitions Response Program (MMRP) sites were identified at this installation.

In FY03, the Army completed the groundwater conceptual model for the PBC and EDC. The installation completed six site SBs with state approval.

In FY04, the installation submitted the final Phase II RFI/CMS for soils and groundwater and the groundwater CMS to EPA and KDEP. The installation submitted the deed of transfer for the PBC to the Commonwealth of Kentucky. The installation submitted the final land use control/corrective measures implementation plan to regulators. The Army, the University of Kentucky, KDEP, and EPA collaborated to resolve risk issues concerning the presence of arsenic in surface soils.

FY05 IRP Progress

The installation completed well abandonment and the final Phase II RFI/CMS resulting in a signed agreement order between the Army and KDEP incorporating post-transfer land use control restrictions. A public comment period on all interim remedial actions conducted over several years at LBAD was completed and KDEP approved the interim actions as completed final actions.

Regulatory issues delayed the deed transfer for the EDC to the Commonwealth of Kentucky.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Lexington Facility, Lexington-Blue Grass Army Depot are grouped below according to program category.

IRP

- Submit the deed for transfer for the EDC to the Commonwealth of Kentucky in FY06.
- Continue groundwater and landfill monitoring in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | |
|-------------------------|-------------------------------------------|
| FFID: | TX621382183100 |
| Size: | 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: | \$ 26.2 million |

| | |
|--------------------------------------------------------|-------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2036) |
| IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| Five-Year Review Status: | Planned |



Progress To Date

The Lone Star Army Ammunition Plant (AAP) loads, assembles, and packs munitions. From 1943 to 1944 the Old Demolition Area (ODA), Site 17, was used to destroy faulty or nonstandard explosives. Environmental studies revealed explosives and metal contamination in the ODA. EPA placed the ODA on the NPL in 1987. RCRA sites investigated include surface impoundments, landfills, fuel storage areas, and load lines. Investigations revealed soil contamination with solvents, metals, and explosives at some sites and groundwater contamination at one site. The Army and EPA signed an interagency agreement in 1990. In FY01, the installation solicited interest in forming a Restoration Advisory Board, but interest was insufficient.

The ODA is the only CERCLA site at the installation. One Record of Decision has been signed to date. The cleanup progress at Lone Star AAP for FY01 through FY04 is detailed below.

In FY01, the Army began construction of the soil cover and erosion controls at the NPL site. The installation awarded the remedial design (RD) contract for Site 33 (G Ponds). The affected-property assessment report for the western inactive sanitary landfill was completed. The installation completed all fieldwork for RCRA facility investigations.

In FY02, the Army completed construction of the soil cover erosion controls at Site 17 (the NPL site) and initiated the RD at Site 16 (High Explosives Burning Ground). The remedial action (RA) at Site 33 (G Ponds) was completed. The installation determined that the RD at Site 422 (B 8 Battery Washdown Sump) was unnecessary. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. The inventory identified one closed range (Site 17), which was determined to already be under the Installation Restoration Program (IRP).

In FY03, the installation continued groundwater monitoring at Sites 2, 17, and 34.

In FY04, the installation continued long-term management (LTM) at Sites 2, 17, 24, 33, and 34. Remedial investigations

(RIs) began at Sites 6, 9, and 101. The installation completed the RD and began the soil removal action at Site 20. The Army received State approval of no further action (NFA) for Sites 78, 79, and 80.

FY05 IRP Progress

Lone Star AAP completed the RI at Site 101 with NFA. The installation initiated LTM at Site 16 and continued LTM at Sites 2, 17, 24, 33, and 34. RAs were completed at Sites 9, 16, and 20. The installation initiated RA at Site 6. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The Army has identified no Military Munitions Response Program (MMRP) sites at this installation.

Plan of Action

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

IRP

- Continue LTM at Sites 2, 16, 17, 24, 33, and 34 in FY06.
- Perform groundwater modeling study at Site 2 in FY06.
- Complete RA at Site 6 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------|
| FFID: | CA917002727200, CA917002755400, CA917002319000, and CA917002726700 | Contaminants: | Solvents, acids, blasting grit, paint, heavy metals, industrial liquid waste |
| Size: | 1,563 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Provide logistics support; perform work in connection with construction, alteration, dry docking, and outfitting of ships and craft assigned; perform manufacturing, research, development, and test work | Funding to Date: | \$ 61.8 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 12.4 million(FY 2014) |
| IAG Status: | None | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| | | Five-Year Review Status: | Planned |



Progress To Date

The Long Beach Naval Complex consists of the Long Beach Naval Shipyard (NSY), Naval Station (NS) Long Beach, and the Long Beach Naval Hospital (NAVHOSP). The Naval Complex provided logistics support, construction, alteration, dry docking, and outfitting of ships and craft. The BRAC Commission recommended closure of the NAVHOSP, the NS, and associated housing areas in FY91; closure occurred in FY94. Closure of the NSY and associated housing areas was recommended in FY93 and occurred in FY97. 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 were used to dispose of ship wastes, drilling mud, and construction debris. In FY94, the Navy formed a BRAC Cleanup Team (BCT), which completed a BRAC cleanup plan. The BCT, composed of regulators and the Local Reuse Authority, meets monthly. In addition, the Joint NS and NSY technical review committee was converted to a Restoration Advisory Board (RAB). The RAB meets semi-annually. The Navy completed a 5-year review in FY04.

To date, the installation has completed Records of Decision (RODs) for Sites 3, 4, 5, and 6A in FY98, and Sites 8 and 10 in FY04. In addition, a combined ROD was completed for Sites 1 and 2 in FY00. The cleanup progress at Long Beach Naval Complex for FY01 through FY04 is detailed below.

In FY01, the installation completed Post-ROD long-term operations (LTO) and long-term management (LTM) for the year at Sites 1 and 2. The interim remedial action (RA) at Site 14 was initiated.

In FY02, the installation worked toward completing the Site 14 LTO/LTM. The feasibility studies (FSs) and proposed plans (PPs) for Sites 8, 10, and 11 were completed. The Sites 9, 12, and 13 FSs were completed. The Navy completed an inventory of Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this Navy.

In FY03, remedial assessment operations at Sites 1, 2, and 14 continued on schedule. Significant progress was made on the ROD for Sites 8 and 10; Site 11 was removed from the ROD in order to facilitate property transfer issues.

In FY04, the installation began LTM operations at Sites 1, 2, and 14, but did not meet all RA objectives; additional monitoring was required. The installation completed the Site 7 FS, Sites 8 and 10 ROD/remedial action plan (RAP); and Sites 9, 12, and 13 PPs on schedule. The installation initiated a PP for Site 7 and RODs for Sites 7, 9, 11, 12, and 13. The draft 5-year review for Sites 1-6A, 14, and Palos Verdes operable unit (OU) 1 was completed. Drafts of the Sites 9, 12, and 13 PPs were completed. Regulatory agencies requested RODs for Site 14, Palos Verdes OU 1, and all area of concern sites that require institutional controls. The RAB met quarterly and the BCT met monthly. Both the RAB Navy and community co-chair attended the Navy-hosted RAB workshop in July 2004 and the Navy solicited new RAB membership.

FY05 IRP Progress

Long Beach Naval Complex initiated a radiological investigation work plan for Sites 1 and 2 and conducted LTM at Sites 1, 2, 11, 12, 13, 14, and Palos Verdes Housing OU 1. The Navy also finalized the 5-year review for Sites 1-6A, 14, and Palos Verdes OU 1. In addition, the Navy drafted the Site 7 FS addendum and finalized the Site 9 ROD/RAP. The Navy also drafted the remedial design (RD)/RA work plans for Sites 8, 9, and 10 and completed the Site 16 expanded site inspection and obtained clean closure. Lastly, the Navy conducted pre-closure groundwater sampling for Buildings 101 and 118 and initiated a screening level ecological risk assessment (SLERA) for Palos Verdes OU 1. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The Navy 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

- Complete radiological investigation work plan and field work for Sites 1 and 2. Conduct groundwater monitoring. Draft and complete limited FS/PP for 1C at Site 6B in FY06.
- Finalize FS addendum and PP and draft ROD for Site 7. Finalize and implement RD/RA work plans and conduct LTM for Sites 8, 9, and 10. Finalize ROD, draft RD/RA Work Plan, and conduct LTM for Sites 11, 12, and 13 in FY06.
- Conduct groundwater monitoring and initiate documentation for ICs for Site 14 in FY06. Complete SLERA, LTM for the Palos Verdes OU 1 in FY06.
- Complete groundwater monitoring and obtain clean closure for Buildings 101 and 118. Initiate basewide RCRA permit closure, update site management plan and federal facilities site remediation agreement schedule, and conduct BCT and RAB meetings. Complete evaluation and negotiations related to regulatory request for basewide ROD for institutional controls in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | TX621382052900 | Funding to Date: | \$ 88.3 million |
| Size: | 8,493 acres | Estimated Cost to Completion (Completion Year): | \$ 34.3 million(FY 2015) |
| Mission: | Loaded, assembled, and packed pyrotechnic and illuminating signal munitions | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2014 |
| HRS Score: | 39.83; placed on NPL in August 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in October 1991 | | |
| Contaminants: | Explosives, heavy metals, VOCs, perchlorate | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Longhorn Army Ammunition Plant (LHAAP) manufactured pyrotechnic and illuminating signal munitions and solid-propellant rocket motors. EPA placed the installation on the NPL in August 1990. The Army and EPA signed an interagency agreement in October 1991. Identified sites included storage areas, landfills, open burning grounds, industrial areas, burial pits, sumps, and wastewater treatment plants. The Army awarded a technical assistance for public participation contract to determine the effects of on-post contamination on surface water entering Caddo Lake in FY99. The Army completed a 5-year review in FY02 for Sites 12, 16, 18, and 24. The installation updated the community relations plan (CRP) in FY03. In FY04, the installation formed a Restoration Advisory Board (RAB).

Environmental studies identified 50 sites at the plant, 18 of which are eligible for the Installation Restoration Program (IRP). The installation divided the sites into five groups. Two Records of Decision (RODs) and two No Further Action RODs have been completed to date. The Army has transferred approximately 6,500 acres to date. The cleanup progress at LHAAP for FY01 through FY04 is detailed below.

In FY01, the installation continued collection and treatment of groundwater from the burning ground and added a fluidized bed reactor for treatment of perchlorate. The Army awarded a contract to continue additional investigations, in accordance with a dispute resolution agreement with EPA and the state. The installation completed remedial investigation (RI) reports for Group 2 and 4 sites and the Site 16 ecological risk assessment (ERA).

In FY02, the Army completed the 5-year review report for interim actions at Sites 12, 16, 18, and 24. The installation completed the perchlorate investigation and RI reports, including risk assessments, for Groups 2 and 4. It also completed the Site 16 feasibility study (FS). The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance (UXO), discarded military munitions, or munitions constituents. The Army identified three Military Munitions Response Program (MMRP) sites at this installation.

In FY03, the Army was the recipient of over \$1 million of funded grant work from the Environmental Security Technology Certification Program and the National Institutes of Health for field pilot studies designed to treat groundwater contaminated with perchlorate. The Army completed a successful FS for in situ treatment of perchlorate in soils. The installation completed work plans for the background study and ERA. The Army held a public meeting, compiled community surveys, and updated the CRP.

In FY04, the installation conducted a transition and partnering meeting with regulators, the U.S. Fish and Wildlife Service (USFWS), and other Army personnel in anticipation of the change in installation managers from Army Material Command to BRAC and a transfer meeting with the USFWS, the General Services Administration, and others to facilitate property transfer. The installation prepared an environmental condition of property (ECOP) and participated in the development of an overarching transfer memorandum of agreement between USFWS and the Army. In 2 separate actions, the Army transferred a total of approximately 5,800 acres to USFWS as part of the Caddo Lake National Wildlife Refuge. The installation prepared a second ECOP to support the FY05 transfer of a 125-acre tract of CERFA Category 1 land to USFWS. The installation reviewed the environmental site assessment/Environmental Baseline Survey for the Production Area. The installation achieved response complete (RC) at LHAAP 045 without an RI/FS. The installation initiated site inspections for three MMRP sites and reviewed historical record reports and site conceptual models for LHAAP 001 R (South Test Area), LHAAP 002 R (Static Test Area), and LHAAP 003 R (Ground Signal Test Area). The installation held meetings with regulators and other stakeholders to familiarize them with the MMRP process and to generate input and approval. The installation conducted a site tour for regulators and stakeholders. The installation provided UXO and munitions and explosives of concern recognition training to regulators, stakeholders, and interested public. The installation established a RAB.

FY05 IRP Progress

The installation awarded a performance-based contract (PBC) to address most of the remaining environmental restoration work. The installation completed two FSs for LHAAP 12 and

LHAAP 67. The installation completed the sitewide ERA through Step 3 and submitted the report to regulators. The ERA is now part of the PBC performance work statement. Additional sampling and evaluation at LHAAP 32 recommended no further action (NFA), so an FS was not required. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the FS for LHAAP 37 and ROD for LHAAP 12. Regulatory issues also delayed the RODs for LHAAP 37 and LHAAP 67, since the proposed plans and RODs for the two sites will be combined. The ROD for LHAAP 32 was delayed after the planned action for the ROD changed to NFA. Regulatory issues delayed the completion of the sitewide ERA.

The RAB ratified its charter, elected a co-chair, and held quarterly meetings.

FY05 MMRP Progress

The installation completed MMRP site investigations for three sites and initiated an engineering evaluation and cost analysis (EE/CA) for each of the sites.

Plan of Action

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

IRP

- Achieve RC at LHAAP 4, 49, 50, 55, 60, and 66 in FY06.
- Complete FS for LHAAP 37 in FY06.
- Complete RODs for LHAAP 8, 32, 37, 48, 53, and 67 in FY06.
- Complete sitewide ERA in FY06.
- Complete 5-year review in FY07.

MMRP

- Complete EE/CAs for three MMRP sites in FY06.

| | | | |
|------------------------|--------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | ME157002452200 | Funding to Date: | \$ 134.3 million |
| Size: | 9,472 acres | Estimated Cost to Completion (Completion Year): | \$ 26.9 million(FY 2299) |
| Mission: | Support B-52 bombers and KC-135 tankers | IRP/MMRP Sites Final RIP/RC: | FY 2000/FY 2006 |
| HRS Score: | 34.49; placed on NPL in February 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in April 1991; revision signed in 1994 | | |
| Contaminants: | VOCs, waste fuels, oils, spent solvents, PCBs, pesticides, heavy metals | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Loring Air Force Base (AFB) was established in 1952 to support B-52 bombers and KC-135 tankers. Environmental studies began at the base in FY84. In July 1991, the BRAC Commission recommended closure of the base. EPA placed the installation on the NPL in February 1990 and the Air Force signed a federal facility agreement in April 1991, which was revised in 1994. 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. Sites identified include spill areas, landfills, fire training areas, underground storage tanks, aboveground storage tanks, and low-level radioactive waste areas. Interim remedial actions (RAs) were initiated in FY93 and included removal of free product at three sites, source removal at two sites, and treatability studies of bioventing and solvent extraction. In FY94, an Environmental Baseline Survey was completed. The installation formed both a BRAC cleanup team (BCT) and a Restoration Advisory Board (RAB) in FY94. In FY98, the BCT published and updated the BRAC cleanup plan. Five-year reviews were completed in FY00 and FY05.

Sites at Loring AFB are grouped into 13 operable units. To date, 12 Records of Decision have been signed, with the last 2 signed in FY99. The Air Force has transferred all property to the Loring Development Authority (LDA). The cleanup progress at Loring AFB for FY01 through FY04 is detailed below.

In FY01, the installation transferred 2,884 acres of airfield, business, and commercial property by deed to the LDA. The treatment system for the Argyle pump station spill site was installed. The installation initiated an institutional control management plan (ICMP). The State initiated a pilot study at the base quarry to evaluate an innovative technology for remediation of dense nonaqueous phase liquid in bedrock. Groundwater monitoring continued and active soil cleanup systems were operated as planned.

In FY02, the installation drafted a cleanup plan for Mattawamkeag pump station and submitted it to the Maine Department of Environmental Protection (DEP). The installation developed an action plan for recently identified polychlorinated biphenyl (PCB) contamination near the east branch of Greenlaw Brook. The installation provided support to the State

and EPA for their pilot study at the former quarry. Groundwater monitoring and the operation of soil cleanup systems continued. Several systems were optimized based on reviews of FY01 progress.

In FY03, the installation submitted the ICMP and received comments from the Maine DEP. Groundwater monitoring and soil cleanup systems operations continued. A finding of suitability to transfer (FOST) was coordinated for the 200-mile pipeline from Loring AFB to Searsport.

In FY04, the installation completed the operating properly and successfully determinations with EPA concurrence for all sites at Loring AFB. Treatment systems for soil cleanups continued to make progress towards remedial goals, and groundwater monitoring remedies remained protective of human health and the environment. The installation submitted property transfer documents for concurrence. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed the FOST for all remaining property, which was transferred to the LDA. Operations and monitoring continued for all remaining cleanup systems. The installation completed the second 5-year review. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

RAB and BCT activities continued.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Complete the RA at the Fuels Tank Farm by excavating and landfarming contaminated soil

- in FY06.
- Continue to operate, monitor, and optimize remedies across the installation in FY06.
- Close out the base laundry site (SS028) in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | LA621382053300 | Funding to Date: | \$ 59.2 million |
| Size: | 14,974 acres | Estimated Cost to Completion (Completion Year): | \$ 2.6 million(FY 2009) |
| Mission: | Manufacture ammunition metal parts and maintain ammunition production facilities | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2009 |
| HRS Score: | 30.26; placed on NPL in March 1989 | Five-Year Review Status: | Completed and underway |
| IAG Status: | IAG signed in 1989 | | |
| Contaminants: | TNT, RDX, HMX, Oils, grease, degreasers, phosphates, solvents, metal plating sludges, acids, fly ash | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

The Louisiana Army Ammunition Plant (AAP) manufactures ammunition parts for the Army. EPA placed the installation on the NPL in March 1989 and the Army and EPA signed an interagency agreement later that year. Sites identified at the installation include lagoons, burning grounds, and landfills contaminated with explosives and plating wastes. Studies identified no off-site contamination; however, groundwater monitoring wells at the installation did reveal contamination with explosive compounds, such as TNT, RDX, and HMX. The potential for off-site migration of contaminants required groundwater monitoring beyond the northern and southern boundaries of the installation; the groundwater monitoring still continues. The Army conducted 5-year reviews for the interim remedial action at the Area P lagoons; one in FY94 that confirmed that the source of the contamination had been removed and another in FY00 that received EPA approval.

The Army identified 7 sites during a preliminary assessment and site inspection (SI) in FY78 and 13 additional sites in FY93 and FY94 (the Y-line etching facility, 9 load-assemble-pack lines, and 3 test areas). The Army identified two additional Military Munitions Response Program (MMRP) sites in FY03. Between FY89 and FY90, the installation incinerated almost 102,000 tons of explosives-contaminated soil and treated more than 53 million gallons of contaminated water. The installation completed one Record of Decision (ROD) and one No Further Action ROD. The cleanup progress at Louisiana AAP for FY01 through FY04 is detailed below.

In FY01, the installation worked with regulators to resolve their concerns related to the ecological risk assessment (ERA) that had delayed the remedial investigation/feasibility study (RI/FS) and ROD for the installationwide groundwater operable unit.

In FY02, the Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY03, the installation completed a draft RI for Sites 09 (nine load lines and three test areas) and 10 (groundwater for the entire installation). The installation also completed a human health assessment and an ERA for these sites. The Army

completed the MMRP CTT ranges and sites inventory that identified two MMRP sites at this installation.

In FY04, the Army awarded a performance-based contract (PBC) for remaining environmental restoration sites. The installation completed the MMRP SI.

FY05 IRP Progress

The installation completed the RI for Sites 09 and 10. In accordance with congressional directive, the Army transferred the installation to the Louisiana Army National Guard. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete PBC in FY06.
- Achieve response complete/remedy in place in FY06.
- Complete 5-year review in FY06.
- Complete groundwater FS, proposed plan (PP) for the soils of nine load lines and three test areas, and RODs for soils and groundwater in FY06.
- Conduct public meetings to discuss PPs for soils and groundwater treatment in FY06.

MMRP

- Conduct a stakeholder briefing on the MMRP SI results in FY06.

| | | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------|
| FFID: | KY417002417500 | Media Affected: | Groundwater, sediment, soil |
| Size: | 142 acres | Funding to Date: | \$ 18.9 million |
| Mission: | Overhaul, repair, and manufacture weapon systems and components used on naval vessels | Estimated Cost to Completion (Completion Year): | \$ 0.7 million(FY 2004) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2004/None |
| IAG Status: | None | Five-Year Review Status: | Planned |
| Contaminants: | Asbestos, chlorinated and nonchlorinated solvents, chemical agents, heavy metals, industrial liquid waste and sludge, paint, pesticides, POLs sludge, plating waste, PCB | | |



Progress To Date

In July 1995, the BRAC Commission recommended closure of the Louisville Naval Surface Warfare Center (NSWC). Operations contributing to contamination at this installation include machining, welding, draining of lubricating fluids, painting, electroplating, degreasing and cleaning of metals, and paint stripping. Site types include waste storage and disposal areas, manufacturing operations and disposal areas, and other miscellaneous support and maintenance activity areas. Contaminants have migrated into nearby soil, sediment, and groundwater. The Restoration Advisory Board (RAB) meets monthly. The restoration program is conducted by a BRAC cleanup team (BCT) partnering effort with the Navy, EPA Region 4, and the Kentucky Department of Environmental Protection. In FY00, all draft RCRA facility investigation (RFI) reports were completed.

The installation has identified nine sites. In 1996, eighty-five percent of the property was leased to the Louisville/Jefferson County Redevelopment Authority as the Navy's first private-in-place installation. Property was conveyed via early transfer in FY2004. The cleanup progress at Louisville for FY01 through FY04 is detailed below.

In FY01, interim removal actions, including 121 surface and subsurface soil removals, were completed. EPA Region 4 and the Commonwealth of Kentucky approved all eight volumes of the RFI report. The Volume 2 (groundwater) corrective measures study (CMS) report was drafted and reviewed by the regulators. The corrective measure at solid waste management unit (SWMU) 70 will be completed as an interim measure. A draft finding of suitability for early transfer (FOSET) was completed and reviewed by the public.

In FY02, the installation submitted Volumes 3 through 8 CMS reports, and received regulatory approval for all except Volume 4. The SWMU 70 interim measure was completed and a FOSET was submitted for approval. Negotiations were initiated with the Louisville/Jefferson County Redevelopment Authority on an Environmental Services Cooperative Agreement. Monthly BCT meetings were held to review progress and plan future actions. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, efforts to complete the early property transfer continued.

In FY04, the installation completed all statements of basis and submitted a RCRA permit modification incorporating all selected corrective measures for all sites. The installation submitted the permit modifications to state regulators for approval. It also completed the early transfer to the Louisville/Jefferson County Redevelopment Authority, and initiated long-term monitoring of natural attenuation (NA) and land use controls (LUC) for all sites. The RAB voted to adjourn, with plans to reconvene if necessary, as all remedial decisions have been made.

FY05 IRP Progress

Louisville NSWC completed the RCRA Part B permit modification. This modification incorporated the final corrective action for all sites at Louisville NSWC which resulted in long-term monitored NA and monitoring of LUCs as remedies. Long-term monitoring of NA and monitoring of LUCs continued. The cost of completing environmental restoration at this installation has changed significantly due to regulatory issues.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Louisville Naval Surface Warfare Center are grouped below according to program category.

IRP

- Continue NA long-term monitoring in FY06-FY07.
- Continue LUC monitoring in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | CO857002413000 | Funding to Date: | \$ 74.6 million |
| Size: | 1,866 acres | Estimated Cost to Completion (Completion Year): | \$ 7.4 million(FY 2012) |
| Mission: | Housed the 3400th Technical Training Wing; served as a technical training center | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Waste oil, general refuse, fly ash, coal, metals, fuels, VOCs, solvents, TCE, petroleum hydrocarbons | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Lowry Air Force Base (AFB) supported the 3400 Technical Training Wing. In 1991, the BRAC Commission recommended closure of all but 108 of the 1,866 acres at Lowry (the Air Force retained 80 acres, as an additional 28 acres were subsequently closed). The base closed in September 1994. The Defense Finance and Accounting Service and the Air Force Reserve Personnel Center remain at Lowry in cantonment areas, but will be closed under BRAC 2005. Environmental sites at the former base include fire training areas, landfills, a fly ash disposal area, coal storage yards, and underground storage tanks. In FY95, an Environmental Baseline Survey was completed. The installation's Restoration Advisory Board (RAB) began receiving technical assistance for public participation funding in FY99.

The cleanup progress at the former Lowry AFB for FY01 through FY04 is detailed below.

In FY01, the remedial action (RA) for the Coal Storage Zone East was completed. The Air Force, the local redevelopment authority, and regulatory agencies made progress on all documents necessary for the privatization agreement. The initial characterization of groundwater-derived volatile organic compound (VOC) contamination in off-base residential indoor air was completed. The final basewide groundwater remedial investigation was completed, with the Air Force acknowledging data gaps.

In FY02, the delineation of the fire training zone dioxin contamination was completed. The environmental services cooperative agreement for privatization of the landfill and groundwater was finalized. Groundwater pilot studies were conducted.

In FY03, RAs were completed for soil at two newly-discovered tank sites: Building 1432 and the Fifth & Trenton site. Two of five investigations and RAs were completed for contaminated soils sites. An RA and no further action (NFA) documentation were completed for the skeet range.

In FY04, a polychlorinated biphenyls (PCBs) removal action at Building 402 and a basewide RCRA facility assessment (RFA) were conducted. Monitoring for radioactive parameters at the landfill progressed on schedule. Investigations and RAs at

contaminated soil sites were completed. Groundwater monitoring was conducted at Building 606 and payments continued for the FY02 privatization agreement. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The final RFA report, which reviewed the 57-year operational history of the installation and reassessed the adequacy of environmental actions performed prior to closure and during the ten-year redevelopment period, was completed. The PCBs removal action at Building 402 was completed and rounds three and four of the quarterly monitoring for radioactive parameters at the landfill zone were performed. A previously abandoned septic tank near Dayton Street was investigated and removed. In addition, several removal actions were completed involving asbestos-containing materials discovered in soil. The cost of completing environmental restoration at this installation has changed significantly due to technical, regulatory, and estimating criteria issues.

The RAs at the Fire Training Zone, Building 606, and Building 898, as well as abandonment of two deep wells, were incorporated into comprehensive agreement negotiations to privatize the remaining environmental cleanup and property transfer actions. The installation identified new requirements during the RFA and added them to the list of items under negotiation for accomplishment through privatization.

The RAB continued to meet on a monthly basis.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Ordnance clearance, RA, and NFA documentation were delayed, pending further evaluation of requirements.

Plan of Action

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

IRP

- Finalize negotiations of a proposed comprehensive agreement to privatize the remaining Air Force actions, including Installation Restoration Program and MMRP actions in FY06.
- Complete RA and NFA documentation for the Fire Training Zone and Building 898 in FY06.
- Complete abandonment of two deep wells and RFA follow-up investigations and RAs in FY06.
- Continue long-term monitoring at the landfill and Building 606 and continue payments for the privatization cooperative agreement in FY06.
- Initiate the 5-year review in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|-------------------------|-----------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA957212452700 | Estimated Cost to Completion (Completion Year): | \$ 22.2 million(FY 2021) |
| Size: | 6,606 acres | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2006 |
| Mission: | Maintain, repair, and refuel aircraft | Five-Year Review Status: | Completed |
| HRS Score: | 31.94; placed on NPL in November 1989 | | |
| IAG Status: | Federal facility agreement signed in September 1990 | | |
| Contaminants: | VOCs, POLs, PCBs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 146.8 million | | |



Progress To Date

March Air Force Base (AFB) was placed on the NPL in November 1989 and the installation signed a federal facility agreement the following year. In July 1993, the BRAC Commission recommended that March AFB undergo realignment. It was recommended that the installation serve as an Air Reserve Base once realignment was completed. Base realignment occurred in April 1996. A preliminary assessment and site inspection (PA/SI) identified fire training areas, inactive landfills, underground storage tanks (USTs), an engine test cell (Site 18), sludge drying beds at a sewage treatment plant, and various spill sites. March AFB is a joint-use base that uses both BRAC and Environmental Restoration Account funds to reach cleanup goals. In FY94, a base technical review committee was converted to a Restoration Advisory Board (RAB) to support cleanup efforts. In FY99, a memorandum of agreement was signed between the Air Force Reserve Command and the Air Force Base Conversion Agency for sharing environmental responsibility. The first 5-year review was completed in FY03.

To date, 47 sites have been identified at March AFB and grouped into 3 operable units (OUs), OUs 1, 2 and 4. Of the 24 BRAC Installation Restoration Program (IRP) sites identified, all Records of Decision (RODs) have been signed. The cleanup progress at March AFB for FY01 through FY04 is detailed below.

In FY01, the remedial action (RA) design was modified for the complete capture of the OU 1 plume. The modified RA construction began, which will eventually lead to operating properly and successfully (OPS) approval. The base continued to optimize the long-term monitoring and maintenance operations. A removal action work plan was completed for Site 43 (ST043). Another site (Building 550) contaminated with methyl tertiary-butyl ether (MTBE) also entered remediation.

In FY02, groundwater pump and treat was initiated and soil vapor extraction continued at Building 550. The basewide remedial investigation and feasibility study (RI/FS) continued and the Site 43 UST soils site was closed. A project was initiated to characterize mercury found in the sewer system at the hospital and dental clinic. The modified portions of the OU 1 plume RA entered service, which allowed the OPS determination efforts to resume.

In FY03, the Air Force closed the groundwater portion of Site 43, continued RA operation (RA-O) activities at the landfills and Building 550, and continued the groundwater monitoring program. The installation also conducted mercury characterizations and research and determined that an RA was not required. The installation completed the first 5-year review.

In FY04, the Air Force finalized the OU 2 ROD, the OU 4 (formally known as the basewide OU) RI/FS, and the proposed plan. The installation completed the Weapon Storage Area (WSA) PA/SI field work and submitted the draft report. RA-O activities at the landfills and Building 550 continued, as did the groundwater monitoring program. The Air Force Real Property Agency (AFRPA) conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified on the BRAC portion of the installation.

FY05 IRP Progress

The installation finalized the OU 4 ROD. The Air Force completed additional field work and the WSA PA/SI report. The installation continued RA-O activities at two landfills and Building 550, and continued groundwater monitoring. The installation also attained the last remedy-in-place milestone. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The RAB met on a quarterly basis.

FY05 MMRP Progress

AFRPA began evaluating requirements at MMRP sites.

Plan of Action

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

IRP

- Continue RA-O activities at landfills and Building 550 in FY06.
- Continue the groundwater monitoring program in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------|
| FFID: | CA917002477500 | Contaminants: | Heavy metals, VOCs, PCBs, pesticides, petroleum hydrocarbons, lead oxides, UXO |
| Size: | 5,293 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Maintained and repaired ships and provided logistical support for assigned ship and service craft | Funding to Date: | \$ 185.3 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 51.3 million(FY 2012) |
| IAG Status: | Federal facility site remediation agreement (FFSRA) signed in September 1992, and a new FFSRA was renegotiated to address early transfers and signed in July 2002 | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2012 |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



Progress To Date

In July 1993, the BRAC Commission recommended closure of Mare Island Naval Shipyard and relocation of the Combat Systems Technical School's Command Activity to Dam Neck, Virginia. The installation closed in FY96. Investigations of chemical and munitions contamination were initiated in FY80. An administrative record and an information repository were established in FY90. Ordnance sites include dredge ponds, storage areas, and the production area. Four offshore areas have identified munitions concerns. The installation formed a technical review committee in FY90 and converted it to a Restoration Advisory Board (RAB) in FY94. The installation completed its community relations plan in FY92, which was updated in FY94 and again in FY01. The installation signed a federal facility site remediation agreement in September 1992, which was renegotiated in July 2002. The RAB received technical assistance for public participation grants in FY99, FY02, and FY03.

The installation has identified 44 sites and completed the transfer of approximately 3,500 acres. A no further action (NFA) Record of Decision (ROD) was issued for Installation Restoration (IR) 22. The cleanup progress at Mare Island Naval Shipyard for FY01 through FY04 is detailed below.

In FY01, an NFA ROD was issued for IR 22. The eastern and western early transfer parcels' findings of suitability for early transfer were signed, and the environmental services cooperative agreements (ESCA) to complete remaining cleanups for these 3,500 acres were executed in advance of the early transfers.

In FY02, the eastern and western early transfer parcels were conveyed to the local redevelopment authority (LRA) and State, respectively. These transfers put the accompanying ESCAs into full effect. One ESCA included the fixed-price cleanup for IR 05, the western magazine, and the nine sites in the H1 landfill area, which remained in Navy ownership. Progress continued for the remedial investigation and feasibility studies (RI/FSs) at areas A1, A2, F1, F2, H1, the production and manufacturing area, and south shore. The installation completed the cleanup effort of the stormwater lines and initiated a site investigation (SI) for the source area. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. Ten MMRP sites

were identified at this installation.

In FY03, the installation completed drafting the planning document for removal action at Site 28, the Defense Reutilization Marketing Office (DRMO), and the H1 landfill groundwater slurry wall trench. The installation continued progress with the RI/FSs for A1, A2, F1, F2, and H1. In addition, the installation completed cleanup at the newly discovered petroleum site adjacent to the elementary school site. The installation completed the action memo (AM) and initiated a time-critical removal action (TCRA) at the Marine Corps Firing Range. Offshore munitions surveys were initiated for the production and manufacturing and south shore areas. The RI/FSs are anticipated to determine further response actions for onshore sites. The installation completed drafting the planning documents for a non-TCRA (NTCRA) to operate the open burning/open detonation range for disposal of recovered munitions.

In FY04, the installation continued negotiations with the LRA for ESCAs for potential early transfer parcels. The LRA continued developing proposals for various sites. The installation completed the removal action for the H1 groundwater.

FY05 IRP Progress

Mare Island Naval Shipyard submitted the draft RI for Area F1. The installation also completed the planning documents and AM for the NTCRA at the DRMO site, and commenced cleanup work.

Legislative issues delayed the RI/FSs for A1, A2, F1, F2, and H1 "landfill area."

FY05 MMRP Progress

Mare Island Naval Shipyard resumed the TCRA at the Marine Corps Firing Range. The installation responded to MEC discoveries within excavated soils on the Eastern Early Transfer Parcel. MEC support was provided to screen items of concern (5" and 8" projectiles), which were disposed along an historic shoreline area and determined to all be inert. The installation also hosted an Army Corps of Engineers' demonstration of the Contained Detonation Chamber.

Technological difficulties and scope growth of munitions and explosives of concern (MEC) delayed the completion of the Marine Corps Firing Range.

Plan of Action

Plan of action items for Mare Island Naval Shipyard are grouped below according to program category.

IRP

- Complete an RI/FS for the H1/landfill area, final ROD and implement the final remedy in FY06.
- Complete the DRMO removal action, and complete draft RI/RS for IR 17 and draft ROD in FY06.
- Complete SI level work at the elementary school and Parcel XVI to address residual contamination in FY06.
- Complete RI document for Area F1 in FY06.

MMRP

- Complete the Marine Corps Firing Range removal action in FY06.
- Formulate agreement on transferring MEC cleanup responsibilities of early transfer parcels in FY06.
- Commence MEC validation surveys and investigations for offshore MEC sites and onshore sites from the Projection and Manufacturing Area to the Western Magazine Area in FY06.

| | | | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------|
| FFID: | VA317302472200 | Media Affected: | Groundwater, surface water, sediment, land soil |
| Size: | 60,000 acres | Funding to Date: | \$ 55.0 million |
| Mission: | Provide military training and support research, development, testing, and evaluation of military hardware | Estimated Cost to Completion (Completion Year): | \$ 53.1 million(FY 2013) |
| HRS Score: | 50.00; placed on the NPL in June 1994 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2013 |
| IAG Status: | RCRA federal facility compliance agreement signed December 31, 1991; Federal facility agreement signed February 4, 1999 | Five-Year Review Status: | Completed and planned |
| Contaminants: | PCBs, pesticides, VOCs, SVOCs, phenols, heavy metals, petroleum hydrocarbons, arsenic | | |



Progress To Date

Marine Corps Base 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. A technical review committee was formed in FY89. The facility signed a federal facility compliance agreement in December 1991. In FY92, the installation established three information repositories, each containing a copy of the administrative record. Contamination at the old landfill area was the primary reason for the installation's placement on the NPL in June 1994. The installation completed a community relations plan in FY95, which was updated in June 2003. The installation signed a federal facility agreement in February 1999. In FY02, the installation conducted a 5-year review for Site 4.

EPA has identified 303 areas of concern (AOCs) at Quantico. The Navy currently recognizes 102 Installation Restoration Program (IRP) sites and RCRA solid waste management units (SWMUs). The remaining AOCs required further investigation to determine extent of contamination. In FY99, two SWMUs and seven EPA AOCs were closed. The installation signed a No Further Action (NFA) Record of Decision (ROD) for Sites 1 and 5 in FY00, and Site 17 in FY01. The cleanup progress at Marine Corps Base Quantico for FY01 through FY04 is detailed below.

In FY01, the installation signed an NFA ROD for Site 17. Preliminary assessments (PAs) and site investigations (SIs) were completed for 45 IRP sites and AOCs. A draft final feasibility study (FS) was submitted to EPA for review and an environmental engineering and cost analysis (EE/CA) workplan was completed for Site 97. After completion of PA/SI reviews, 33 IRP sites were closed. This closure accounted for 12.5 percent of the entire Department of the Navy's site closure.

In FY02, the installation completed EE/CAs for Sites 2 and 97. Site 97 was closed with NFA and a removal action was implemented for Site 2. The installation implemented Quantico Watershed investigation sampling. In addition, work on the EE/CA and interim remedial action (IRA) at Site 20. Through extensive partnering agreements, 42 IRP sites and 84 AOCs were closed. The installation conducted a 5-year review of the

interim ROD for Site 4. The U.S. Army Corps of Engineers completed an inventory of all Military Munitions Response program (MMRP) sites. MMRP sites were identified at this installation in the archive search report and preliminary range assessment.

In FY03, the installation completed the EE/CAs on four sites and implemented IRAs at three sites. The installation submitted the final FS for Site 4 to regulators for review. The installation completed the final post-IRA report for Quantico Embayment. The installation awarded the IRA at Site 20.

In FY04, the installation completed Phase I of the IRA at the Former Rifle Range (Site 20) and implemented Phase II. The installation also completed an additional IRA for the auto hobby shop (Site 34) resulting in site closure and awarded IRAs for additional site work. The installation finalized the Post-IRA study for contaminated sediments and submitted a draft FS for review. Sampling work continued for the remainder of the Quantico Watershed Study SIs and remedial investigations. The installation completed EE/CAs for five sites.

FY05 IRP Progress

Marine Corps Base Quantico completed an IRA at Site 20. The installation completed EE/CAs and IRAs for three sites. The installation issued a final SI for the Potomac River Sediments.

FY05 MMRP Progress

No work was performed on MMRP sites at this installation.

Plan of Action

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

IRP

- Complete two RODs in FY06.
- Complete IRAs at five sites and reach closeout for seven IRP sites in FY06-FY07.
- Complete remedial design and ROD for remedial action for the Quantico Embayment Sediments and an IRA design and action memorandum for Chopawamsic Creek Sediments in FY06-FY07.

- Complete treatability study at one groundwater site and implement IRA in FY06-FY07.

MMRP

- Award a basewide MMRP SI in FY06 and final in FY07.

FFID: MA157282448700
Size: 22,000 acres
Mission: Provide Army and Air National Guard training and support the East Coast Air Defense and Coast Guard Air and Sea Rescue Units
HRS Score: 45.93; placed on NPL in November 1989
IAG Status: Federal facility agreement signed in July 1991; last amended in June 2002

Contaminants: Petroleum fuel related compounds (including ethylene dibromide), waste solvents, VOCs, pesticides, metals
Media Affected: Groundwater, surface water, soil
Funding to Date: \$ 551.1 million
Estimated Cost to Completion (Completion Year): \$ 472.9 million(FY 2045)
IRP/MMRP Sites Final RIP/RC: FY 2011/None
Five-Year Review Status: Completed



Progress To Date

Massachusetts Military Reservation (MMR) provides Army and Air National Guard training, and supports the East Coast Air Defense and Coast Guard Air and Sea Rescue Units. EPA placed the installation on the NPL in November 1989. The Air Force signed a federal facility agreement in July 1991, which was last amended in June 2002. Sites at MMR include chemical and fuel spill sites, storm drains, landfills, and former firefighter training areas. Private and municipal wells near the installation were closed and replaced after off-base migration of groundwater contamination was detected. Five-year reviews were completed in FY97 and FY02.

Studies have identified 85 sites at the installation. To date, Records of Decision (RODs) or decision documents (DDs) have been signed for 74 sites, and 63 sites have been closed. The cleanup progress at MMR for FY01 through FY04 is detailed below.

In FY01, the installation issued RODs for two fuel spill (FS) sites, FS 28 and FS 29. Under the MMR Source Areas program, soil removal operations at 25 source areas commenced and 10 sites attained response complete status. Phosphorus treatment was conducted at Ashumet Pond to reduce nutrient loading.

In FY02, the MMR completed remediation at 14 sites and installed 4 soil vapor extraction (SVE) subsurface soil treatment systems. Work continued on engineering designs for groundwater treatment systems for Sites CS 4, CS 20, CS 21, and FS 29. The second MMR 5-year review process was initiated.

In FY03, the installation completed construction and started operation of the FS 1 groundwater treatment system, and finalized the 5-year review. Remedial investigation began on the Site CS 23 groundwater plume and pre-design data was gathered for the CS 18 and CS 19 UXO disposal sites. The installation continued monitoring, operation, and optimization of eight groundwater treatment systems and four SVE systems. Two of the SVE systems achieved cleanup goals and were decommissioned in FY03.

In FY04, the installation completed engineering designs for off base groundwater treatment systems for Sites CS 4, CS 20, CS 21, and FS 29. Real estate support finalized or continued processing easements for 45 properties. MMR commenced soil removal at the CS 19 UXO disposal site. MMR continued the monitoring, operation and optimization of eight groundwater treatment systems and two SVE systems. MMR also decommissioned three older groundwater treatment systems associated with the Sites CS 4, SD 5 South, and FS 1 groundwater plumes. Site CS 1 was approved for no further action (NFA). MMR acquired a direct push rig, and utilized direct push technology to fill data gaps in a timely and cost effective manner. The base continued aggressive community involvement efforts.

FY05 IRP Progress

MMR completed 90 percent of the construction for an off-base combined groundwater treatment system for Sites CS 4, CS 20, CS 21, and FS 29. Real estate support finalized or continued processing easements for 70 properties. The MMR in-house geoprobe rig completed 35 groundwater profile borings to 230 feet deep, installed 11 piezometers, and completed 40 soil profile borings. The installation completed removal actions at two sites, completed Phase I & II removal actions at the CS 19 UXO disposal site, issued remedial action reports for five sites, closed three sites, decommissioned an SVE system, and obtained NFA for two groundwater sites. MMR continued monitoring, operation and optimization of eight groundwater treatment systems and an SVE system. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The base community involvement (CI) team continued aggressive community involvement efforts.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

Plan of action items for Massachusetts Military Reservation are grouped below according to program category.

IRP

- Complete construction for the combined Sites CS 4, CS 20, CS 21, and FS 29 groundwater treatment system (located off-base) in FY06.
- Have remediation in place at six sites (FS 25, CS 14, CS 4, CS 20, CS 21, and FS 29), and complete Phase III removal action at the CS 19 UXO disposal site in FY06.
- Complete response at two sites (FS 25 and CS 14), and obtain approval for NFA for the CS 13 groundwater site in FY06.
- Start operations at a new groundwater treatment plant in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA957002474300 | Funding to Date: | \$ 181.2 million |
| Size: | 5,718 acres | Estimated Cost to Completion (Completion Year): | \$ 78.2 million(FY 2074) |
| Mission: | Provided navigation and electronic warfare officer training; housed SAC Bombing and Refueling Squadron | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2006 |
| HRS Score: | 28.90; placed on NPL in July 1987 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in 1989 | | |
| Contaminants: | Solvents, jet fuel, petroleum hydrocarbons, lead | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1987, Mather Air Force Base (AFB) was placed on the NPL. The BRAC Commission recommended closure in December 1988 and the installation signed an interagency agreement the following year. Before becoming inactive in FY93, the installation 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, underground storage tanks (USTs), fire training areas, a trichloroethylene (TCE) disposal site, a weapons storage area, wash rack areas, spill areas, and waste pits. Interim actions included removing USTs and contaminated soil, supplying an alternate water supply for nearby residents, removing sludge from a former wastewater treatment plant, removing petroleum product from soil by vapor extraction (SVE), and excavating pesticide contamination from drainage ditches. In FY94, a Restoration Advisory Board (RAB) and a BRAC cleanup team (BCT) were formed. The installation completed 5-year reviews in FY00 and FY05.

Studies have identified 89 sites at the installation, which were grouped into 6 operable units (OUs): OU 1, Aircraft Control and Warning Site; OU 2, Groundwater; OU 3, Soil; OU 4, Landfill; OU 5, Basewide; and OU 6, Supplemental Basewide. To date, Records of Decision (RODs) have been approved for OU 1, OU 2, OU 3, OU 4, and OU 5. The cleanup progress at Mather AFB from FY01 through FY04 is detailed below.

In FY01, the installation installed groundwater monitoring wells for the Phase IV remediation project at 12 of 15 locations. Removal actions at Sites 80 (ST080), 85 (DD085), 88 (SD088), and 89 (OT089) were completed except for reclamation and reporting. The installation issued the draft remedial action work plan and preliminary engineering report for Phase IV groundwater remediation. The installation completed the remedial action report (RAR) for Site 62 (OT062) and the draft RAR for Site 15 (SD015).

In FY02, construction was completed for the Phase IV groundwater remediation, and capture was expanded into additional baseline areas. The Phase V project was planned to evaluate the performance of the Phase IV extraction system, as well as recommend the necessity of further extraction and any additional cost-reducing enhancements. Sites 19 (WP019), 56

(SD056), and 60 (SD060), as well as Facilities 2595 and 18015 (ST075) completed in situ vadose-zone treatment. RARs were completed for Sites 56 and 60 and the northeast plume. Closure letters from the Regional Water Quality Control Board were obtained for eight Installation Restoration Program sites and five UST sites. The installation also underwent the performance and protectiveness review and remedial process optimization (RPO) evaluation.

In FY03, the installation began two performance and protectiveness reviews/RPO evaluations, one for groundwater monitoring, and one for groundwater remediation. RARs were completed for Sites 69 (OT069) and 86 (FR086). The installation discovered additional buried debris and fuel contamination at Site 10C/68 (FT010/ST068).

In FY04, the installation installed a new extraction well near the toe of the main base/SAC Area plume. One injection well was redeveloped and two extraction wells were replaced. A reduction of groundwater sampling frequency reduced operation and maintenance costs. The installation initiated the closure process for two CERCLA and two non-CERCLA sites. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation began operating the new extraction well near the toe of the main base/SAC Area plume. Existing groundwater, SVE, and treatment systems continued to operate. The Air Force completed the second 5-year review report and obtained concurrence.

Funding issues delayed the reinstallation of the groundwater remediation system at Site 7 (WP007). Regulatory issues delayed the completion of the institutional control management plan.

RAB and BCT activities continued.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Complete reinstallation of groundwater remediation at Site 7 in FY06.
- Continue to collect site information on the remaining six active SVE sites in FY06.
- Continue to operate existing groundwater, SVE, and treatment systems in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| FFID: | WA057182420000 | Contaminants: | VOCs, SVOCs, metals, chlorinated solvents, petroleum hydrocarbons, pesticides, radioactive waste |
| Size: | 4,616 acres | Media Affected: | Groundwater and soil |
| Mission: | Provide airlift services for troops, cargo, equipment, passengers, and mail | Funding to Date: | \$ 24.9 million |
| HRS Score: | 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; delisted from NPL in September 1996 | Estimated Cost to Completion (Completion Year): | \$ 31.5 million(FY 2044) |
| IAG Status: | Federal facility agreement signed in August 1989; consent decree with State of Washington signed in February 1992 | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2012 |
| | | Five-Year Review Status: | Completed |



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 areas, landfills, and waste pits. Two sites were placed on the NPL - the Area D/American Lake Garden Tract (D/ALGT) in September 1984 and the Washrack/Treatment Area (WTA) in July 1987. WTA was delisted in September 1996. The installation signed a federal facility agreement in August 1989. The installation signed a consent decree with the State of Washington in February 1992. McChord AFB assessed the local community's interest in forming a Restoration Advisory Board (RAB) in FY95, FY96, FY98, FY99, and FY04. It found very little interest in forming a RAB due to the maturity of the program and community trust in the installation. The installation completed a 5-year review at Area D/ALGT in FY05.

Since 1982, 65 sites have been identified at this installation. All 65 sites were classified as remedy in place by FY96; however, Site SS 34 was reopened in FY00. Six sites are currently listed on the state's hazardous sites list and are managed through long-term monitoring and natural attenuation monitoring. To date, 600 million gallons of groundwater have been treated and 52 pounds of trichloroethylene (TCE) recovered at Area D/ALGT. A Record of Decision (ROD) was signed and two 5-year reviews have been completed for the WTA site. The second 5-year review of the WTA Area, conducted in FY04, recommended that this would be the final CERCLA review for this site. The cleanup progress at McChord AFB for FY01 through FY04 is detailed below.

In FY01, the installation initiated a remedial investigation/feasibility study (RI/FS) in response to the identification of TCE in groundwater in the northern segment of Site SS 34. TCE was also detected in monitoring wells installed in a residential neighborhood adjacent to the installation. This site was designated SS 34N and comprises approximately 350 acres. All but one of the private residential wells in the subdivision were decommissioned by the installation and the residences were connected to the municipal water supply.

In FY02, the installation completed the RI/FS for Site SS 34 and submitted the draft for review. The installation also initiated a remedial design (RD) and began field pilot test preparations.

The installation formed an informal relationship with the Washington Department of Ecology for Site SS 34N that would provide prompt document review. In FY03, the installation completed a field pilot test and obtained information necessary for the RD of an in situ treatment system for TCE. Permanganate injection proved to be successful in eliminating TCE in all wells included in the pilot test. The installation developed a cleanup action plan for Site SS 34N based on the results of the field pilot test and submitted the document for approval. The RD for Site SS 34N received funding and a contract was awarded.

In FY04, McChord AFB completed the RD and began the Phase I remedial action (RA) at Site SS 34N, where sodium permanganate was injected into the groundwater via a network of 32 wells and proved to be successful in TCE treatment. As part of the RA construction, the installation developed and implemented a monitoring plan both on- and off-base to determine when, and if a Phase II injection round will be necessary at site SS 34N. The second 5-year review of the WTA Area former NPL site was conducted. Regulators concurred with the review recommendation that this would be the final CERCLA review for this site, and signed the review in September 2004. The installation distributed over 10,000 surveys within the surrounding communities, polling for RAB community interest. Two individuals expressed interest in RAB participation.

FY05 IRP Progress

McChord AFB completed and obtained regulator signatures on the second 5-year reviews and finalized an RA optimization study for the Area D/ALGT. The installation monitored the progress of the Site SS 34N RA and optimized the Phase II execution strategy. McChord AFB continued to update the administrative record. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Pursue delisting of the Area D/ALGT site from the NPL in FY06.
- Conduct Phase II of the Site SS 34N RA in FY06.
- Update the administrative record in FY06.
- Pursue a ROD amendment to modify the current pump and treat extraction system in FY06.
- Streamline Site SS 34N RA Phase II execution strategy in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | CA957172433700 | Media Affected: | Groundwater and soil |
| Size: | 3,452 acres | Funding to Date: | \$ 554.1 million |
| Mission: | Provide logistics support for aircraft, missile, space, and electronics programs | Estimated Cost to Completion (Completion Year): | \$ 695.9 million(FY 2032) |
| HRS Score: | 57.93; placed on NPL in July 1987 | IRP/MMRP Sites Final RIP/RC: | FY 2015/FY 2006 |
| IAG Status: | IAG signed in 1990 | Five-Year Review Status: | Completed and planned |
| Contaminants: | Solvents, metal plating wastes, tic cleaners and degreasers, paints, lubricants, photochemicals, phenols, chloroform, t acids and bases, PCBs, VOCs, TCE, radioactive material | | |



Progress To Date

The mission of the former McClellan Air Force Base (AFB) was to provide support for aircraft, missile, space, and electronics programs. EPA placed the installation on the NPL in 1987 and the Air Force signed an interagency agreement in 1990. Environmental contamination at McClellan AFB has resulted from sumps associated with industrial operations, landfills, leaks from industrial waste lines, surface spills, and underground storage tanks. Studies detected groundwater contamination, leading to the closure of two on-base and three off-base drinking water wells. The installation converted its technical review committee to a Restoration Advisory Board (RAB) in FY93. A BRAC cleanup team (BCT) has been formed at this installation. Two 5-year reviews have been completed for the NPL portion of the base and one 5-year review was completed for the Davis site located approximately 15 miles west of McClellan AFB.

In addition to 373 acres of contaminated soil in the vadose zone, there are three large plumes, totaling over 660 acres, consisting primarily of trichloroethylene (TCE)-contaminated groundwater. Sites at the installation are grouped into 11 operable units (OUs), including an installationwide groundwater OU. To date, interim Records of Decision (IRODs) have been signed for OU B1 and the groundwater OU. In addition, two no action Records of Decision (RODs) have been signed. To date, the installation has transferred 373 acres. The cleanup progress at McClellan AFB for FY01 through FY04 is detailed below.

In FY01, the installation completed all environmental baseline reports. All groundwater and soil vapor treatment systems continued to work effectively. In addition, a time-critical removal action (TCRA) was initiated at CS-10 due to new radiological issues. The restructured RAB was active.

In FY02, all groundwater and 14 soil vapor treatment systems covering 19 areas operated effectively. A removal action at PRL S 33 was completed. The TCRA continued at the large radiological CS-10 site. Extensive work was completed on the initial parcel feasibility study, initial parcel finding of suitability for early transfer (FOSET), and no-action ROD. Two finding of suitability to transfer (FOST) documents were completed, which allowed 208 acres to be deed transferred. A TCRA

memorandum was signed and a corrective action was initiated to fix hexavalent chromium issues at the groundwater treatment plant. The RAB continued to meet regularly.

In FY03, the installation completed the TCRA for the hexavalent chromium treatment system and the six-site no action ROD. The TCRA at CS-10 resulted in the excavation of over 51,000 cubic yards of contaminated soil, with approximately one-third of the excavated soil remaining safely on site. Operation of groundwater and soil vapor treatment systems continued.

In FY04, the installation completed the local redevelopment authority (LRA) Initial Parcel #1 ROD and associated FOSET and FOST for 82 acres. A total of 154 acres were transferred by deed. The IROD groundwater Phase III off-base design was completed and the IROD groundwater Phase III on-base design began. The installation completed the second 5-year review for the NPL portion of the base and also completed the 5-year review for the Davis site. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed construction of the Phase III groundwater system. The installation awarded the Davis site cleanup guaranteed firm-fixed price contract to achieve site closeout.

Regulatory issues delayed the draft final basewide VOC groundwater ROD. The installation formed a technical team that includes regulators to determine a reasonable long-term remedy.

BCT activities and active RAB participation continued.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Complete LRA Initial Parcel ROD #1 remedial actions in FY06.
- Complete Breakout Shallow Soil Gas ROD in FY06.
- Complete LRA Initial Parcel ROD #2 in FY06.
- Complete Focused Strategic Sites feasibility study in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | NJ257182401800 | Funding to Date: | \$ 48.7 million |
| Size: | 3,500 acres | Estimated Cost to Completion (Completion Year): | \$ 171.5 million(FY 2032) |
| Mission: | Provide quick-response airlift capabilities for placing military forces into combat situations | IRP/MMRP Sites Final RIP/RC: | FY 2013/None |
| HRS Score: | 47.20; placed on the NPL in October 1999 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | VOCs, SVOCs, PAHs, BTEX, TPH, metals, PCBs, TCE, and pesticides | | |
| Media Affected: | Groundwater, soil, sediment | | |



Progress To Date

McGuire Air Force Base (AFB) provides quick-response airlift capabilities for placing military forces into combat situations. EPA placed the installation on the NPL in October 1999. Sites include landfills, waste piles, fire training areas, hazardous waste storage areas, and spill sites. The installation formed a Restoration Advisory Board (RAB) in 1999.

Forty-two sites have been identified at the installation to date. Six sites were identified at the Boeing Michigan Aeronautical Research Center (BOMARC) facility, a remote location under McGuire AFB jurisdiction. The cleanup progress at McGuire AFB for FY01 through FY04 is detailed below.

In FY01, an ongoing basewide background study and ecological assessment continued, as did the remedial investigation (RI) and feasibility study of the trichloroethylene (TCE) groundwater plume at Site OT 16. Partnering among contractors, service agents, action officers, and base personnel began, but required regulator participation to be effective. Two RAB meetings were held.

In FY02, the free product recovery equipment began operation at the Bulk Fuel Storage Area (ST 09). The RI phase to delineate the extent of the TCE groundwater plume at Site OT 16 continued. The basewide background study was completed and a draft report was submitted. The report was under revision based on regulators' comments. The cleanup of the BOMARC missile accident site began. About 50 percent of the contaminated soil and debris was removed and shipped out for disposal. The installation held two RAB meetings, two partnering (Tier I) meetings with regulators, action officers and base personnel, one Tier II meeting with Tier I members' superiors, and one Tier III meeting.

In FY03, the installation completed operation of the free product recovery equipment at pilot scale for Site ST 09. The basewide background study was also completed. Based on an environmental site inspection, 19 former areas of concern were added as new sites, resulting in a total of 42 sites at the installation. Two RAB meetings were held. Seven partnering (Tier I/II) meetings were held with regulators, action officers, and base personnel. Three Tier III conference calls were held.

In FY04, the installation began RI work plan development at Landfill 02 (LF 02) and LF 03. In addition, the installation completed soil removal at the BOMARC missile accident site (RW 01) and IRA Phase I soil removal at Fire Protection Training Area 3 (FT 13). McGuire AFB continued the RI study for the TCE groundwater plume delineation and source investigation at Site OT 16, as well as for the Spill Site at Building 2227 (SS 24), and document preparation for LF 03. The installation held two RAB meetings, one Tier I/II partnering meeting and one Tier III partnering meeting.

FY05 IRP Progress

McGuire AFB completed RI fieldwork at LF 03 and an RI at Building 2227 (SS 24). The installation initiated a comprehensive basewide conceptual site model (CSM), ecological study, and background study. The Department of Energy led a survey at the BOMARC missile accident site (RW 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 cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The Air Force did not complete the Class II/III area survey inside the BOMARC fence line due to the discovery of additional contamination which put a halt to these activities. Regulatory issues delayed the RI Phase 1 fieldwork for LF 04.

The installation held two RAB meetings, one Tier I/II partnering meeting, and one Tier I/II/III partnering meeting.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Complete site surveys and initiate particle

cleanup at Site RW 01 in FY06.

- Complete RI study for LF 03 in FY06.
- Continue comprehensive basewide CSM, ecological study, and background study in FY06.
- Complete fieldwork at Site OT 16 in FY06.
- Initiate RIs at Sites LF 02, WP 21, LF 19, LF 20, ST 07, and ST 09 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | PA317002210400 | Funding to Date: | \$ 30.0 million |
| Size: | 824 acres | Estimated Cost to Completion (Completion Year): | \$ 11.8 million(FY 2015) |
| Mission: | Provide inventory management and supply support for weapons systems | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2011 |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | PCBs, heavy metals, pesticides, VOCs, SVOCs, dioxin | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Mechanicsburg Naval Inventory Control Point provides inventory management and supply support for weapons systems. Historical defense industrial and inventory disposal operations have caused contamination at this installation. EPA placed the installation on the NPL in May 1994 and the installation signed a federal facilities agreement (FFA) in FY05. A technical review committee, formed in FY88, was converted to a Restoration Advisory Board in FY95. The installation placed its administrative record on CD-ROM and completed a community relations plans in FY99. The installation completed a 5-year review in FY04.

Environmental investigations conducted at the installation have identified 15 CERCLA sites. The installation has completed a Record of Decision (ROD) for Sites 1 and 3. In addition, no further action (NFA) documents have been completed for Sites 2, 4, 7, 8, 12, 13, and 14, as well as Areas of Concern (AOC) 22, 48, and a 28-site AOC. The cleanup progress at Mechanicsburg for FY01 through FY04 is detailed below.

In FY01, the installation completed ecological risk assessment (ERA) fieldwork for Site 9 and soil removal at Site 14. The installation completed an action memorandum (AM) and soil removal at Site 15. Site investigation (SI) fieldwork for four AOCs were also completed along with an NFA report for Site 7. The Navy completed NFA documents for Sites 12, 13, and 14, and a 28-site AOC NFA.

In FY02, the installation finalized NFA documents for Sites 2, 4, and Site 8 soil. AOC 21 underwent an expanded SI and NFA decision documents (DDs) were completed for AOCs 22 and 48. The installation completed a groundwater remedial investigation (RI) for Site 3. The installation also completed the basewide ERA and the SI for four AOCs. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation completed the groundwater feasibility study (FS) for Site 9 and the final groundwater FS for Site 3. The installation completed the soil removal at AOC 38. The installation completed a draft 5-year review.

In FY04, the installation completed the 5-year review and a site management plan. The installation completed the Site 3 proposed remedial action (RA) plan (PRAP) and pilot study. NFA DDs were completed for AOCs 36-A and 38. A Site 9 FS and fieldwork for a bioremediation pilot study were completed. The installation completed a time critical AM and soil removal for Site 5. Due to the additional soil contamination, Site 5 was reopened and the contractor was tasked to perform an RI.

FY05 IRP Progress

Mechanicsburg Naval Inventory Control Point signed the FFA. The installation completed the Site 3 ROD and completed the Site 5 RI work plan and fieldwork.

Technical issues delayed the Site 9 PRAP.

FY05 MMRP Progress

The Navy identified one MMRP site at this installation.

Plan of Action

Plan of action items for Mechanicsburg Naval Inventory Control Point are grouped below according to program category.

IRP

- Complete the Site 5 RI/FS Report in FY06.
- Complete the Site 3 chemical oxidation RA-operation in FY06.
- Complete the Site 9 PRAP and ROD FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | TN421382058200 | Funding to Date: | \$ 145.2 million |
| Size: | 22,357 acres | Estimated Cost to Completion (Completion Year): | \$ 67.7 million(FY 2016) |
| Mission: | Load, assemble, pack, ship, and demilitarize explosive ordnance | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2014 |
| HRS Score: | 58.15; placed on NPL in July 1987 | Five-Year Review Status: | Completed and underway |
| IAG Status: | IAG signed in 1989 | | |
| Contaminants: | Munitions-related wastes | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

The Milan Army Ammunition Plant (AAP) handles explosive ordnance. EPA placed the installation on the NPL in July 1987, and the Army and EPA signed an interagency agreement in 1989. In FY91, the Army discovered the explosive compound RDX in the City of Milan's municipal water supply wells. In FY94, the installation formed a Restoration Advisory Board. Representatives of the Army, the City of Milan, EPA and the State of Tennessee completed a contingency plan to ensure that safe drinking water would be available to residents. The city completed a new drinking water well field in 1998 using funds provided by the Army. The installation completed 5-year reviews in FY01 and FY05.

Since FY87, preliminary assessments (PAs) and site investigation (SI) activities conducted at Milan AAP identified 25 sites requiring further investigation. Subsequent studies expanded the number of sites to 39. The installation grouped the sites into five operable units (OUs). To date, the installation has signed six Records of Decision (RODs), including one in FY92 for OU 1 groundwater treatment plant construction, one in FY93 to extend a cap over the former O-Line Ponds soil, one in FY00 for the groundwater treatment facility construction at the Western Boundary Area (OU 4 Region 1), and an interim ROD for OU 5 in FY04. The cleanup progress at Milan AAP for FY01 through FY04 is detailed below.

In FY01, the Army used an explanation of significant difference (ESD) to modify the existing ROD for OUs 3 and 4 soil, which allowed land application of treated explosive-contaminated soil. The ESD discontinued the land filling of this soil which is now disposed of at the plant's ammunition destruction area. The Army completed the 5-year review. The regulators approved the final proposed plan, and the Army submitted the draft ROD for OU 5. The installation completed bioremediation of explosive-contaminated soil at Lines C, E, and F. The draft feasibility study (FS) for the City of Milan (OU 4 Regions 2 and 3) was approved. The Army implemented recommendations provided by a Groundwater Extraction and Treatment Effectiveness Review Team.

In FY02, the Army completed construction and began operation of a groundwater treatment facility for the Western Boundary Area (OU 4). The installation completed bioremediation of

explosives-contaminated soil at Lines H and Z and Area M and N. The regulators approved the draft FS for overall groundwater contamination. The Army submitted the draft ROD for OU 4 Regions 2 and 3 to the regulators. The Army completed remediation of the Y-103 rail classification yard. The installation continued operation of the OUs 1 and 3 groundwater treatment plants.

In FY03, the installation continued operation of the OUs 1, 3, and 4 groundwater treatment systems. The composting of Line X proceeded on schedule. The installation began two studies for examining groundwater quality. The Army completed an inventory of the closed, transferred, and transferring ranges and sites with unexploded ordnance (UXO), discarded military munitions, or munitions constituents. The inventory identified one closed site totaling 263 acres within the installation's boundaries where there is possible UXO and medium explosives safety risk.

In FY04, the Army awarded a performance-based contract for the Installation Restoration Program (IRP) activities at Milan AAP. The installation signed an interim ROD for OU 5. The Army selected an interim ROD instead of a final ROD because it will address groundwater issues in the sitewide groundwater ROD. The installation continued operation of the OU 1, 3, and 4 groundwater treatment plants. The Army conducted pilot studies on the use of carbohydrates to determine the applicability of these materials to biologically degrade explosive compounds in groundwater. The installation completed a PA for the Military Munitions Response Program (MMRP) site and initiated the SI.

FY05 IRP Progress

The Army completed characterization of all explosive contaminated soils within the Northern Industrial Areas of the facility. Milan AAP began injection of carbohydrates to determine treatment capability for groundwater plume located within the OU 1/OU 2 area. The installation produced a conceptual site modeling report to begin evaluating a remedy for groundwater treatment. The Army submitted technical memoranda to the regulatory community in an effort to enhance groundwater treatment facilities capabilities. In addition, the installation completed a 5-year review and found no deficiencies. Based on the data generated during the pilot study

within OU 5, the installation was unclear whether the use of a carbohydrate in situ treatment for soils would be appropriate. Due to the low volume of soil exceeding remedial action goals, ex situ treatment appeared to be the most efficient and economical means of treatment.

Accessibility issues delayed the delineation study for off-site groundwater plumes. A decision to perform a collective evaluation of all remaining sites delayed soil characterization and excavation for Line X.

The installation attended partnership training sessions with the State, EPA, and the Army and established a charter to address issues that would allow expedited remediation of the Milan facility. This charter also addressed team practices and established lines of communication to resolved issues that could impede progress. Milestone schedules for restoration were developed and agreed to by all parties in attendance.

FY05 MMRP Progress

An SI report for MMRP sites has been submitted for comments.

Plan of Action

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

IRP

- Complete soil characterization and excavation for Line X in FY06.
- Complete delineation study for all off-site groundwater plumes in FY06.
- Develop a draft FS for groundwater in FY06.

MMRP

- Complete SI report in FY06.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA917002323800 | Funding to Date: | \$ 116.6 million |
| Size: | 3,097 acres | Estimated Cost to Completion (Completion Year): | \$ 78.5 million(FY 2031) |
| Mission: | Housed 7th Infantry Division; supports the Defense Language Institute Foreign Language Center, currently at the Presidio of Monterey, California | IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| HRS Score: | 42.24; placed on NPL in February 1990 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in July 1990 | | |
| Contaminants: | VOCs, petroleum hydrocarbons, heavy metals, pesticides | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Moffett Field Naval Air Station (NAS) was headquarters of the Commander, Patrol Wings U.S. Pacific Fleet. Responsible for submarine patrol operations across the Pacific, NAS Moffett Field was the largest P-3 base in the world. In July 1991, the BRAC Commission recommended closure of the installation. The installation was closed on July 1, 1994 and transferred to NASA. The associated Moffett Community Housing (MCH) was transferred to the Army. EPA placed the installation on the NPL in July 1987. The Navy signed a federal facility agreement (FFA) in FY90, amended it in FY94 and revised it in FY01. Sites at the installation include landfills, underground storage tanks, 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 installation was divided into seven operable units (OUs). The installation completed a community relations plan (CRP) and established an information repository in FY89. In FY94, it formed a BRAC cleanup team (BCT) and completed a BRAC cleanup plan, which was updated in FY97. The installation converted its technical review committee to a Restoration Advisory Board (RAB) in FY95. A RAB forum for the Bay Area Community was held and the CRP was updated in FY02. In FY03, the installation completed 5-year review reports for two groundwater remedial sites.

Environmental studies have identified 34 sites at the installation. The Naval Air Manor property was transferred to a neighboring city. In addition, the installation has completed several no further action (NFA) Records of Decision (RODs). The installation has also completed RODs for OU 1, Sites 22, 26, 27, and 28. The installation has completed closure of 35 petroleum sites. The cleanup progress at Moffett Field NAS for FY01 through FY04 is detailed below.

In FY01, the FFA was revised to provide a detailed closure schedule, to refine the cleanup strategy, and to accelerate the remediation of Moffett Field in order to get the installation delisted from the NPL. Support of the NASA-Navy memorandum of agreement (MOA) continued. The proposed plan (PP) was completed for the Site 22 landfill, and negotiations toward the ROD began with regulatory agencies.

In FY02, the installation completed closure of 35 petroleum sites. The ROD and remedial design (RD) for Site 22 were completed as well as the PP and ROD for the NFA sites. The installation submitted 5-year review reports for OU 1 and Sites 1 and 2 to regulatory agencies. Progress continued on the site management plan for delisting Moffett Field from the NPL. Support of the NASA-Navy MOA continued. The installation initiated an optimization study for Sites 26 and 28 pump and treat systems. A human health risk assessment (HHRA) on MCH started due to groundwater contamination. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed a 5-year review report for both the westside and eastside aquifers treatment systems. Additionally, the installation completed the PP for Site 25 and initiated a time-critical removal action (TCRA) at the new source area, Hangar 1. The installation completed the feasibility study (FS) for Site 27 and the remedial action (RA) for Site 22. The HHRA at MCH was completed, although additional studies are needed to supplement HHRA. An additional seven petroleum sites were closed.

In FY04, the installation completed the Hangar 1 TCRA and started work on the remedial investigation (RI) and FS work plan for Hangar 1. The installation completed the Site 27 PP. Optimization of the Sites 26 and 28 pump and treat systems began. The installation completed air sampling at MCH and a work plan drafted for the final phase of groundwater investigation. The installation received closure letters for petroleum sites from the California Regional Water Quality Control Board.

FY05 IRP Progress

The installation finalized the Moffett Field NAS Site 25 RI report addendum and submitted the draft FS Report Addendum for agency review and comment. The Navy finalized the Site 27 ROD and began the RD for RA. The installation continued the site management plan for delisting Moffett Field from the NPL and support of the NASA-Navy MOA.

Regulatory issues delayed the draft final RI work plan for Site 29.

The installation continued facilitating the BCT and RAB meetings.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete FS report addendum, PP, and ROD for Site 25 in FY06.
- Complete RA for Site 27 in FY06.
- Complete removal action at Site 29 in FY06.
- Begin resolving groundwater contaminant responsibility in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | WA09799F331700 | Funding to Date: | \$ 18.6 million |
| Size: | 9,607 acres | Estimated Cost to Completion (Completion Year): | \$ 1.4 million(FY 2010) |
| Mission: | Served as tactical air command, air transport, and strategic air command base; provided pilot training | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | 50.00; placed on NPL in October 1992 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | IAG for RI/FS signed in March 1999 | | |
| Contaminants: | VOCs (specifically TCE) | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Larson Air Force Base (AFB) served as a Tactical Air Command base, then as a military air transport facility, and later as a Strategic Air Command base. The property was sold to the Port of Moses Lake in 1966 and is now operated by the Grant County Airport. Much of the former Larson AFB property serves as a regional aviation, industrial, and educational facility. Environmental assessments, beginning in FY87, identified four sites that required further investigation: 11 underground storage tanks and associated potentially contaminated soil; a trichloroethylene (TCE)-contaminated groundwater plume; an area potentially containing low-level radioactive waste; and 2 disposal areas potentially containing tetraethyl lead. The Army and EPA signed an interagency agreement in March 1999, and EPA placed the property on the NPL in October 1992. The U.S. Army Corps of Engineers (USACE) established a Restoration Advisory Board (RAB) at this property.

USACE has identified four projects at this property. The cleanup progress for Moses Lake for FY01 through FY04 is detailed below.

In FY01, USACE completed an interim remedial action (IRA) at the former liquid oxygen generating plant site. Two sumps containing TCE-contaminated water and sludge, as well as the associated piping and contaminated soil, were removed and disposed of properly. USACE initiated remedial investigation (RI) work for the draft RI report. USACE continued work for completing well construction and the draft feasibility study (FS).

In FY02, USACE initiated the IRA to construct and provide a replacement well for the community of Skyline. The supplemental RI work was scoped, awarded, and coordinated. USACE published a draft RI report, with several field sites requiring more investigation.

In FY03, USACE completed the Skyline well replacement project and handed the well over to the owner. USACE completed the final RI report. USACE began a long-term monitoring program for domestic well owners on the southern edge of the plume. EPA continued to be an active participant in the restoration process and partnered with USACE and the public during all phases of the project.

In FY04, USACE continued the long-term monitoring/whole-house filter program to determine the impact of TCE in groundwater to residents with private wells in Moses Lake. USACE completed planning and initiated the execution of the nature and extent investigation (NEI) of TCE in the groundwater at Moses Lake. The interagency agreement (IAG) required the NEI as a supplement to the completed RI. USACE continued the surface soil operable unit (OU) FS. The groundwater OU FS preliminary work continued.

FY05 IRP Progress

USACE completed the NEI of TCE in groundwater at Moses Lake. The long-term monitoring/whole-house filter program for residents with private wells in Moses Lake continued. USACE completed the draft versions of the groundwater OU FS and shallow soils OU FS and submitted the FSs to EPA. USACE submitted all deliverables required in the IAG between USACE and EPA. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) sites at this property.

Plan of Action

Plan of action items for Moses Lake Wellfield Contamination Site are grouped below according to program category.

IRP

- Continue to work with EPA and support the proposed plan/Record of Decision (ROD) through the public notice period, response to comments, and final ROD issuance in FY06.
- Revise groundwater FS and shallow soils FS as necessary in FY06.
- Continue long-term monitoring/whole house filter program for residential wells in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | ID057212455700 | Estimated Cost to Completion (Completion Year): | \$ 8.8 million(FY 2012) |
| Size: | 6,000 acres | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| Mission: | Provide composite combat air power worldwide | Five-Year Review Status: | The installation has not completed a 5-year review. |
| HRS Score: | NA; placed on the NPL in August 1990 | | |
| IAG Status: | Federal facility agreement signed in January 1992 | | |
| Contaminants: | VOCs, POLs, heavy metals | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 12.7 million | | |



Progress To Date

The mission of Mountain Home Air Force Base (AFB) is to provide composite combat air power worldwide. EPA placed the installation on the NPL in August 1990 and the Air Force signed a federal facility agreement in January 1992. Sites identified at the installation include: landfills, fire training areas, a fuel hydrant system spill area, disposal pits, surface runoff areas, wash racks, ditches, underground storage tanks, petroleum/oil/lubricant (POLs) lines, and a low-level radioactive material disposal site. In FY94, the installation converted its technical review committee to a Restoration Advisory Board. In FY00, the installation updated the community relations plan.

Environmental studies conducted since FY83 have identified 32 sites at this installation. To improve and accelerate site characterization, the installation grouped the sites into operable units (OUs). To date, a No Further Action (NFA) Record of Decision (ROD) has been signed for OU 2 and OU 4. RODs have also been signed for OUs 1, 3, 5, and 6; the lagoon landfill; and Fire Training Area 8. The installation completed a 5-year review in FY01. The cleanup progress at Mountain Home AFB for FY01 through FY04 is detailed below.

In FY01, the installation continued to monitor regional groundwater and the perched water at Site ST 11. The 5-year review was completed and, as a result, additional sampling will be accomplished for Site ST 11 and the regional groundwater. Three new areas of concern (AOCs) will be addressed by a site inspection (SI). Due to the identification of the new potential sites and the plan for additional sampling and analysis at Site ST 11, deletion from the NPL will not be revisited until the next 5-year review.

In FY02, the installation installed five wells; three with vapor sampling ports, to assist in monitoring regional groundwater, and eight additional wells to assist in monitoring perched groundwater and BTEX compounds at Site ST 11. Seventeen sites that were recommended for additional institutional controls in the 5-year review were sampled. The installation began an SI for three AOCs to determine whether the AOCs qualify as sites.

In FY03, the installation evaluated the results of the SI for the three AOCs and determined that NFA was necessary. Monitoring of vapor ports commenced and monitoring of

perched and regional groundwater continued. An additional regional aquifer groundwater well was installed to satisfy RCRA post-closure requirements at Site ST 13. Samples analyzed from two regional aquifer monitoring wells indicated isolated values for benzene and trichloroethylene (TCE), which exceeded maximum contaminant levels.

In FY04, the installation completed an interim remedial design and installed 10 new groundwater and vapor monitoring wells into the deep aquifer. Using wells installed in 2002, the installation continued remediation of shallow groundwater at Site ST 11, and continued to monitor volatized vapors from vadose zones at eight sites. In addition, Mountain Home AFB continued to monitor perched groundwater and regional groundwater, and removed TCE-contaminated soils from hot spots at Site SD 24.

FY05 IRP Progress

Mountain Home AFB continued to monitor wells for fuel and TCE vapors at eight sites and conducted groundwater monitoring. The installation awarded a performance-based contract. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Administrative issues delayed the hot spot removal at Sites FT 08, SD 27, and SS 29.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Conduct hot spot removals at Sites SD 27 and SS 29 in FY06.
- Complete OU 3 ROD amendment in FY06.
- Conduct a 5-year review in FY06.

- Continue to monitor wells for fuel and TCE in groundwater and vapor at eight sites in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | SC457002482100 | Funding to Date: | \$ 52.5 million |
| Size: | 3,937 acres | Estimated Cost to Completion (Completion Year): | \$ 13.8 million(FY 2029) |
| Mission: | Housed tactical fighter wing | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Spent solvents, fuel, VOCs, metals, asbestos, paints, POLs, thinners, waste oil | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Myrtle Beach Air Force Base (AFB) housed a tactical fighter wing. In July 1991, the BRAC Commission recommended closure of Myrtle Beach AFB. On March 31, 1993, the installation closed. Sites identified at the installation include landfills, 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 hydrocarbons (PAHs), heavy metals, and volatile organic compounds (VOCs). A joint management team assumed the role of a BRAC cleanup team (BCT) in FY93. The installation also formed a Restoration Advisory Board (RAB) in FY94 and the BCT updated the BRAC cleanup plan (BCP) in FY96 and FY04.

The RCRA facility investigation work plan and fieldwork have been completed for six areas. The cleanup progress at Myrtle Beach AFB for FY01 through FY04 is detailed below.

In FY01, the installation completed a pilot study and interim corrective measure (ICM) at the vehicle maintenance area and revised the ICM at B575. Corrective measure studies (CMSs) for nine sites were completed, and CMSs for three sites were drafted. RCRA Statements of Basis (SBs) for 10 sites were submitted. Two fuel sites were closed, and remediation continued at four fuel sites. Groundwater monitoring and operation of existing systems continued. Installation of a soil cover on the 10-acre construction rubble site was completed. Remediation was completed at two sites thought to contain unexploded ordnance (UXO); there was no UXO present.

In FY02, the installation continued remediation at four fuel sites, groundwater monitoring, and operation of existing systems. One pilot study was completed. Drafts were developed for five CMSs and five SBs.

In FY03, the installation began investigation of a new groundwater site and initiated corrective measure implementations at four sites. Fourteen CMSs and SBs were modified and eight decision documents (DDs) were signed. Remediation at four fuel sites as well as groundwater monitoring and operations of existing systems continued. The

installation shut down one active treatment system and moved the site into monitored natural attenuation (MNA). The Air Force reached a consent agreement with the State regarding land use control (LUC) issues, which allowed the installation to proceed with postponed documents.

In FY04, the installation initiated remedial actions (RA) at one site. The installation completed four CMSs and SBs, including the associated public comment period, for three sites. The installation completed field investigations and issued a RCRA facility investigation for the petroleum/oil/lubricant (POL) site. Regulatory agencies provided approval to shut down a pump and treat system. The Air Force updated the BCP. The installation reached site closure on a fuel-contaminated site, optimized remedial systems, and eliminated or reduced the monitoring frequency of several monitoring wells. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

Myrtle Beach AFB initiated final RAs at three sites. The installation issued draft documents for two CMSs, one SB, and four DDs. In addition, the installation closed an active treatment system and moved the site into MNA; discontinued monitoring at two landfills; and granted one site no further action (NFA). The installation also evaluated and implemented optimization actions at all sites with remedial systems operating and/or long-term monitoring ongoing. The installation performed annual inspections of LUCs. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Administrative issues delayed the operating properly and successfully (OPS) determinations and the remaining DDs. The SBs were not completed due to the delay in finalizing the CMSs; however, the installation submitted a draft SB for review. Other priority submittals delayed the POL site CMS.

Myrtle Beach AFB held three RAB meetings and conducted a site tour. The BCT held monthly meetings to discuss the LUC monitoring and enforcement in accordance with legal requirements.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites.

Plan of Action

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

IRP

- Complete RA installation at one site in FY06.
- Complete three SBs, five DDs, four OPS determinations, and two CMSs in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|-------------------------|----------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | WI59799F244900 | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2000) |
| Size: | 320 acres | IRP/MMRP Sites Final RIP/RC: | FY 2000/None |
| Mission: | Manufacture ordnance | Five-Year Review Status: | Completed |
| HRS Score: | 43.7; placed on NPL in June 1986 | | |
| IAG Status: | None | | |
| Contaminants: | VOCs, including TCE | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 3.2 million | | |



Progress To Date

Between 1981 and 1985, EPA and the Wisconsin Department of Natural Resources (WDNR) conducted groundwater studies in the general area west of the National Presto Industries (NPI) site (formerly Eau Claire Ordnance Plant No. 1, which manufactured ordnance). Groundwater samples detected volatile organic compounds (VOCs). EPA issued an administrative order on consent requiring NPI to design and install an on-site groundwater treatment facility. EPA placed NPI on the NPL in 1986. The U.S. Army Corps of Engineers (USACE) completed a 5-year review in FY03.

To date, studies identified contamination in four plumes emanating from five source areas. USACE has signed a Record of Decision (ROD) and conducted source removals and installed groundwater treatment systems. The cleanup progress at NPI for FY01 through FY04 is detailed below.

In FY01, the monitoring and operating of soil vapor extraction (SVE) and groundwater systems continued. USACE reviewed the monitoring reports submitted by the property. USACE requested EPA's approval to cease operating the Plume 1/2 system in favor of natural attenuation (NA).

In FY02, USACE continued to monitor and operate the SVE and groundwater treatment systems and continued to review monitoring reports submitted by the property. USACE also continued to work toward a consensus on ceasing to operate the Plume 1/2 system in favor of NA.

In FY03, the property manager continued to monitor and operate the SVE and groundwater treatment systems. USACE reviewed submitted monitoring reports. The property reviewed the use of NA in place of the present Plume 1/2 system. NA was eliminated as an option because contaminants of concern were still above action levels. USACE completed a 5-year review.

In FY04, the property manager installed monitoring wells and delineated the area of contamination in the southwest corner. The property manager continued to operate the two SVE and the two groundwater extraction/treatment systems as prescribed in the ROD and monitored the groundwater in the three areas of concern (AOCs). Plumes 1/2 and 3/4 are stable

or decreasing. The property manager recommended a number of changes for optimizing operation of the active systems and improving the groundwater monitoring plan to EPA and WDNR. USACE continued to monitor progress reports and technical recommendations. USACE has identified no Military Munitions Response Program (MMRP) sites at this property.

FY05 IRP Progress

The property manager recommended changes to EPA and WDNR for optimizing operation of the active systems and improving the groundwater monitoring plan. USACE continued to monitor progress reports and provide technical recommendations. Under a settlement agreement, USACE will no longer be directly involved in any of the on-site operations at NPL. This is the last narrative for NPI and no further actions are planned.

FY05 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) sites at this property.

Plan of Action

Plan of action items for National Presto Industries are grouped below according to program category.

IRP

There are no IRP actions scheduled for FY06 or FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | PR217002758200 | Funding to Date: | \$ 22.5 million |
| Size: | 8,432 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2012) |
| Mission: | Provide training and support to Atlantic Fleet operations in the Caribbean | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2004 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Petroleum hydrocarbons, VOCs, SVOCs, PCBs, pestic | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Naval Station Roosevelt Roads (NSRR) was established in 1943 as a Naval Operations Base to provide training and support to Atlantic Fleet operations in the Caribbean. Since the early 1960s, NSRR's major mission was to support the Atlantic Fleet Weapons Training Facility's (AFWTF's) training missions on Vieques Island, located approximately 7.5 miles east of NSRR. Naval Training Range on Vieques was transferred to the Department of the Interior on May 1, 2003, and all AFWTF training activities have since ceased. In response to this action, NSRR was closed on March 31, 2004. The real estate disposal/transfer is to be carried out in accordance with procedures outlined in BRAC 1990. In FY04, the U.S. Navy established Naval Activity Puerto Rico (NAPR) to serve as the caretaker of the real property associated with the former NSRR and to assist in the transfer of the property. Prior to 1993, environmental activities, having to do with past suspected releases of hazardous constituents, were conducted in accordance with CERCLA regulations under the Department of the Navy's Installation Restoration Program (IRP). The Navy completed the initial assessment study (IAS) in FY84. The study identified sites that showed the potential for releasing hazardous constituents. EPA completed a RCRA facility assessment (RFA) in FY98 and a follow up visual site inspection (VSI) in FY93, which identified the IAS sites and a number of additional solid waste management units (SWMUs) and areas of concern (AOCs).

To date, the Navy has identified 76 SWMUs, 5 AOCs, and 8 monitored natural attenuation sites. In FY94, NSRR received a RCRA Part B Permit, which included corrective action requirements for SWMUs identified during the FY88 RFA and FY93 VSI. In total, the permit contained 52 SWMUs and 4 AOCs. Two additional sites were identified by the Navy and added to the RCRA Corrective Action Program in FY00. These included SWMUs 53 and 54. Also, EPA created a new site SWMU 55 by splitting a trichloroethylene (TCE) plume previously attached to SWMU 7/8 (petroleum hydrocarbon plume) into a separate SWMU.

In FY04, following the closure of NSRR and establishment of NAPR, the Navy performed an Environmental Condition of Property investigation to evaluate both the historic and recent operations at NSRR as relating to compliance with

environmental programs. The investigation identified 21 additional SWMUs and 1 AOC.

FY05 IRP Progress

Naval Activity Puerto Rico completed a corrective measures study final report for SWMUs 7/8, 54, and 55, and initiated ecological risk assessment projects for SWMUs 1,2,9, and 45. The installation initiated RCRA facility investigation (RFI) study for SWMU 14 and a corrective measures implementation for SWMUs 13, 46, 53, and AOC C. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The installation initiated RFI for Pineros and Cabeza de Perro Islands under the MMRP.

Plan of Action

Plan of action items for Naval Activity Puerto Rico are grouped below according to program category.

IRP

- Initiate RFI study for SWMUs 14, 16, and AOC A in FY06.
- Perform ecological risk assessment projects for SWMUs 1,2,9, and 45 in FY06.
- Perform RFI study for SWMU 14 in FY06.
- Complete CMI for SWMUs 13, 46, 53, and AOC C in FY06.

MMRP

- Perform RFI for Pineros and Cabeza de Perro Islands in FY06.

| | | | |
|------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | VA317002248200 | Funding to Date: | \$ 25.3 million |
| Size: | 2,147 acres | Estimated Cost to Completion (Completion Year): | \$ 19.6 million(FY 2016) |
| Mission: | Provide logistics facilities and support services to meet the amphibious warfare training requirements of the Armed Forces | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| HRS Score: | 50; placed on NPL in May 1999 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement negotiations underway | | |
| Contaminants: | Heavy metals, Mixed municipal wastes, VOCs, SVOCs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Naval Amphibious Base 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 (PCP) dip tank, sandblast yards, battery storage areas, and underground storage tanks. EPA placed the installation on the NPL in FY99 because of the potential for contaminants in soil and groundwater to migrate to potential receptors. The installation signed a federal facilities agreement (FFA) in FY04. The installation established a Restoration Advisory Board (RAB) in 1994 and completed a community relations plan (CRP) in FY02. Community and RAB members attended regular meetings and tours of Installation Restoration Program (IRP) activities. The Navy, EPA and State formed a partnership to address environmental cleanup at the facility and met frequently to track progress.

To date, four Records of Decision (RODs) have been finalized, and over 100 sites have been closed. The cleanup progress at Naval Amphibious Base Little Creek for FY01 through FY04 is detailed below.

In FY01, the installation completed a draft work plan for the Solid Waste Management Unit (SWMU) 3 remedial investigations (RIs) and a draft RI for Sites 5, 11, and 13. It also submitted the final base background report and a draft FFA for regulatory comment. The installation completed the interim remedial action (IRA), a draft engineering evaluation and cost analysis (EE/CA), a draft RI work plan at SWMU 8, and a final ecological risk assessment for Sites 5 and 13.

In FY02, the installation completed the CRP, the Site 8 IRA, and draft RI. The installation also completed pilot studies at Site 13 using an oxygen release compound, and at Site 11 using cyclodextrin to significantly reduce groundwater contamination. The installation closed Sites 5, 15, and 16, and SWMU 2. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed the draft RI for Sites 7 and 8. In addition, the installation completed the draft RI for SWMUs

3, 7, and 8. A facility background study and supplemental site assessment investigation was completed for Areas of Concern (AOCs) H, I, J, and Site 14. The installation also completed a no further action (NFA) closeout for Site 4.

In FY04, the installation signed an FFA, and over 100 sites were closed out upon signature. The installation finalized a remedial design (RD) and ROD for Sites 9 and 10. The installation completed final RIs for Sites 7, 8, and SWMUs 7 and 8, and closed out SWMUs 96, 97, 98, and 119. The installation completed a final feasibility study (FS) for Site 12 and an EE/CA and removal action for SWMUs 7 and 8. It also implemented a pilot study for Sites 11a and 13.

FY05 IRP Progress

Naval Amphibious Base Little Creek completed NFA RODs for SWMU 7a and 8. The installation completed EE/CA for Sites 7 and 8, and initiated construction for an IRA. The installation completed an FS and ROD for Site 12. The installation initiated an FS for Site 11. The installation completed site screening assessments at SWMUs 5, 6, 13, and Site 6. SWMUs 18, 116, and AOC D were closed out with NFA.

FY05 MMRP Progress

The Navy identified one MMRP site (former MWR skeet range) at the installation and submitted a draft preliminary assessment for regulatory review.

Plan of Action

Plan of action items for Naval Amphibious Base Little Creek are grouped below according to program category.

IRP

- Complete FS and ROD for Site 13 in FY06.
- Complete RD and RA for Site 12 in FY06.
- Complete FS for Site 11 in FY06.
- Complete Phase II RI for SWMU 3 in FY07.

MMRP

- Complete site investigation in FY06.
- Conduct ROD in FY07.

| | | | |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------|
| FFID: | CA917002757500 | Contaminants: | Petroleum products, solvents, refuse, ordnance, incinerator wastes |
| Size: | 1,527 acres | Media Affected: | Groundwater and soil |
| Mission: | Served as an auxiliary airfield for operations from Moffett Field and other Navy facilities in the area; used for practice operations by the Navy, Air Force, Army, and Coast Guard during the 1970s and 1980s and as a research and development site by NASA | Funding to Date: | \$ 22.2 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 7.1 million(FY 2013) |
| IAG Status: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



Progress To Date

The Naval Auxiliary Landing Field (NALF) at Crows Landing was commissioned in May 1943, and served primarily as an auxiliary airfield. The installation established an information repository in FY89. In July 1991, the BRAC Commission recommended closure of NALF Crows Landing. The installation was closed on July 1, 1994, and was transferred to NASA in FY94. In FY94, the installation formed a BRAC cleanup team (BCT) and completed a BRAC cleanup plan, which was updated in FY97. The installation developed an environmental business plan and a community relations plan (CRP), both of which were updated in FY01. The CRP was also updated in FY02.

To date, regulatory oversight agencies have concurred on no further action (NFA) status for eight Installation Restoration Program (IRP) sites. Congress authorized NASA to transfer the facility to Stanislaus County in FY99. The cleanup progress at NALF Crows Landing for FY01 through FY04 is detailed below.

In FY01, feasibility studies (FSs) for IRP Sites 11 (disposal pits) and 17 (demolished hangar area and administration area plume) were revised, and site verification activities were conducted at IRP Site 11A (former and current sewer systems). Corrective actions continued at the underground storage tank (UST) sites. Two time critical removal actions (TCRAs) were implemented for groundwater extraction at source areas in the administration area plume, routine groundwater monitoring activities were conducted, the environmental business plan was updated, a CRP addendum was published and BCT meetings were conducted bimonthly.

In FY02, groundwater extraction and monitoring activities continued at two source areas at the Administration Area Plume (Site 17). The installation continued to provide for community involvement, published four fact sheets, updated the CRP, and maintained the local information repository in Patterson, California. The installation completed corrective actions at UST Cluster 1, and removed a total of 22,000 pounds of petroleum hydrocarbons from the vadose zone. Information gathering for closure reports began for UST sites. BCT meetings were conducted bimonthly. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites.

In FY03, the Navy continued groundwater extraction activities and removed more than 280 pounds of contaminant mass (primarily acetone and gasoline) from the Administration Area Plume (Site 17). The installation completed closure reports for UST CL 7 and UST CL 40, and the regulatory closure of those sites. Information was collected for the revised FSs for Sites 11 and 17. The administrative record and information repository were maintained. Plans for an in situ submerged oxygen curtain (iSOC) groundwater treatment demonstration project were completed. NFA status was achieved for UST CL 7 and UST CL 40. Approximately 19,000 tons of waste and construction debris were removed from IRP Site 11A (sewer systems) during a TCRA. A draft engineering evaluation and cost analysis, explosive safety submittal, and a work plan for a TCRA to remove approximately 14,000 tons of buried waste, ordnance, and construction debris from IRP Site 11 were completed. Five fact sheets were sent to the community members and other recipients on the CRP mailing list. The BCT meetings were conducted bimonthly.

In FY04, the Navy continued groundwater extraction activities near the site of a former dry well at the Administration Area Plume (Site 17). In addition, a demonstration project was conducted using iSOC within Site 17. The installation prepared a plan to conduct a groundwater investigation on the adjacent (downgradient) property and began development of the access agreement. The installation conducted routine groundwater monitoring activities and munitions evaluations at IRP Site 11. The Navy initiated investigating and response actions at Site 11A. The installation issued four fact sheets and three public notices. The BCT meetings were conducted bimonthly. The BCT continued to partner, evaluating environmental cleanup as well as approving the environmental master schedules for the installation.

FY05 IRP Progress

Naval Auxiliary Landing Field at Crows Landing held a public meeting and completed the removal action at Site 11 (disposal pits). The transitional groundwater extraction near the former dry well at the Administration Area Plume (Site 17) was completed. In addition, the investigation of groundwater beneath adjacent property at Site 17 was completed. The installation received regulatory closure on USTs 109 and 117 as well as the Cluster 2 area. Munitions and explosives of

concern evaluations began in four areas at the installation. The iSOC demonstration project within Site 17 was completed. Final results are pending. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The BCT continued to partner, evaluating the environmental program as well as approving the environmental master schedules for the installation. The installation issued two fact sheets, two public notices, and updated the CRP. NALF issued an environmental business plan.

FY05 MMRP Progress

The Navy conducted no MMRP actions at this installation.

Plan of Action

Plan of action items for Naval Auxiliary Landing Field Crows Landing are grouped below according to program category.

IRP

- Continue basewide groundwater monitoring at the installation in FY06.
- Complete a removal action and/or site closure at Site 11B in FY06.
- Complete the focused FSs for Sites 11 and 17 in FY06-FY07.
- Complete a removal action at the adjacent property (Site 17) in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | HI917002438800 | Funding to Date: | \$ 21.2 million |
| Size: | 2,400 acres | Estimated Cost to Completion (Completion Year): | \$ 33.2 million(FY 2012) |
| Mission: | Operate and maintain communications facilities and equipment for naval shore installations and fleet units in the eastern Pacific | IRP/MMRP Sites Final RIP/RC: | FY 2012/None |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Planned |
| IAG Status: | Draft federal facility agreement was cancelled | | |
| Contaminants: | PCBs, metals, petroleum hydrocarbons | | |
| Media Affected: | Soil | | |



Progress To Date

The Naval Computer and Telecommunications Area Master Station (NCTAMS), Pacific installation operates two 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 maintenance and operation of electrical transformers and switches have been the primary sources of contamination. The installation was placed on the NPL in May 1994 because polychlorinated biphenyl (PCB)-contaminated soil was detected in work and residential areas. Contamination with metals and petroleum hydrocarbons also resulted from the station's operating and maintenance activities. Two Restoration Advisory Boards were established because the installation consisted of two primary facilities. The final community relations plan was completed in FY95.

Thirty sites have been identified at this installation, including 24 CERCLA sites and 5 underground storage tank (UST) sites. The installation has completed a no further action for Site 14 and UST Site 6. The cleanup progress at NCTAMS, Pacific for FY01 through FY04 is detailed below.

In FY01, the removal action at Sites 17, 18, and 20 continued, consisting of treatment of PCB-contaminated soil by thermal desorption. A UST site (UST 9) was identified during demolition of Building 63, NCTAMS Wahiawa.

In FY02, the installation completed the draft remedial investigation (RI) planning documents for Sites 6 and 24. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed draft work plans for the removal action at Sites 17, 18, and 20. In addition, the installation completed the RI fieldwork at Sites 6 and 24. The ecological risk assessment (ERA) for Sites 1, 2, 5, and 22 continued. The installation drafted verification planning documents to confirm the Eureka laboratory results at Sites 14 and 15.

In FY04, the installation completed removal actions at Sites 17, 18, and 20. Additionally, the installation completed draft reports for verification sampling to confirm Eureka laboratory results at Sites 14 and 15, and completed Step 3a ERA at Sites 1, 2, 5, and 22.

FY05 IRP Progress

NCTAMS completed final reports for verification sampling to confirm Eureka laboratory results at Sites 14 and 15. The installation completed draft Step 3a ERA at Sites 6 and 24.

Technical issues delayed final RI reports for Sites 1, 2, 5, 6, 22, and 24.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

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 final RI reports for Sites 1, 2, 5, 6, 22, and 24 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------|
| FFID: | PR217003172000 | Contaminants: | Explosives, metals, VOCs, SVOCs, pesticides, PCBs, gasoline, land waste oil. |
| Size: | 22,687 acres | Media Affected: | Groundwater, surface water, sediment, soil. |
| Mission: | VNTR provided ground warfare and amphibious training for marines, naval gunfire support training, and air to ground training. NASD provided munitions storage for Atlantic Fleet training. | Funding to Date: | \$ 14.5 million |
| HRS Score: | Not scored; Placed on NPL in March 2005. | Estimated Cost to Completion (Completion Year): | \$ 8.8 million(FY 2014) |
| IAG Status: | Federal facility agreement under negotiation. | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2007 |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



Progress To Date

The former Naval Facilities on Vieques consist of the former Naval Ammunition Support Detachment (NASD) on the western end of the island and the Vieques Naval Training Range (VNTR) on the eastern half. Site types include underground storage tanks, open burning/open detonation areas (OB/OD), and munitions areas. In FY03, the Governor of Puerto Rico requested EPA list VNTR and NASD on the NPL; the installation listed on March 2005. The installation converted the technical review committee (TRC) to a Restoration Advisory Board (RAB) in FY04.

The Navy has identified 17 potentially contaminated sites at NASD. At VNTR, the Navy identified 12 RCRA sites and 62 potential Military Munitions Response Program (MMRP) sites. The Navy has transferred 8,114 acres of NASD to the Department of the Interior (DOI), the Municipality of Vieques, and the Puerto Rico Conservation Trust. Four thousand of the acres owned by DOI are operated and managed as a National Wildlife Refuge by the U.S. Fish and Wildlife Service (USFWS). The Navy has also transferred 14,573 acres of VNTR to DOI to be operated and managed as a National Wildlife Refuge and Wilderness Area. The cleanup progress for FY01 through FY04 is detailed below.

In FY01, the Navy completed the preliminary assessment/site investigation (PA/SI) for 17 sites at NASD, the munitions investigation report for Green Beach, and the engineered safety controls for the OB/OD site.

In FY02, the Navy completed the final report on background contamination for NASD.

In FY03, the Navy completed a remedial investigation/feasibility study (RI/FS) at four sites at NASD, and the final baseline groundwater work plan for VNTR. In addition, the Navy completed the munitions investigation and report for Red and Blue Beach, and placed warning signs in restricted areas throughout VNTR.

In FY04, the Navy conducted Phase I fieldwork for the RI for 12 sites on VNTR, RI/FS reports for four sites at former NASD, RI/FS investigations for two sites at NASD, and finalized the NFA document for nine sites on NASD, which is in review with

Navy

the Puerto Rico Environmental Quality Board. TRC was converted to an RAB in August 2004. The installation completed a draft final expanded range assessment and SI work plan and submitted it for regulatory review.

FY05 IRP Progress

The Navy completed supplemental RI work plans for three NASD sites [Areas of Concern (AOCs) E, I, and R] and received regulatory approval. In addition, the Navy submitted engineering evaluation and cost analyses for four former NASD sites [AOC J, AOC R, solid waste management units (SWMUs) 6 and 7]. For the former VNTR, the Navy completed a PA/SI work plan for eight photo-identified/potential AOC (PI/PAOC) sites and received regulatory approval. The Navy submitted a data summary report for the original 12 RCRA sites. The Navy completed a background soil investigation work plan for the former VNTR and received regulatory approval. The Navy completed a charter for the RAB.

Regulatory issues delayed implementation of RIs at the three NASD sites and PAs/SIs for eight PI/PAOC sites. Regulatory issues delayed the federal facilities agreement, although negotiations continued.

FY05 MMRP Progress

The Navy initiated MMRP interim removal action at SWMU 4 for NASD. The installation conducted an MMRP SI and expanded range assessment for VNTR. In addition, the Navy conducted an MMRP surface removal action at discrete sites at the live impact area and specific beaches and roads for VNTR.

Regulators and Navy deferred the final closure plan for the OB/OD site for VNTR until the surface removal of munitions and explosives of concern (MEC) in live impact areas (LIAs) is conducted.

Plan of Action

Plan of action items for Naval Facilities on Vieques are grouped below according to program category.

IRP

- Conduct RI/supplemental RIs at three former

NASD sites (AOCs E, I, and R) in FY06.

- Perform removal actions at four former NASD sites (AOC J, R, SWMU 6, and SWMU 7) in FY06.
- Conduct RI at former NASD SWMU 4 in FY06.
- Conduct background soil investigation and PA/SI at eight PI/PAOC sites at the former VNTR in FY06.

MMRP

- Initiate Phase II MMRP interim removal action at SWMU 4 for NASD in FY06.
- Complete surface removal of MEC from 400 acres and initiate removal for remaining 450 acres of the LIA in FY06.
- Conduct subsurface removal of MEC at selected beaches to be utilized by DOI and USFWS in FY06.
- Complete Phase II SI and expanded range assessment in FY06.

| | | | |
|------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | CA917002756300 | Funding to Date: | \$ 27.0 million |
| Size: | 416 acres | Estimated Cost to Completion (Completion Year): | \$ 13.9 million(FY 2009) |
| Mission: | Supply and provide bulk storage of various grades of petroleum fuel product for fleet | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Petroleum products, VOCs, SVOCs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

The Naval Fuel Depot (NFD), Point Molate supplies and provides bulk storage of fuel for the fleet. In July 1995, the BRAC Commission recommended closure of NFD, Point Molate. Operations at the installation included bulk storage and supply of fuel products, including JP-5, JP-7, and diesel, and Bunker C. Contaminants of concern include petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs) in soil and groundwater. There are 13 disposal areas at Point Molate.

Nine disposal areas (1, 2, 4, 6, 7, 8, 9, 11, and 12), consisting of 364 acres, were transferred to the City of Richmond in 2003. Two Records of Decision (RODs) have been signed to date. The cleanup progress at NFD, Point Molate for FY01 through FY04 is detailed below.

In FY01, the installation completed the action memorandum (AM) and design documents for the Site 1 landfill cap and began construction. Fieldwork for Site 3 was completed, and the engineering evaluation and cost analysis (EE/CA) was initiated. The fieldwork for Site 4 was also completed, and the ecological risk assessment (ERA) and human health risk assessment (HHRA) began. The installation completed fieldwork and pilot studies for the firing range and Building 87 sites. Mobile free product removal systems were installed at two large underground storage tanks (USTs) and one former valve box. The installation continued extraction-trench groundwater treatment under the existing National Pollution Discharge Elimination System (NPDES) permit. NFD, Point Molate began preparing a final Phase II Environmental Baseline Survey (EBS) summary report.

In FY02, the installation completed a removal action at Site 1 and initiated long-term management. The Site 4 screening level risk assessment was also completed. The installation continued extraction-trench groundwater treatment under the existing NPDES permit. The Phase II EBS summary report and corrective action plan for USTs and fuel pipelines were completed. The installation completed construction of the Site 1 landfill cap. The installation initiated an EE/CA for Site 3. The Navy has completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were

identified at this installation.

In FY03, the installation completed an HHRA/ERA at Site 4 and significantly reduced the boundaries of Site 4. The quarterly groundwater and methane monitoring continued at Site 1. An oil-water separator was installed at Site 1. The groundwater extraction continued at Site 3 and the removal began for the three treatment ponds at Site 3. The installation also initiated feasibility studies (FSs) at Installation Restoration Program (IRP) Sites 1, 3, and 4, and investigated the pipes and tanks on the pier. The semiannual basewide groundwater monitoring continued. While revising the environmental closure strategies, a decision was made and agreed to by the BRAC Cleanup Team (BCT) to stop the Site 3 EE/CA and AM and proceed with developing an FS, proposed plan (PP), and ROD for Site 3. A community involvement plan was revised. A Restoration Advisory Board/community site tour was held.

In FY04, the installation completed the Site 3 treatment ponds removal and the Site 1 FS and PP. It also began the environmental and structural closure of the 22 USTs, pipelines, and valve boxes. The installation began a groundwater beneficial use evaluation (BUE) study. Basewide groundwater monitoring and landfill methane monitoring continued. The groundwater extraction continued at Site 3. The installation initiated the Site 3 and Site 4 FSs and PPs. The BCT continued to partner and evaluate the environmental cleanup at the installation and approved the environmental Master Schedule for the installation.

FY05 IRP Progress

NFD completed the environmental and structural closure of the 22 USTs, pipelines, and valve boxes. The Navy received concurrence on the structural closure from the regulatory agencies and is waiting for concurrence on the environmental closure. The installation completed the groundwater BUE with concurrence from the regulatory agencies. The Navy completed and signed the Site 1 ROD. In concurrence with the regulatory agencies, the installation changed the strategy for Site 4 and completed a risk assessment technical memorandum (RATM) to complement previous documents, instead of an FS. Basewide groundwater monitoring and landfill methane monitoring continued. The cost of completing environmental restoration at this installation has changed significantly due to

technical issues.

Regulatory issues delayed the FS and corrective action plan (CAP) for Site 3. The Site 4 strategy change delayed the PP.

The BCT continued to partner and evaluate the strategies for environmental cleanup at the installation. The environmental master schedule was approved.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Naval Fuel Depot, Point Molate are grouped below according to program category.

IRP

- Complete Site 3 FS, CAP, and PP in FY06.
- Complete Site 4 RATM and PP in FY06.
- Continue Site 1 landfill monitoring in FY06.
- Complete Site 1 remedial design and remedial action in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------------|-------------------------------------|-------------------------|
| FFID: | WA017002756800 | Estimated Cost to Completion | \$ 0.4 million(FY 2007) |
| Size: | 2,716 acres | (Completion Year): | |
| Mission: | Receive, store, maintain, and issue ordnance | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2005 |
| HRS Score: | 50.00; placed on NPL in May 1994; delisted in June 2005 | Five-Year Review Status: | Completed |
| IAG Status: | IAG signed in August 1996 | | |
| Contaminants: | RDX, heavy metals, PCBs, VOCs, TNT | | |
| Media Affected: | Groundwater, surface water, sediment, land soil | | |
| Funding to Date: | \$ 9.2 million | | |



Progress To Date

The Naval Magazine Indian Island history includes receiving, storing, maintaining, and issuing ordnance. The primary sources of contamination at the installation are landfills, ordnance disposal, and transfer sites. Investigations have focused on cleaning up existing, and preventing future contamination of shellfish beds near the installation. Investigations found trace metals (including lead), organics, and petroleum hydrocarbons in shellfish near the north-end landfill. A community relations plan was developed in FY92 and revised in FY96. EPA placed the installation on the NPL in May 1994. The Navy signed a federal facility agreement in August 1996. The installation's technical review committee was converted to a Restoration Advisory Board in FY95. The installation conducted 5-year reviews in FY00 and FY05, and no deficiencies were identified.

Since FY84, investigations at this installation have identified 19 sites. A Record of Decision (ROD) was signed in FY95. The cleanup progress at Naval Magazine Indian Island for FY01 through FY04 is detailed below.

In FY01, the installation completed a removal action for petroleum and polycyclic aromatic hydrocarbon (PAH)-contaminated soil at Site 36. The Navy completed a removal action and engineering evaluation and cost analysis for lead-contaminated soil at Site 33. The State of Washington's Department of Ecology (WADOE) determined that Sites 33 and 36 require no further action (NFA). Long-term operations and maintenance (LTOM) at Site 10 continued with groundwater sampling, landfill cap, and shoreline maintenance activities.

In FY02, the installation continued LTOM at Site 10 (the north-end landfill). The Navy initiated, modified, and reduced groundwater monitoring requirements. The reduced requirements produced a savings to the Navy of approximately 85 percent per year in LTOM costs. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation continued LTOM at the north-end landfill at Site 10. In addition, the installation conducted extensive repairs to the landfill's shoreline protection system.

In FY04, the installation continued LTOM at Site 10. The Navy also initiated a second 5-year review. Navy and EPA project managers continued taking steps to remove the installation from the NPL. The installation completed an underwater investigation at Crane Point (Site EO101) by Explosive Ordnance Disposal Unit 11 (EODMU 11) - Detachment Bangor. The investigation was completed as an element of ongoing training exercises by EODMU 11.

FY05 IRP Progress

The Navy and EPA signed an explanation of significant differences (ESD) for the ROD. The ESD clarified the institutional control (IC) requirements for Site 10 and established the general requirements for the installation to follow to ensure the effectiveness of ICs for Indian Island. WADOE issued a NFA letter and determined that the remedial actions specified in the ROD have been completed. All response actions at this installation are complete, and no further construction is anticipated; only long-term maintenance and monitoring of Site 10 and the management of ICs remain. The installation continued LTOM at Site 10. Naval Magazine Indian Island was removed from the NPL on June 14, 2005. The cost of completing environmental restoration at this installation has changed significantly due to regulatory issues. This is the last year for this narrative.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

Plan of action items for Naval Magazine Indian Island are grouped below according to program category.

IRP

- Continue LTOM at Site 10 in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|-----------------------------------------------------------|-------------------------------------|----------------------------------|
| FFID: | RI117002424300 | Estimated Cost to Completion | \$ 56.6 million(FY 2034) |
| Size: | 1,400 acres | (Completion Year): | |
| Mission: | Provide logistical support and serve as a training center | IRP/MMRP Sites Final RIP/RC: | FY 2014/FY 2009 |
| HRS Score: | 32.25; placed on NPL in November 1989 | Five-Year Review Status: | Completed, underway, and planned |
| IAG Status: | Federal facility agreement signed in March 1992 | | |
| Contaminants: | PCBs, POLs, VOCs, SVOCs | | |
| Media Affected: | Groundwater, surface water, sediment, land soil | | |
| Funding to Date: | \$ 88.2 million | | |



Progress To Date

Naval Station Newport (formerly known as the Newport Naval Education and Training Center) was used as a refueling depot from the early 1900s until after World War II, when it was restructured to support research and development and provide specialized training. 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 installation was placed on the NPL in November 1989. It signed a federal facility agreement in March 1992. The installation formed a technical review committee in FY88 and converted it to a Restoration Advisory Board (RAB) in FY95. A community relations plan was completed in FY90, and the installation established an ecological advisory board. The installation completed 5-year reviews in FY99 and FY04.

The installation has completed Record of Decision (ROD) documents for the Landfill cap and the Site 1 offshore area. The installation has also submitted an interim ROD for Tank Farm No. 5. The cleanup progress at Naval Station Newport for FY01 through FY04 is detailed below.

In FY01, the installation finalized reports for the Site 17 study area screening evaluation (SASE) and Site 2 closure. The remedial investigation (RI) was completed and the feasibility study (FS) was started for Site 9. The Phase I remedial action (RA) for the Site 1 offshore area was completed. Long-term management (LTM) continued for the Site 1 onshore RCRA cap.

In FY02, the installation completed the Phase II RA for Site 1 offshore area. The draft final FS for Site 9 was completed. The draft proposed RA plan was submitted to regulators for Site 9. The operations and maintenance plan for offshore area of Site 1 was initiated. LTM continued for Site 1 onshore RCRA cap. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the Navy completed a total petroleum hydrocarbons (TPH)- and PCB-contaminated soil removal action on Gould Island. The Navy removed 207 tons of TPH-contaminated soils with concentration greater than 5,000 parts per million (ppm)

and 8,632 tons of TPH-contaminated soils with concentration less than 5,000 ppm. In addition, the Navy treated and discharged 326,416 gallons of TPH-contaminated water. The Navy removed 693 tons of PCB-contaminated soil and treated and discharged 70,000 gallons of PCB-contaminated water from the excavation. The installation submitted the draft RI work plan for the field investigation at Site 17 to regulatory agencies. The Navy began the preliminary assessment (PA) study for potential MMRP sites at the installation. The internal draft PA report was prepared; the Navy has identified unexploded ordnance (UXO) 000001 Carr Point Skeet Range as an eligible MMRP site that will need further investigation, based on initial review. An additional UXO site, Sachuest Point Rifle Range, was also identified, but it was determined that this property fell under the FUDS program. The Navy held a public meeting to discuss an onshore soil removal action at Site 9.

In FY04, the installation performed a site investigation (SI) at Site 4. For Site 8, the installation prepared the draft and draft final SASE reports, finalized the background study work plan, and awarded a removal action to remove several drums and paint cans discovered during the study area screening assessment. For Site 9, the installation completed the pre-design investigation for the soil removal action, and awarded the first phase of a soil removal action to remove three soil mounds approximating 11,000 cubic yards. It also developed a draft sediment and groundwater monitoring work plan. The installation completed the SI work plan for Sites 12 and 13, and the RI work plan for Site 17. For Site 19, sediment sampling was completed and will be used to update and finalize the FS for the offshore area. For Site 20, a draft SASE was prepared. A 5-year review was completed in 2004. The installation prepared the draft and draft final PA for the Carr Point Shooting Range. The draft final report recommends no further action. The RAB met nine times, including a bus tour of the Installation Restoration Program (IRP) sites.

FY05 IRP Progress

Naval Station Newport initiated Site 12 and Site 13 SI. The installation completed the Site 17 RI fieldwork. The installation completed the Site 20 study area screening assessment. Removal action for Site 008 was completed. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Optimization review delayed the second phase of soil removal at Site 9.

FY05 MMRP Progress

The installation finalized Carr Point shooting range PA, which recommends proceeding to the SI phase.

Plan of Action

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

IRP

- Complete RI work plan and fieldwork for Site 008 in FY06.
- Complete optimization review for Site 009 in FY06.
- Continue LTM at Site 001 in FY06-FY07.
- Complete RI report for Site 008 in FY07.

MMRP

- Initiate SI for UXO Site 001, Carr Point Shooting Range in FY06.

| | | | |
|------------------------|------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | WA09799F345500 | Funding to Date: | \$ 0.3 million |
| Size: | 191 acres | Estimated Cost to Completion (Completion Year): | \$ 0.2 million(FY 2010) |
| Mission: | Served as shipbuilding facility and reserve shipyard | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | Unknown | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | VOCs, PNAs, PCBs, heavy metals, including arsenic, lead, mercury | | |
| Media Affected: | Groundwater, sediment, soil | | |



Progress To Date

The Naval Station Todd-Tacoma shipyard is located on Commencement Bay between Hylebos and Blair Waterways in Tacoma, Washington. The U.S. Navy acquired the 191-acre facility between 1942 and 1948. Beginning in 1940, the western portion of the property, approximately 74.2 acres and owned at that time by Seattle-Tacoma Shipbuilding Corporation (later called Todd Pacific Shipyards, Inc., Tacoma Division), was rapidly developed to support the Navy war effort. The Navy and the Maritime Commission acquired adjacent land to expand the plant. By October 1942, the Maritime Commission had transferred all of its contractual and facility interests to the Navy. Land acquisitions continued until the end of the war, and the facility expanded to 191 acres. After the war, the property was designated 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 the remaining property was conveyed to the Port of Tacoma in January 1960.

The cleanup progress for Naval Station Todd-Tacoma for FY01 through FY04 is detailed below.

In FY01, the need for additional field data to confirm or counter allegations of liability was reviewed. Discussions continued with other potentially responsible parties, regulators, and stakeholders. The U.S. Army Corps of Engineers (USACE) assisted the Office of Counsel and Department of Justice (DOJ) with a response to the EPA special notice letter, as well as with settlement negotiations.

In FY02, USACE continued to assist the Office of Counsel and DOJ with the ongoing settlement negotiations. National Resources Damages Assessment (NRDA) Trustees have proposed a method for assessing NRDA damages, and have solicited and received comments on the methodology.

In FY03, a U.S. District Judge signed a consent decree that included DoD and other federal agencies. USACE continued to assist the Office of Counsel and DOJ with settlement negotiations.

In FY04, USACE continued to assist with ongoing negotiations. USACE has identified no Military Munitions Response Program (MMRP) sites at this property.

FY05 IRP Progress

USACE continued to assist with ongoing settlement negotiations. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

USACE has identified no MMRP work at this property.

Plan of Action

Plan of action items for Naval Station Todd-Tacoma are grouped below according to program category.

IRP

- Continue to assist the Office of Counsel and DOJ with settlement negotiations in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | VA317002468500 | Funding to Date: | \$ 56.8 million |
| Size: | 2,677 acres | Estimated Cost to Completion (Completion Year): | \$ 12.0 million(FY 2011) |
| Mission: | Proof and test ordnance | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 50.26; placed on NPL in October 1992 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in September 1994 | | |
| Contaminants: | Cleaning solvents, explosives residues, heavy metals, low-level radioactive materials, mercury, PCBs, pesticides | | |
| Media Affected: | 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 testing of ordnance for the Navy. Site types include former landfills, former ordnance burning and disposal areas, underground storage tanks, operating ordnance ranges, and operating ordnance research and development areas. The installation established an information repository and an administrative record in FY91. EPA placed the installation on the NPL in October 1992 because of potential migration of releases from three contaminated sites. These releases could affect the Potomac River, Gambo Creek, associated wetlands, and local groundwater aquifers used for drinking water. Ordnance testing operations contributed to the contamination. In FY92, a community relations plan was completed, and the installation formed a technical review committee (TRC). In FY95, the TRC was converted to a Restoration Advisory Board (RAB). The installation has completed 5-year reviews in FY03, FY04, and FY05.

To date, Dahlgren has identified 68 sites. The installation completed approximately 16 Records of Decision (RODs) since the beginning of the environmental restoration process. The cleanup progress at Dahlgren for FY01 through FY04 is detailed below.

In FY01, the installation completed remedial investigations and feasibility studies (RI/FSs), proposed plans (PPs), and RODs for Sites 36/49 and 46. A remedial design (RD) was completed for Site 25, and the remedial action (RA) contract was awarded and initiated. Contracts for removal designs and actions at Sites 31 and 50 were awarded and initiated. Three Appendix B sites were closed out with no further action (NFA), including Solid Waste Management Units 23, 61, and 77. Regulators approved the Phase II Gambo Creek work plan, and sampling was performed. The Navy awarded long-term management (LTM) contracts for Sites 9 and 17 and submitted work plans.

In FY02, the installation completed an RI/FS, a PP, and an ROD for Site 6, and completed an RI for Site 55. Four Appendix B closeout sites were sampled and documents were finalized for NFA. RODs were completed for Sites 6 and 46. LTM work plans were finalized for Sites 9, 10, and 17. The installation

completed interim RAs (IRAs) at Sites 13 and 50. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed two RI/FSs, two PPs, and two RODs for Sites 31 and 55. The Navy completed the 5-year review for Site 2. The installation completed the Site 46 RA and began the Site 6 RA. The installation also began the Site 37 RD. The Navy initiated a treatability study (TS) using the in situ Multiple Application Gas Nutrient System (Magnus System) to inject nutrients into the groundwater at Site 12. The additional planned RD was not required.

In FY04, the installation completed three RIs (Sites 32, 37, and 61), two FSs (Sites 32 and 37), two PPs, and two RODs for Sites 32 and 37. The Navy completed the 5-year review for Sites 9, 10, 12, and 17. The installation completed the Site 6 RA and began construction on Site 47 IRA. The Site 37 100 percent RD was submitted. The Magnus System TS continued at Site 12. The installation completed annual wetland monitoring reports for Sites 9/58, 17, 25, 46, and 50. The installation completed IRAs for Sites 43 and 52. The installation initiated the IRA for Site 61 and completed site screenings for four sites (Sites 14, 15, 38, and 57).

FY05 IRP Progress

The Navy completed a comprehensive 5-year review for multiple sites, an RD for Site 37, annual wetland monitoring report for multiple sites, and an RI/FS, a PP and a ROD for Site 62. The installation completed IRAs for Sites 47b and 61b. The Navy finalized two closeout documents for NFA at Sites 38 and 40. The installation completed RIs for Sites 20 and 61a and conducted removal actions at Sites 4 and 15. The Navy utilized diffusion bag technology for conducted groundwater sampling in order to assist with volatile organic chemical (VOC) contamination concentrations at Site 20. Two Restoration Advisory Board meetings were held and a presentation was made to the King George Board of Supervisors on the status of the remediation efforts at Dahlgren. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Naval District Washington, West Area are grouped below according to program category.

IRP

- Complete an engineering evaluation and cost analysis or FS for one site in FY06.
- Complete IRAs for three sites in FY06; finalize closeout reports in FY07.
- Initiate RA in FY06; finalize closeout report in FY07.
- Complete annual wetland monitoring report for multiple sites in FY06 and FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------------|-------------------------------------|--------------------------|
| FFID: | NE79799F041800 | Estimated Cost to Completion | \$ 62.9 million(FY 2025) |
| Size: | 17,214 acres | (Completion Year): | |
| Mission: | Performed ordnance storage and manufacturing activities | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2001 |
| HRS Score: | 31.94; placed on NPL in August 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in September 1991 | | |
| Contaminants: | Explosives, VOCs, TCE, PCBs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 85.3 million | | |



Progress To Date

From 1942 to 1956, the Nebraska Ordnance Plant (NOP) 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 on-site and off-site groundwater contaminated with explosives and volatile organic compounds (VOCs). EPA placed the property on the NPL in August 1990 and EPA and the Army signed an interagency agreement in September 1991. USACE installed groundwater treatment and containment systems. In FY97, USACE converted the property's technical review committee to a Restoration Advisory Board (RAB). In FY99, USACE completed a memorandum of understanding with the Lower Platte National Resource District concerning beneficial reuse of treated groundwater. USACE installed groundwater treatment and containment systems. In FY02, USACE approved a 5-year review of the munitions and explosives of concern (MEC) engineering evaluation and cost analysis (EE/CA) removal action.

To date, USACE has signed a Record of Decision for Operable Unit (OU) 1 and incinerated over 16,000 tons of contaminated soil at the site. The cleanup progress at NOP for FY01 through FY04 is detailed below.

In FY01, the OU 2 groundwater remedial action (RA) construction progressed. The groundwater monitoring program continued and USACE completed four rounds of sampling. USACE continued operations and maintenance (O&M) of the OU 2 containment interim RA. The draft-final groundwater circulation pilot study report was completed, with the restoration parties deciding to implement groundwater circulation wells (GCWs) for focused remediation in lieu of high-capacity extraction wells. USACE prepared a draft explanation of significant differences (ESD), and hosted a public availability session to document the GCW decision. The regulators approved the draft-final OU 2 Phase II GCW remedial design (RD) and the draft-final OU 3 feasibility study report. USACE submitted the draft OU 3 proposed plan for review. The

estimate for funding of a future Military Munitions Response Program (MMRP) project was updated and an EE/CA was scheduled for approximately FY13.

In FY02, USACE completed the OU 2 containment construction that is currently in the O&M phase. The District Commander signed the OU 2 ESD and submitted it to EPA. EPA Region 7, the Nebraska Department of Environmental Quality, and USACE continued to address issues with monthly project managers meetings. USACE conducted a 5-year review of the MEC EE/CA removal action.

In FY03, USACE performed further investigation of the recently discovered trichloroethylene (TCE) groundwater contamination plume south of Load Line 1. The investigation determined the extent of the contamination plume, which allowed the work plans for the pre-design analysis and RA to be completed. At the request of EPA and the Department of Justice (DOJ), USACE initiated additional investigation activities to document and verify disposal of potential hazardous waste materials reported by the present landowner. In addition, both the Kansas City and Omaha Districts of the USACE worked with the City of Omaha Municipal Utilities District and EPA regarding the selected location for their new municipal water well field. The 5-year review of the MEC EE/CA removal action was under review for approval.

In FY04, USACE developed an RD for additional containment and groundwater monitoring wells. Additionally, USACE continued O&M of the treatment system, and conducted quarterly groundwater monitoring. USACE also completed work plans for the Load Line 1 RA and developed an RD for a treatment facility south of Load Line 1. In a separate effort, USACE, EPA, and DOJ began negotiations with three potentially responsible parties (PRPs) for cost recovery and settlement of their environmental liability at the NOP. A pre-design investigation was conducted in the vicinity of the proposed monitoring wells. The 5-year review of the MEC EE/CA removal action was approved.

FY05 IRP Progress

DOJ continued to lead negotiations with PRPs. USACE initiated construction on Load Line 1 extraction wells and the air stripper treatment system (RA for OU 2). USACE began

implementation of the focused extraction portion of the OU 2 ROD. The PP and ROD for OU 3 was deferred due to regulatory issues. USACE also initiated a supplemental groundwater investigation to better define the southern and eastern edges of the plume and facilitate design of the City of Omaha Municipal Utility District monitoring network. USACE continued O&M of the treatment system quarterly groundwater monitoring. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY05 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) work at this property.

Plan of Action

Plan of action items for Nebraska Ordnance Plant are grouped below according to program category.

IRP

- Continue legal and technical support to DOJ for settlement discussions or litigation in FY06.
- Develop plan for investigation of potential bedrock contamination in FY06.
- Complete construction of Load Line 1 extraction wells and air stripper (RA for OU 2) in FY06.
- Continue implementation of the focused extraction portion of the OU 2 ROD.
- Complete groundwater investigation, update groundwater model and develop containment criteria in FY06.
- Issue the PP and ROD for OU 3 in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | NC49799F483500 | Funding to Date: | \$ 1.9 million |
| Size: | 4 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2006) |
| Mission: | Served as World War II bomber command and Vietnam-era aerospace defense command | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| HRS Score: | 39.39; placed on NPL in March 1989 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | VOCs and SVOCs | | |
| Media Affected: | Groundwater | | |



Progress To Date

New Hanover County Airport served as a World War II bomber command and Vietnam-era air defense command installation. In FY87, a preliminary assessment and a site inspection identified groundwater contamination caused by past fire training activities. These activities involved burning of jet fuel, gasoline, fuel oil, and kerosene. The property included a burn pit, a mockup of an aircraft, and a 10,000-gallon aboveground storage tank that supplied fuel to the burn areas. Other fire training stations at the property include a fire smokehouse, a railroad tanker car, and several automobiles. These fire-training activities contaminated groundwater with benzene. EPA identified DoD, New Hanover County, Cape Fear Community College, and the City of Wilmington as potentially responsible parties (PRPs) for the property and placed the property on the NPL in March 1989.

To date, the PRPs have signed a Record of Decision (ROD) for property cleanup. The cleanup progress at New Hanover County Airport for FY01 through FY03 is detailed below.

In FY01, EPA approved the air sparging (AS) ROD amendment. The PRPs completed the 60 percent remedial design (RD) document, and submitted the 90 percent AS RD document to EPA. At the State's request, additional monitoring wells were installed to determine the lateral continuity of the confining unit. The U.S. Army Corps of Engineers (USACE) and the Department of Justice (DOJ) will evaluate a possible settlement of DoD liability when the RD is completed and removal action costs are established.

In FY02, the 90 percent and final AS RD documents were both approved. USACE conducted a public comment meeting.

In FY03, a contractor installed the AS system on behalf of the PRP group.

FY05 IRP Progress

The settlement was delayed pending final action by DOJ, which also delayed project closeout. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) sites at this property.

Plan of Action

Plan of action items for New Hanover County Airport are grouped below according to program category.

IRP

- Complete final settlement with PRPs in FY06.
- Complete project closeout following final settlement in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------|
| FFID: | CT117002202000 | Media Affected: | Groundwater, surface water, sediment, land soil |
| Size: | 547 acres | Funding to Date: | \$ 58.8 million |
| Mission: | Maintain and repair submarines; conduct submarine training and submarine medical research; provide a home port for submarines | Estimated Cost to Completion (Completion Year): | \$ 22.2 million(FY 2042) |
| HRS Score: | 36.53; placed on NPL in August 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2012/None |
| IAG Status: | Federal facility agreement signed in January 1995 | Five-Year Review Status: | Completed |
| Contaminants: | Dredge spoils, incinerator ash, POLs, PCBs, spent acids, pesticides, solvents, construction debris, metals, VOCs | | |



Progress To Date

New London Naval Submarine Base maintains and repairs submarines. Significant sites at the installation include the Area A landfill (Site 2), a number of smaller disposal areas, and fuel and chemical storage areas. The Navy placed the installation on the NPL in August 1990 because of polychlorinated biphenyl (PCB) contamination at Site 2. The installation formed a technical review committee in FY89 and converted it to a Restoration Advisory Board in FY94. The installation signed a federal facility agreement in January 1995. In FY01, the installation completed a 5-year review.

Twenty-nine sites have been identified at this installation, including 22 CERCLA sites, along with underground storage tanks (USTs) which were grouped into 2 UST sites. The installation has completed Record of Decision (ROD) documents for Sites 2, 3, 6, 8, 20, and the basewide groundwater operable unit (OU). In addition, the installation has signed No Further Action RODs for Sites 4 and 15. The installation completed the proposed remedial action plan (PRAP) and ROD for the basewide groundwater OU. The cleanup progress at New London Naval Submarine Base for FY01 through FY04 is detailed below.

In FY01, the installation completed the remedial actions (RAs) at Sites 8 and 20. Groundwater monitoring continued at Sites 2 and 6. The installation completed the remedial investigation for the basewide groundwater OU. The 5-year review was completed as planned. The draft feasibility study (FS) was completed for the lower base.

In FY02, the installation continued groundwater monitoring at Sites 2, 6, and 8. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the Navy performed additional fieldwork in the adjacent Thames River. The data was included in the FS for the lower base sites. The installation completed the FS for the basewide groundwater OU.

In FY04, the installation completed the PRAP and ROD for the basewide groundwater OU.

FY05 IRP Progress

New London Naval Submarine Base completed remedial design for basewide groundwater OU and for Site 7 Soil OU.

Regulatory issues delayed the Thames River Study and FS, ROD, and PRAP for lower base sites. Funding issues delayed the RA for basewide groundwater OU.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete RA for basewide groundwater OU in FY06.
- Complete RA for Site 7 Soil OU in FY06.
- Complete Thames River Study and FS for lower base sites in FY06.
- Complete PRAP and ROD for lower base sites in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | OH557002465000 | Funding to Date: | \$ 5.8 million |
| Size: | 70 acres | Estimated Cost to Completion (Completion Year): | \$ 0.3 million(FY 2007) |
| Mission: | Provided depot-level maintenance for Air Force and DoD missile, navigation, and guidance systems. | IRP/MMRP Sites Final RIP/RC: | FY 2002/None |
| HRS Score: | N/A | Five-Year Review Status: | Completed and planned |
| IAG Status: | None | | |
| Contaminants: | VOCs, SVOCs, BCEE, TCE | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Since 1962, Newark Air Force Base (AFB) has provided depot-level maintenance for missile, guidance, and navigational systems used by most aircraft and missiles. Past waste management activities related to solvents such as freon 113 and trichloroethylene (TCE) have affected groundwater at the installation. In FY93, the BRAC Commission recommended that Newark be closed. The base closed in 1996. An Environmental Baseline Survey was completed in 1994. In FY94, the installation formed a BRAC cleanup team (BCT) and a Restoration Advisory Board (RAB) to support cleanup efforts. The RAB adjourned in FY05. The installation completed the first 5-year review in FY05.

Through investigations, the installation has identified 12 sites. The installation prepared no further action decision documents (DDs) for five sites. Upon closure, 56 of the 70 acres comprising Newark AFB were transferred to the Heath-Newark-Licking County Port Authority, and the base mission was privatized to contractors. In FY03, an additional 13 acres were transferred. The cleanup process at Newark AFB from FY01 through FY04 is detailed below.

In FY01, the installation initiated enhanced in situ bioremediation as the remedial action (RA) at FF87 (ST011). This site later attained remedy in place (RIP) status.

In FY02, a focused supplementary remedial investigation concluded that bis-dichloroethylether (BCEE) in groundwater was due to an up-gradient, off-site source. A feasibility study recommended institutional controls as the RA for BCEE. A DD was signed and the last RIP (LRIP) for LF002 was achieved. Three of the eight required cycles of quarterly monitoring to assess the success of the vegetable oil injection at the three-quarter acre FF87 were completed. The 5-year review was rescheduled based on the 1999 achievement of LRIP for the 56-acre parcel.

In FY03, the Air Force transferred LF002, totaling 13 acres, to the Licking County Regional Airport Authority. An amended post closure plan (APCP) for FF87 and the hazardous waste storage area was submitted for regulatory review.

In FY04, the APCP for FF87 was completed. Contaminant concentrations dramatically decreased at MW-87-1A. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed the first 5-year review. The installation formally adjourned the RAB due to a lack of community interest and because all environmental cleanup sites are closed with the exception of FF87. The enhanced bioremediation at FF87 continues to make progress at the two remaining wells (MW-87-1 and MW-87-1A) where concentrations of TCE exceed the maximum contaminant level. A performance-based contract was awarded for groundwater monitoring at FF87. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed the operating properly and successfully (OPS) determination for FF87. Administrative issues delayed the closure of obsolete groundwater monitoring wells. Regulatory issues delayed the modification of the APCP.

The BCT held one meeting. The installation presented proposed amendments for the post closure plan for the detection monitoring and bioremediation effectiveness monitoring program to the BCT. The RAB formally adjourned in accordance with DOD policy.

FY05 MMRP Progress

The Air Force has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Amend the APCP for FF87 in FY06.
- Complete OPS documents and obtain an OPS approval letter for FF87 in FY06.
- Close obsolete groundwater monitoring wells

at FF87 and at previously transferred parcels in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | VA317002741400 | Funding to Date: | \$ 91.3 million |
| Size: | 4,631 acres | Estimated Cost to Completion (Completion Year): | \$ 25.7 million(FY 2020) |
| Mission: | Provide services and materials to support the aviation activities and operating forces of the Navy | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 50.00; placed on NPL in April 1997 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in February 1999 | | |
| Contaminants: | Petroleum products, PCBs, solvents, heavy metals, acids, paints, asbestos, pesticides | | |
| Media Affected: | Surface water and sediment | | |



Progress To Date

Norfolk Naval Base provides services and materials to support the aviation activities and operating forces of the Navy. Contamination has resulted from maintenance of aircraft, equipment, and vehicles, and from operation of support facilities. Site types at the installation include landfills, ordnance storage areas, waste disposal areas, fire training areas, fuel spill areas, and underground storage tanks. The installation was placed on the NPL in April 1997 mainly because of the potential for migration of contaminated surface water into groundwater and soil. The installation formed a technical review committee in FY89 and converted it to a Restoration Advisory Board in FY94. A community relations plan was completed in FY93 and updated in FY03. The installation signed a federal facility agreement in February 1999. The installation has completed 5-year reviews for Sites 1, 2, 3, 6, and 20.

Sixty-two sites and 173 solid waste management units (SWMUs) have been identified at this installation. The installation has signed Records of Decision (RODs) for SWMUs 12 and 16, and Sites 2 and 6. The cleanup progress at Norfolk Naval Base for FY01 through FY04 is detailed below.

In FY01, the installation signed the ROD for Site 2 and the closeout reports for Sites 5, 7, 8, 12, and 17. Additionally, the installation signed closeout reports for SWMUs 8, 9, 10, 38, and 39. It also completed a feasibility study (FS) for Site 22 and prepared the draft proposed remedial action plan (PRAP) and the draft ROD. Modeling to characterize the groundwater extraction well capture zones at Site 1 was completed as a part of the long-term monitoring program.

In FY02, the installation signed closeout reports for Sites 10 and 16 and prepared an engineering evaluation and cost analysis (EE/CA) for Site 22. It also completed a removal action consisting of a one-foot soil cover for Site 22 and revised the draft PRAP and ROD to address the removal action. As part of an optimization effort, the installation developed a shutdown strategy for the air sparge/soil vapor extraction system at Site 3 Area of Concern 1 (AOC 1). A nonsignificant difference document was prepared to address the need to treat additional shallow water in the pump and treat system at Site 1. The installation initiated the remedial investigation (RI) and FS at SWMU 14 and completed a draft 5-year review. The installation

also completed the site investigation (SI) and closeout reports for Site 10. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed a final 5-year review document. Watershed contaminant source documentation was prepared for SWMU 14 and is in a draft final format. The closeout report was signed for SWMU 6. A consensus was also reached for closure of SWMU 4. The installation prepared an EE/CA to address contamination in a pond area adjacent to Site 22. This removal action consists of a one-foot cover over contaminated sediment. Consensus was reached on the shutdown strategy for Site 3 AOC 1 and the strategy was implemented. The installation prepared a document to record the potential sources of contamination in the watershed of Willoughby Bay. Site 23 was added as a new CERCLA site.

In FY04, the installation completed the one-foot sediment cover removal action at the pond adjacent to Site 22. The installation also finalized the watershed contaminated source document for Willoughby Bay. Additionally, the RIs for SWMUs 12 and 16 were finalized and consensus was reached for no further action (NFA) at these sites. The installation finalized the PRAP and ROD for soil and sediment at Site 22 and initiated the RI at Site 23. The installation initiated a final expanded SI.

FY05 IRP Progress

The Norfolk Naval Base finalized an NFA PRAP and ROD for SWMUs 12 and 16. The installation finalized a SI for Site 23. A remedial design (RD) was finalized for Sites 2 and 22. The installation completed the final RI for SWMU 14. The installation also completed the first phase of the RI and SI for Site 23.

FY05 MMRP Progress

The Navy identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete an EE/CA for a concrete cover at Site 23 in FY06.
- Complete RDs for Sites 1, 3, 6, and 20 in FY06.
- Implement the shutdown strategy for Site 3 AOC 2 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------|
| FFID: | VA317002481300 | Contaminants: | Heavy metals, PCBs, VOCs, SVOCs, POLs, land solvents |
| Size: | 795 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | 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 | Funding to Date: | \$ 22.0 million |
| HRS Score: | 50.0; placed on NPL in July 1999 | Estimated Cost to Completion (Completion Year): | \$ 8.8 million(FY 2014) |
| IAG Status: | None | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



Progress To Date

Norfolk Naval Shipyard (NSY) is located on the western bank of the southern branch of the Elizabeth River. The Norfolk NSY Installation Restoration Program (IRP) includes investigation and remediation of sites located within the main shipyard and within three annexes that were formerly part of Norfolk NSY but are now under the control of other claimants. The sites resulted from past landfilling, disposal operations, and the operation of a plating shop. The installation was placed on the NPL in July 1999 because of the potential impact of surface water runoff on Paradise Creek, which is adjacent to the shipyard disposal areas. An administrative record was established in FY92, and a community relations plan (CRP) was completed in FY94; the CRP was updated in June 2003. The installation formed a technical review committee in FY94 and converted it to a Restoration Advisory Board in FY96. The Navy completed a federal facilities agreement (FFA) in FY04.

An initial assessment study identified 19 sites at Norfolk NSY. A RCRA facility investigation (RFI) performed at the installation identified 31 solid waste management units (SWMUs). A RFI supplement 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 nomenclature of potentially contaminated areas in the previous documentation was identified. As a result, the Norfolk NSY reduced the number of sites to 163 in the FFA. The cleanup progress at Norfolk NSY for FY01 through FY04 is detailed below.

In FY01, the installation completed a non-time critical removal action (NTCRA) at Site 1. Significant cost savings were realized by use of an in situ stabilization treatment process to render the waste nonhazardous for disposal. After the removal of the blast grit and soil, the Navy created 1.9 acres of new wetlands at the site in lieu of backfilling the former landfill area.

In FY02, Norfolk NSY led the development of a joint approach response action (JARA) to address cross-boundary contamination from Norfolk NSY Site 9 onto an adjoining private NPL site. The Department of Justice established the JARA allocation costs. The feasibility study (FS) for Site 17 was completed. The installation completed the St. Helena Annex

expanded site investigation, which allowed the property to be excessed. The installation completed remedial investigations (RI) for Operable Units (OUs) 1 and 2. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation drafted an FFA, which identified a total of 163 sites (7 sites which will require a Record of Decision [ROD], 5 site screening areas, 5 preliminary screening areas, and 146 no further action sites). The installation completed the JARA to address cross-boundary contamination from Norfolk NSY Site 9 and approximately 44,000 tons of calcium hydroxide and other debris were removed and the site was restored to create 1.5 acres of engineered tidal wetlands.

In FY04, the installation finalized the FFA. The Navy completed the engineering evaluation and cost analysis and removal action designs for OUs 1 and 2. The NTCRA at OU 1 was initiated.

FY05 IRP Progress

Norfolk Naval Shipyard's Site 17 FS was revised to address changes in the planning requirements for the site. A NTCRA was completed at OU 1; approximately 30,000 tons of waste were removed, and 1.46 acres of wetlands were created or restored. The proposed plan (PP) for OU 1 was finalized. The Phase I NTCRA for OU 2 was initiated.

Administrative issues delayed the ROD. Regulatory issues delayed the Site 17 PP and ROD.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Norfolk Naval Shipyard are grouped below according to program category.

IRP

- Finalize ROD for Site 17 in FY06.
- Finalize ROD for OU 1 in FY06.

- Complete the Phase 1 NCTRA at OU 2 in FY06.
- Complete the RI and FS for Site 10 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA957002434500 | Funding to Date: | \$ 118.6 million |
| Size: | 2,221 acres | Estimated Cost to Completion (Completion Year): | \$ 15.7 million(FY 2012) |
| Mission: | Supported C-141 airlift operations | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2006 |
| HRS Score: | 39.65; placed on NPL in July 1987 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in 1989 | | |
| Contaminants: | Waste oils and fuel, spent solvents, paints, refrigerants, heavy metals, TCE, VOCs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Norton Air Force Base (AFB) supported C-141 airlift operations. EPA placed the installation on the NPL in July 1987. In December 1988, the BRAC Commission recommended closure of Norton AFB. The installation signed an interagency agreement in 1989 and closed in March 1994. The most significant sources of contamination at the base were a trichloroethylene (TCE)-contaminated groundwater plume and contaminated soil areas. Sites include underground storage tanks, landfills, fire training areas, spill areas, and waste disposal pits. Four RCRA sites required closure. The installation formed a Restoration Advisory Board (RAB) and BRAC cleanup team (BCT) in FY94. The RAB disbanded in FY98. The installation completed the first 5-year review in FY00 and the second 5-year review in FY05.

Prior to FY01, a Record of Decision (ROD) was signed for the Central Base Area (CBA) Operable Unit (OU) and a closure report for Site 5 (AT005) was completed. The cleanup progress at Norton AFB for FY01 through FY04 is detailed below.

In FY01, Site 10 (LF010) dioxin contamination was characterized both on and off the installation, and an ecological risk assessment was completed for two threatened and endangered species located at the site. The installation incorporated the data into the basewide OU feasibility study (FS). The installation resubmitted the basewide OU FS to address BCT land use control concerns. A focused effort to close the RCRA sites began. The installation optimized the long-term management (LTM) of groundwater, as well as operations and maintenance (O&M) at remedial action (RA) systems to realize cost efficiencies. Additional radium-contaminated soil was discovered outside of Building 752 (RW029 and RW030). The installation continued efforts to close Air Combat Camera Services (ACCS), the industrial wastewater treatment plant (IWTP), and industrial waste line (IWL) RCRA sites.

In FY02, the CBA OU RA systems completed active operations and were shut down. LTM of groundwater and O&M of the Site 2 (LF002) landfill RA continued. RA planning for Site 10 was initiated, as well as a biological opinion project description detailing endangered and threatened species at the site. A removal action work plan was submitted for Building 752.

In FY03, the installation closed the ACCS and initiated closure of the IWL. The final basewide FS was approved by regulatory agencies and the interior RA for Building 752 was completed.

In FY04, the installation finalized the basewide proposed plan and submitted the draft ROD for regulatory review. The installation also completed the physical closure of the IWL and IWTP. The IWL post-closure care plan and permit were submitted for regulatory approval. Finally, RA construction was completed at Site 10 and the Building 752 exterior. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation finalized the basewide ROD and selected remedies for 21 sites and 73 areas of concern. The Air Force completed the second 5-year review. The installation completed and submitted RCRA documentation and certification for the remaining two RCRA sites to regulators. Groundwater pump and treat systems were decommissioned and over 50 groundwater monitoring wells were taken out of service and decommissioned. The installation began preparing the RA completion report for the groundwater pump and treat systems. The installation also attained the last remedy in place milestone. The Air Force submitted addendums to the IWTP clean closure certification report to regulators.

The BCT continued to meet every other month. The RAB, although formally disbanded in FY98, held an annual public meeting.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Receive regulatory concurrence on the remaining two RCRA sites in FY06.
- Complete transfer of all remaining property to local redevelopment agency in FY06.
- Finalize the RA completion report for the groundwater pump and treat systems in FY06.
- Initiate the NPL delisting process in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|-------------------------|---------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | CA921352066100 | Estimated Cost to Completion (Completion Year): | \$ 0.8 million(FY 2006) |
| Size: | 425 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| Mission: | Military Traffic Management Command, Western Area | Five-Year Review Status: | Planned |
| HRS Score: | N/A | | |
| IAG Status: | None | | |
| Contaminants: | POL, TCE, solvents, lead, PCBs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 41.0 million | | |



Progress To Date

In 1995, the BRAC Commission recommended closure of Oakland Army Base. The Army closed the installation, and it ceased operations as scheduled on September 30, 1999. Between 1989 and 1995, the installation began to characterize potentially contaminated areas through its Installation Restoration Program (IRP). These areas included underground storage tanks (USTs); Berths 6 and 6 ½, where storm drain bedding materials were contaminated with oil and fuel products; Building 991, where pesticides and oil were in soil and groundwater; the West Grand Avenue overpass roadsides (lead-contaminated soil); Building 807 (chlorinated solvents in soil and groundwater); and Building 648, where soil was contaminated with polychlorinated biphenyls (PCBs). In FY96, the installation formed a BRAC cleanup team and a Restoration Advisory Board (RAB). In FY98, the installation completed an initial BRAC cleanup plan and an Environmental Baseline Survey for each of the base's 26 parcels.

Environmental studies identified 26 parcels at the installation. The Army has signed one Record of Decision (ROD) to date and transferred approximately 387 acres. The cleanup progress at Oakland Army Base for FY01 through FY04 is detailed below.

In FY01, the installation completed UST removals and closure reports. The installation removed an abandoned pre-Army oil pipe at Operable Unit (OU) 1 and began the final remedial investigation (RI) of pre-Army oil residue. The installation also researched and established the likely source of pre-Army oil residue to support its potentially responsible party position.

In FY02, under negotiations for a finding of suitability for early transfer (FOSET), the state regulatory agency agreed on the land use controls to be included in the transfer documents. In addition, EPA granted a land disposal restriction variance, which greatly facilitated the agreement by the state regulatory agency to accept the viability of the financial agreement between the Army and the local reuse authority (LRA). The Army postponed groundwater treatment of the methyl tertiary butyl ether (MTBE) and benzene plume, which the LRA assumed upon transfer. The Army transferred 18 acres to the Federal Highway Administration. The Army awarded an RI/feasibility study (FS) contract for the remaining 20-acre

Parcel 1. The RAB reviewed the investigation reports for the Building 1 waste oil site, the OU 4 investigation, and the Phase II investigation as well as the LRA's remedial action (RA) plan and risk management plan. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. The inventory identified no Military Munitions Response Program (MMRP) sites at this installation.

In FY03, the installation provided supplementary groundwater monitoring completing FOSET negotiations. The installation programmed funding for the Parcel 1 investigation and cleanup for FY03 and FY05, respectively. It also initiated off-site OU 2 monitoring. In support of a FOSET, the state regulatory agency issued a ROD approving the RA and risk management plans. The installation transferred 366 acres to the LRA. The RAB initiated the process to formally adjourn.

In FY04, the installation completed groundwater monitoring and transferred monitoring responsibility to the LRA for their closure actions. The Army continued to oversee LRA cleanup actions under the terms of the environmental services cooperative agreement.

FY05 IRP Progress

Oakland Army Base completed the RI and began contracting actions at Parcel 1. The installation negotiated with regulators on RAs at OU 2, who agreed to postpone the RAs until the likely source area for the contamination, which is on LRA property, was investigated and remediated. The installation continued oversight of the LRA RAs. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Funding issues delayed the FS for Parcel 1.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Oakland Army Base are grouped below according to program category.

IRP

- Complete Parcel 1 FS in FY06.
- Initiate remedial design/RA at Parcel 1 in FY06.
- Develop plan for RAs at OU 2 in FY06.
- Continue oversight of LRA RAs in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------|
| FFID: | WA09799F832600 | Contaminants: | PCBs, heavy metals, petroleum hydrocarbons, dioxins and furans, asbestos |
| Size: | 350 acres | Media Affected: | Surface water, sediment, soil |
| Mission: | Originally provided harbor defense for Puget Sound; during World War I, tested torpedoes and stored fuel; later served as a fire training school for the Navy and housed an antiaircraft artillery battery | Funding to Date: | \$ 12.0 million |
| HRS Score: | 50.00; placed on NPL in May 1994 | Estimated Cost to Completion (Completion Year): | \$ 0.4 million(FY 2004) |
| IAG Status: | IAG signed in July 1997 | IRP/MMRP Sites Final RIP/RC: | FY 2004/None |
| | | Five-Year Review Status: | Completed and planned |



Progress To Date

The Navy owned the Old Navy Dump/Manchester Annex from 1919 to 1960. During that time, three areas (a net depot, a fire training area, and a landfill) were established at the property. Activities at the property 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. 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. Preliminary assessments and site inspections conducted at the property since FY87 identified past releases of hazardous substances from the three areas. 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 and furans, and asbestos. The Manchester Annex work group was established in FY94. EPA placed the property on the NPL in May 1994. During FY95, a potential unexploded ordnance area was identified, but the U.S. Army Corps of Engineers (USACE) determined that the area was not accessible to the general public and thus the area was considered for no further action. The USACE signed an interagency agreement in July 1997. In FY04, USACE completed the first 5-year review, which determined that the remedy continued to be protective.

To date, the Army and regulators have signed one Record of Decision (ROD). The cleanup progress at the Old Navy Dump/Manchester Annex for FY01 through FY04 is detailed below.

In FY01, USACE revised the remedial action (RA) schedule and budget originally developed in FY00.

In FY02, USACE completed the Phase II RA construction. USACE also initiated long-term management (LTM) of the landfill cover that extends through FY05.

In FY03, USACE completed the institutional control plan. USACE continued LTM for inspection and maintenance of the landfill cover.

In FY04, USACE continued LTM for inspection and maintenance of the landfill cover. USACE also completed the first 5-year review on the site and identified several areas where USACE needs to take action. Additionally, USACE determined that the remedy continued to be protective. USACE has identified no Military Munitions Response Program (MMRP) work at this property.

FY05 IRP Progress

USACE conducted the required actions from the FY04 5-year review. The remedy has been functioning as intended. USACE initiated the shellfish tissue and sediment study to determine the health of the bivalve population. The study suggested that the remedy in the ROD is operating properly. Contamination did not appear to be reducing the bivalve population. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

USACE has identified no MMRP sites at this property.

Plan of Action

Plan of action items for Old Navy Dump/Manchester Annex are grouped below according to program category.

IRP

- Continue compliance monitoring in FY06.
- Continue LTM in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | WV39799F346200 | Estimated Cost to Completion (Completion Year): | \$ 0.1 million(FY 2007) |
| Size: | 825 acres | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| Mission: | Manufactured chemicals for ordnance | Five-Year Review Status: | The installation has not completed a 5-year review. |
| HRS Score: | 35.62; placed on NPL in June 1986 | | |
| IAG Status: | None | | |
| Contaminants: | PCBs, PAHs, inorganic compounds, arsenic, mercury | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 2.3 million | | |



Progress To Date

On the basis of environmental studies, EPA grouped sites at the Ordnance Works Disposal Areas in Morgantown, West Virginia, into two operable units (OUs). OU 1 consists of an old landfill, a shallow disposal area with topsoil removed, and two lagoons from which sludge was excavated. OU 2 consists of all other projects, particularly those located in processing areas. EPA placed the property on the NPL in June 1986. The remedial investigation and feasibility study (FS) for OU 1 was completed in early FY88. In FY90, EPA issued consent orders for both OUs. In the same year, the potentially responsible parties (PRPs) signed a participation agreement for OU 2. In FY94, a pilot-test work plan was approved for the cleanup of soil contamination at OU 1, and remedial work began. In FY95, the PRPs completed a time critical removal action at five areas in OU 2. In FY96, the U.S. Army Corps of Engineers (USACE) reached an agreement on allocating the cost of remediation at OU 1. During FY97, the PRP group which includes USACE, completed the removal actions at OU 2 and received EPA concurrence on completion. In August 1998, after state concurrence, EPA approved the remedy proposed for OU 1 in the focused FS.

The Record of Decision (ROD) for OU 1, signed in FY89, required excavation of soil contaminated with polyaromatic hydrocarbon (PAHs) compounds and treatment in a bioremediation bed. EPA issued a new ROD for OU 1 in FY99, superseding the ROD signed in 1989. The cleanup progress for Ordnance Works Disposal Area for FY01 through FY04 is detailed below.

In FY01, the PRP group and the Department of Justice (DOJ) initiated review of the consent decree. The anticipated USACE share was 31 percent of the cost, paid from the judgment fund. EPA approved a work plan for the treatment and removal of the tar from OU 1, and fieldwork began.

In FY02, field efforts included the off-site treatment of the tar and construction of the replacement wetlands. Materials that were below the chlorinated PAHs limits were consolidated in the on-site landfill. The PRP group initiated work on the final cap, swales and treatment wetland. The discovery of small amounts of oil during the excavations of the tar materials delayed completion of the consent decree.

In FY03, the PRPs completed the final landfill cover and constructed the engineered wetlands for leachate treatment. Recycling for tar disposal and the passive treatment wetlands provided a cost savings. The PRPs completed investigation of the oil discovery following EPA approval of the work plan. DuPont filed an appeal with the Court of Appeals for the Federal Circuit in July 2003. In September 2003, as a result of "Cadillac Fairview," EPA suggested redrafting the proposed consent decree using the cost recovery model instead of the remedial design/remedial action model.

In FY04, issues with a separate WWII contract indemnification lawsuit delayed the completion of the final consent decree. In April 2004, the Court of Appeals for the Federal Circuit reversed the earlier favorable decision regarding indemnification (E.I. DuPont De Nemours and Company v. United States, 365 F.3d 1367). The Federal Circuit denied the Army's Request for Rehearing and Rehearing En Banc in August 2004. The continuing negotiation of a consent decree expected to resolve DuPont's CERCLA lawsuit against the government as well as all other liability issues for the facility was held in abeyance as DOJ/AMC decided whether to seek a writ of certiorari to the U.S. Supreme Court. The Solicitor General of the United States declined to pursue a writ to the Supreme Court. USACE has identified no Military Munitions Response Program (MMRP) work at this property.

FY05 IRP Progress

DOJ published a consent decree in the Federal Register for the former Morgantown Ordnance Works, after it was filed with the Court in West Virginia. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

USACE has identified no MMRP sites at this property.

Plan of Action

Plan of action items for Ordnance Works Disposal Areas are grouped below according to program category.

IRP

- Enter consent decree in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | FL417002473600 | Funding to Date: | \$ 33.0 million |
| Size: | 2,050 acres | Estimated Cost to Completion (Completion Year): | \$ 10.3 million(FY 2010) |
| Mission: | Serve as naval training center; formerly used as Army Air Force and Air Force bases | IRP/MMRP Sites Final RIP/RC: | FY 2003/None |
| HRS Score: | N/A | Five-Year Review Status: | Completed and planned |
| IAG Status: | None | | |
| Contaminants: | Asbestos, paint, POLs, photographic chemicals, solvents, low-level radioactive wastes | | |
| Media Affected: | 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, it became a naval training center. In July 1993, the BRAC Commission recommended closure of the installation and relocation of its activities. 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 FY94, the installation formed a Restoration Advisory Board and a BRAC cleanup team (BCT). The installation closed on April 30, 1999. In FY01, the installation conducted a 5-year review.

The installation has identified 55 areas of concern (AOCs) and more than 300 tank systems requiring removal or assessment. The BCT completed a Record of Decision (ROD) and removed and assessed 55 tanks. The installation completed a draft finding of suitability to lease for McCoy Annex and draft findings of suitability to transfer for the public benefit conveyance of Herndon Annex and part of McCoy Annex to the Airport Authority. In addition, the installation has transferred 1,425 acres to the City of Orlando, and approximately 83 acres to the Federal Aviation Administration. The cleanup progress at Orlando NTC for FY01 through FY04 is detailed below.

In FY01, the installation completed final decision documents (DDs) for two AOCs and four tank sites; work continued to complete DDs for the remaining AOCs. The installation initiated long-term management (LTM) at two AOCs, one site, and multiple underground storage tank sites. The proposed plan (PP) and ROD were completed for Operable Unit (OU) 4, and began at OU 2. The installation began a 5-year review. The installation initiated the transfer of 45.8 acres to the Department of Veterans Affairs (VA) and 120 acres to the City of Orlando.

In FY02, the installation completed the PP for OU 2. Although completed, the VA declined the transfer of 45.8 acres due to environmental issues. Also in FY02, the Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, operating properly and successfully was granted at Study Area (SA) 36 and is still pending at the remaining AOCs. The installation issued DDs for SA 18 and SA 54. Treatability studies at OU 3 and Building 7125 were completed. Orlando NTC completed the original interim remedial action (IRA) at OU 2. IRAs continued at OU 3 and OU 4. The installation transferred SA 36 and SA 39 (3.42 acres) to the City of Orlando via covenant deferral.

In FY04, the installation continued LTM at SAs 17, 36, 39, 52, and OU 1, and operation and management (O&M)/LTM at OUs 2, 3, and 4. It also completed Phase II of the finding of suitability for early transfer (FOSET) of the majority of remaining sites (OU 2, OU 3, the majority of Area C, OU 4, SAs 2, 17, and 52). The installation initiated the FOSET for the remainder of Area C for General Services Administration public sale. The installation completed the IRA for SA 55 and continued the IRAs at OU 3, SA 17, and SA 52. It also completed the covenant deferral for the majority of the remaining property. Orlando NTC performed an IRA and amended the ROD at OU 3. The amendment stated that the IRA is part of a pilot study to clean arsenic from groundwater at SAs 8 and 9 (OU 3). The installation also issued final DDs for SAs 36, 39, 52, and 55.

FY05 IRP Progress

The installation continued LTM/O&M at OUs 1, 2, 3, 4, SAs 17, 36, 39, and 52. The installation continued IRAs at OUs 2, 3, 4, SAs 2, 36, and 39. The Navy identified a new site at the main base (SA 36 NW) where petroleum contamination in groundwater (primarily benzene) migrated from the former main base auto service station (Building 109). The installation added the site to LTM. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Regulatory issues delayed the transfer of the majority of remaining property via covenant deferral.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Orlando Naval Training Center are grouped below according to program category.

IRP

- Complete transfer of the majority of remaining property via covenant deferral and public actions in FY06.
- Monitor and evaluate off-site contamination at OUs 2, 3, 4, SAs 17, and 36 NW in FY06.
- Continue to monitor IRAs LTM/O&M at OUs 1, 2, 3, 4, SAs 36, 36 NW, 17 and 52 in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|--------------------------------------------|-------------------------------------|-----------------------------------------------------|
| FFID: | TX69799F676300 | Estimated Cost to Completion | \$ 0.0 million(FY 2003) |
| Size: | 16,000 acres | (Completion Year): | |
| Mission: | Produced and stored military weapons | IRP/MMRP Sites Final RIP/RC: | FY 2002/FY 2003 |
| HRS Score: | 51.22; placed on NPL in May 1994 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | Under negotiation | | |
| Contaminants: | VOCs, SVOCs, heavy metals, UXO, explosives | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 0.4 million | | |

Progress To Date

The former Pantex Ordnance Plant began operations in 1942 as an Army Ordnance Corps facility. The property is now owned by DOE and Texas Tech University (TTU). Operations conducted on the active DOE site include fabrication, assembly, testing, and disassembly of nuclear ammunition and weapons. Sources of contamination have included burning of chemical waste in unlined pits, burial of waste in unlined landfills, and discharge of plant wastewaters into on-site surface water. The southern part of the property is used as an experimental agricultural research farm by TTU. DOE is solely investigating sites on their property. EPA placed the property on the NPL in May 1994. The U.S. Army Corps of Engineers (USACE) established an electronic administrative record for the TTU FUDS in FY03.

A preliminary assessment and site inspection (SI) in FY90 identified nine areas of emphasis for investigation. The cleanup progress for Pantex Plant for FY01 through FY04 is detailed below.

In FY01, a review of previous work indicated that additional soil and groundwater investigations were required before development of a cleanup strategy. USACE conducted meetings with Texas Natural Resource Conservation Commission (TNRCC) and reached agreements on requirements for a field investigation work plan. USACE began preparation of the work plan and developed a schedule for submittal to TNRCC.

In FY02, USACE completed a work plan for DoD-related investigations that TNRCC approved. TTU, the landowner, and potentially responsible parties (PRP) submitted a separate work plan for investigations. Preparations for field investigation at the former Bomb Loading Line area (Zone 9) began. PRP discussions with Texas Tech continued.

In FY03, USACE completed environmental investigations at Zone 9 and other areas of concern (AOCs), including Zone 1, the Burning Grounds, Carbon Black Pits, Landfill, and Lake Mounds areas. In addition, USACE presented investigation results for Zone 9 to TNRCC. DoD continued PRP discussions with landowners. USACE established an electronic administrative record for the TTU FUDS. USACE determined

the extent of explosives contamination in soil at Zone 9.

In FY04, USACE completed environmental investigations to determine the extent of contamination for all AOCs, including Zone 2, and continued investigations for sites that may have required additional data. Additionally, USACE presented investigation results for Zone 1, Zone 9, the Burning Grounds, Carbon Black Pits, Landfill, Rock Pile, and Lake Mounds AOCs to the Texas Commission on Environmental Quality (TCEQ) (formerly the TNRCC), DOE, and TTU. PRP discussions with TTU and DOE continued. The installation prepared for a remedial investigation (RI) report and feasibility study (FS) for cleanup of all DoD responsible AOCs. No Military Munitions Response Program (MMRP) work was performed at this property.

FY05 IRP Progress

USACE submitted a final RI report to regulators for investigations at nine AOCs and performed additional SIs to fill data gaps identified during the RI. USACE continued PRP discussions with TCEQ, TTU, and DOE. Plantex Plant received an updated right-of-entry from TTU for a two-year permit. USACE initiated preparation of public involvement plan (PIP).

FY05 MMRP Progress

USACE submitted an MMRP work plan for four of the nine AOCs to regulators and received an updated security plan from DOE.

USACE initiated work plans for an RI/FS, rather than an engineering evaluation and cost analysis. USACE could not complete remediation because of an incomplete RI/FS.

Plan of Action

Plan of action items for Pantex Plant are grouped below according to program category.

IRP

- Receive regulatory comments for the RI report in FY06.
- Initiate additional investigations or revise RI report as needed in FY06.

- Resolve responsibility issues at site in FY06.
- Complete PIP in FY06.

MMRP

- Revise MMRP work plan, as needed in FY06.
- Develop draft RI report for review in FY06.
- Develop fact sheet for the community in FY06.

| | | | |
|------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | SC417302276300 | Funding to Date: | \$ 17.0 million |
| Size: | 8,043 acres | Estimated Cost to Completion (Completion Year): | \$ 18.0 million(FY 2013) |
| Mission: | Receive, recruit, and combat-train enlisted personnel upon their enlistment in the Marine Corps | IRP/MMRP Sites Final RIP/RC: | FY 2010/FY 2013 |
| HRS Score: | 50.00; placed on NPL in December 1994 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | Industrial wastes, pesticides, paint, POLs, solvents, ordnance compounds, metals, acids, electrolytes | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

The Parris Island Marine Corps Recruit Depot receives, recruits, and combat-trains enlisted personnel upon their enlistment in the Marine Corps. The installation was placed on the NPL in December 1994 due to contamination at two landfill sites. Sites at the installation include landfills or spill areas where groundwater and sediment are contaminated with solvents and petroleum/oil/lubricants (POLs). The installation began to compile an administrative record in FY96 and completed a community relations plan in FY98. There has been no community interest in forming a Restoration Advisory Board.

Investigations have identified 48 potential CERCLA and RCRA sites and the installation has identified 33 sites. The installation has signed an interim Record of Decision (ROD) for Site 3 and has submitted a draft ROD for no action for Site 2. The cleanup progress at Parris Island Marine Corps Recruit Depot for FY01 through FY04 is detailed below.

In FY01, the installation completed construction of the landfill cap at Site 3 and submitted the interim remedial action/corrective action report. The remedial investigation (RI) for Site 1 was completed, and the feasibility study continued under review. The RI recommended no action for Site 2. The installation developed a corrective action plan (CAP) for the gas station and a monitoring plan for Building 4022. Parris Island Marine Corps Recruit Depot began RI fieldwork at Site 45; alternative technologies are being considered.

In FY02, the installation completed a RI and submitted the report to the South Carolina Department of Health and Environmental Control and EPA. The Environmental Security Technology Certification Program requested Site 45 be used to test the effectiveness of Chemox in cleaning volatile organic compounds (VOCs) in the groundwater; baseline testing was completed. The construction of the Site 1 cap proceeded as scheduled. This installation submitted a groundwater monitoring report which was approved and initiated a contamination assessment at a fiber optics vault when petroleum was discovered during installation. Regulators approved the monitoring plan for Building 4022. The installation began planning for a technical review committee. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

In FY03, the installation transferred the contamination assessment at the fiber optic vault from the underground storage tank program to the Installation Restoration Program (IRP) due to the evidence of chlorobenzene in the groundwater. The installation injected Chemox at Solid Waste Management Unit (SWMU) 45 and continued groundwater sampling. The initial assessment for implementing the CAP at the gas station has been completed; however, additional assessment was required and monitoring continued. The installation continued monitoring Building 4022 and the aviation gasoline (AVGAS) pipeline. The Site 1 landfill cap work plan was approved and construction began.

In FY04, the installation developed an RI addendum work plan to sample the groundwater plume and define the path forward for SWMU 45. It also completed the RCRA facility assessment at fiber optic vault Site 55. The installation issued a draft proposed plan (PP) for SWMU 12. It also completed the landfill cap at Site 1 and developed a draft long-term monitoring work plan. The installation completed the CAP at the Depot gas station, monitored the AVGAS pipeline and Building 850, and completed negotiations on the federal facility agreement (FFA).

FY05 IRP Progress

Parris Island Marine Corps Recruit Depot issued a PP and draft ROD for Site 12. It awarded a fixed-price environmental multi-award contract for Site 12 and issued a draft remedial action work plan. The installation completed a long-term monitoring work plan for Site 1 and continued monitoring at Sites 1, 3, and 45. The CAP for the Depot gas station was implemented and sampling was completed. The installation also continued work at Depot gas station and AVGAS pipeline. The installation received a no further action (NFA) letter for Building 850. The installation signed the FFA and completed a 5-year review.

FY05 MMRP Progress

No MMRP actions were scheduled at this installation in FY05.

Plan of Action

Plan of action items for Parris Island Marine Corps Recruit Depot are grouped below according to program category.

IRP

- Complete removal action at Site 12 in FY06.
- Complete RFI Addendum and Develop Feasibility Study for RA at Site 45 in FY06.
- Continue monitoring at the Depot gas station and AVGAS pipeline in FY06-FY07.
- Continue monitoring at Sites 1 and 3 in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------------|-------------------------------------|----------------------------------|
| FFID: | MD317002453600 | Estimated Cost to Completion | \$ 38.3 million(FY 2011) |
| Size: | 6,800 acres | (Completion Year): | |
| Mission: | Test and evaluate naval aircraft systems | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 36.87; placed on NPL in May 1994 | Five-Year Review Status: | Completed, underway, and planned |
| IAG Status: | None | | |
| Contaminants: | Heavy metals, pesticides, organics, POLs, solvents, UXO | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 48.8 million | | |



Progress To Date

Patuxent River Naval Air Station (NAS) tests and evaluates naval aircraft systems. Three sites were placed on the NPL in May 1994: a Fishing Point Landfill site (Site 1), the former sanitary landfill (Site 11), and the pest control shop (Site 17). Wastes managed at the sites included mixed solid wastes, petroleum/oil/lubricants (POLs), paints, thinners, solvents, pesticides, and photographic laboratory wastes. The installation formed a technical review committee in FY90 and completed a community relations plan in FY91, which is updated every three years. A Restoration Advisory Board that meets quarterly was established in FY94. The Navy regularly updates an administrative record and two information repositories. The installation completed 5-year reviews in FY01 and FY04.

To date, Patuxent NAS has identified 62 sites. The installation completed Record of Decision (ROD) documents for Site 1, Site 11, and Site 12. In addition, a ROD amendment was completed for Site 17. The installation closed Site 6A [6 Operable Unit 1 (OU 1)] in FY04. The cleanup progress at Patuxent River for FY01 through FY04 is detailed below.

In FY01, the installation converted its administrative record to CD-ROM for Navy personnel, completed a remedial action (RA) at Sites 1 and 12, and began the long-term management (LTM) phase at OU 1. The installation completed the proposed plan and ROD amendment for Site 17, and the RAs for Site 17. OU 1 at Site 17 entered the LTM phase. The installation completed a 5-year review.

In FY02, the installation completed investigations for Sites 13, 36, 38, and 53; subsequent no further action (NFA) decision documents were completed. It also initiated two watershed ecological studies. The installation completed accelerated investigations for Site 27, a National Guard facility on the NAS. Patuxent River NAS conducted 5-year reviews on a site-specific basis, as only three sites required such reviews (Sites 1/12, 11 and 17). The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, Site 37 reached closeout with NFA required. In addition, the installation completed investigations for Sites 48, 49, 50, and 52. The installation initiated the remedial investigation/feasibility study (RI/FS) efforts at Sites 4, 5, 6 (OU 2), 11 (OU 2), 17 (OU 2), and 46, exceeding the goal of four sites. It also initiated preliminary assessment/site investigation efforts at five sites, exceeding the goal of two sites. One ROD was completed. Interim RA (IRA) work at Sites 4 and 5 proceeded on schedule.

In FY04, the installation closed Site 6A (6 OU 1) and Site 46 via completion of the RI/FS and NFA ROD. Patuxent NAS also completed a basewide 5-year review with no outstanding actions requiring further action.

FY05 IRP Progress

Patuxent River NAS completed the FS, and the proposed remedial action plan (PRAP)/ROD, for Sites 1/12 OU 2, Rifle Range Landfill. The installation completed two of four RI/FS documents, and four of eight desktop evaluations. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Funding issues delayed the remedial design (RD) and RA for Sites 1/12 OU 2. Technical issues delayed the remaining two RI/FS documents. Regulatory issues delayed the remaining four desktop evaluations.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete RD/RA at Site 1/12 OU 2 at Fishing Point Landfill in FY06.
- Complete IRA/site closeout at Site 31 tire shop in FY06.
- Complete RD/RA at Site 17 OU 2 at pesticide shop in FY06.

- Complete RI/FS, PRAP/ROD for Site 17 OU 2 at pesticide shop in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

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|------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | HI917002434200, HI917002477900, HI917002434100, HI917002434000, HI917002433900, and HI917002433400 | Funding to Date: | \$ 162.6 million |
| Size: | 2,162 acres | Estimated Cost to Completion (Completion Year): | \$ 135.7 million(FY 2035) |
| Mission: | Provide primary fleet support in the Pearl Harbor area | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 70.82; placed on NPL in October 1992 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement signed in March 1994 | | |
| Contaminants: | VOCs, SVOCs, heavy metals, PCBs, pesticides, petroleum, hydrocarbons, solvents | | |
| Media Affected: | Groundwater and 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), semivolatle organic compounds (SVOCs), and metals. A technical review committee, formed in FY90, was converted to a Restoration Advisory Board (RAB) in FY95. The installation established three information repositories in FY90 and an administrative record in FY92. A community involvement plan was completed in FY92 and updated in FY95 and FY05. The installation was placed on the NPL in October 1992. The installation signed a federal facility agreement in March 1994.

The installation has identified 80 sites and has conducted investigations and cleanups under CERCLA and RCRA at over 60 sites. The cleanup progress at Pearl Harbor Naval Complex for FY01 through FY04 is detailed below.

In FY01, the installation began a groundwater remedial investigation (RI) for Sites 33 and 39. Fieldwork was completed for an expanded site inspection (ESI) for Site 42. Groundwater monitoring continued at Site 20, and remedial action operations (RA-O) continued at Sites 31, 36, 37, and 46. Construction began on removal actions at Sites 25 and 45. The installation completed construction at Site 29 and began RA-O. The 5-year groundwater monitoring program at Site 8 and the RI/feasibility study (FS) at Sites 19, 31, and 51 continued. An ESI was initiated in the Waipio Peninsula Geographic Study Areas (GSA) and the West Loch GSA for sites recommended for further investigation in the site summary reports (SSR). The installation completed the draft final SSRs for the Pearl City Peninsula, Naval Sea System Command Inactive Ships On-Site Maintenance Office, West Loch, PWC Main Complex, Naval Housing, Makalapa, and Richardson GSAs.

In FY02, the installation completed the draft final SSRs for the Shipyard GSA and final amendments to the Naval Housing, Makalapa, Richardson, Naval Sea System Command Inactive Ships On-Site Maintenance Office and PWC Main Complex

SSRs. The installation completed the removal action for Building 49 and initiated the site investigation (SI) for Solid Waste Management Unit (SWMU) 44. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation continued the RA-O at Sites 25, 29, 36, 37, 45, and 46 and the RI/FS for Site 19. The Navy completed the removal action and remediation verification reports (RVRs) for Sites 25 and 45, the RI/FS for NS Sites 51 through 57, the draft final RI/FS for NS Site 31, and initiated removal actions for NS Sites 51 and 53 through 57. Removal actions continued at PWC Sites 4 and 43, and for NS Sites 31 and 35, transformer sites PWC Site 34, NAVMAG Site 19, and NS Site 52. The installation completed the draft groundwater RI for Sites 33 and 39 and supplemental RI for Site 22. The installation completed the draft ESI for NSY Site 42, the draft SI for NAVMAG West Loch and Waipio Peninsula GSAs, the final SSR for Shipyard GSA, and the final SSR amendments for Halawa-Main-Gate, Pearl City Peninsula, and West Loch. Draft final planning documents for site characterization for PWC Site 47 were completed. The Navy added an MMRP site at the NAVMAG West Loch for further investigation of potential munitions-generated constituents in a burning pit. The installation provided site tours for the RAB of NS Sites 51 and 53 through 57, the Material Minimization Facility Center, the Fort Kamehameha Wastewater Treatment Plant, and the Bilge Water/Oily Waste Treatment Facility. In addition, the installation partnered with the EPA Superfund Innovative Technology Evaluation program on two innovative technology treatment demonstrations.

In FY04, the installation completed removal actions for NS Sites 51, 53 through 57, and PWC Site 34 and continued removal actions at NS Site 31, RA-O at Sites 25, 29, 36, 37, 45, and 46, and RI for NS Site 19. The installation initiated the removal site evaluation (RSE) at NS SWMU 6. The installation finalized the innovative Technology Evaluation Report for NSY Site 10 and initiated the SI for NSY Site 49. The installation completed the combined SI for West Loch and Waipio Peninsula and initiated the RSE at PWC Sites 2 and 48 and continued the SI report for SWMU 44.

FY05 IRP Progress

Pearl Harbor Naval Complex initiated the RSE for FISC Site 26. The installation continued RA-O at Sites 25, 29, 36, 37, 45, and 46, and RI for NS Site 19. The installation continued the SI for NSY SWMU 44, and the proposed plan (PP) for NSY Site 41, and RSE for PWC Sites 2, 25, and 48. The installation initiated SI fieldwork for NSY Site 49 and SI for SWMU 84, and completed the RVR for NS Sites 51 and 53 through 57. The cost of completing environmental restoration at this installation has changed significantly due to technical, regulatory, and estimating criteria issues.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Initiate the removal action at FISC Site 44 in FY06.
- Complete RI and initiate FS for NS Site 19 in FY06.
- Complete removal action report for FISC Site 26, removal actions at NSY Site 10 and SWMU 44, and PP for NSY Site 41 in FY06.
- Initiate site characterization at PWC Site 47 in FY06.
- Initiate Proposed Plan (PP) and ROD for NAVMAG Site 9 in FY06.

MMRP

- Complete preliminary assessment for LLL NM Unexploded Ordnance Site 7 in FY06.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | NH157002484700 | Funding to Date: | \$ 158.6 million |
| Size: | 4,255 acres | Estimated Cost to Completion (Completion Year): | \$ 41.5 million(FY 2046) |
| Mission: | Served as Strategic Air Command bomber and tanker base | IRP/MMRP Sites Final RIP/RC: | FY 2000/FY 2006 |
| HRS Score: | 39.42; placed on NPL in February 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility site remediation agreement signed in September 1992, and a new FFSRA was renegotiated to address early transfers and signed in July 2002 | | |
| Contaminants: | VOCs, spent fuels, waste oils, POLs, pesticides, paints, TCE | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Pease Air Force Base (AFB) served as a Strategic Air Command bomber and tanker base. The BRAC Commission recommended closure of Pease AFB in 1988 and EPA placed the installation on the NPL in February 1990. The installation signed a federal facilities site remediation agreement (FFSRA) in September 1992, which was renegotiated in July 2002. In March 1991, the installation was closed. Studies identified the following site types: fire training areas, burn pits, industrial facilities, landfills, and underground storage tanks. Groundwater and soil are contaminated with petroleum products (JP-4 jet fuel) and industrial solvents, such as trichloroethylene (TCE). Before closure, the installation completed interim remedial actions (RAs) at four sites, soil removal at three sites, and test pit operations at two sites. The installation formed a BRAC cleanup team (BCT) in FY93 and a Restoration Advisory Board (RAB) in FY95. The installation completed 5-year reviews in FY99 and FY04.

To date, 10 Records of Decision (RODs) have been signed. The cleanup progress at Pease AFB for FY01 through FY04 is detailed below.

In FY01, the installation drafted a land use control/institutional control management plan (ICMP). The installation drafted findings of suitability to transfer (FOSTs) for all parcels not requiring operating properly and successfully (OPS) determinations. Remedial system operation and monitoring continued successfully. The monitoring and evaluation of Site 49 (SS049) proceeded as planned.

In FY02, the installation initiated the design for the Zone 3 remedy change. Coordination with local water suppliers was underway. RA system operation, monitoring, long-term management (LTM), and trend analysis continued. The installation completed a proposed plan and drafted a ROD amendment for Zone 3. The installation signed a renegotiated FFSRA to address early transfer.

In FY03, the installation developed and submitted the draft final ROD amendment for the Zone 3 remedy change. The ICMP was developed and implementation of the plan began. The installation submitted the RA plan for flightline sites to the state. RA system operation, monitoring, LTM, and trend analysis continued.

In FY04, the installation constructed the wellhead protection system for the Haven Well. The installation completed a detailed characterization of refueling system contamination near the well, including an analysis of the alternatives meeting New Hampshire requirements for RA at the site. Monitoring and the operation of remedial systems continued. The installation initiated optimization evaluations for several locations. An OPS demonstration was accepted by EPA for Site 73 (ID073) and OPS documentation was drafted for the remaining Zone 3 sites. The installation completed the second 5-year review. The Air Force conducted an inventory of Military Munitions Response Sites (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed the RA plan for Plumes 13/14 located in the flightline area. The installation continued monitoring and operations of remedial systems and continued optimization activities. In addition, the installation completed the OPS demonstration for Zone 3 and Site 49. The installation developed FOSTs for the remaining parcels and transferred all remaining property to the Pease Development Authority. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

RAB and BCT activities continued.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Execute RA plan for Plumes 13/14 in FY06.
- Continue operation and monitoring of remedial systems and optimization efforts for all sites in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | FL417002461000 | Funding to Date: | \$ 65.3 million |
| Size: | 5,874 acres | Estimated Cost to Completion (Completion Year): | \$ 47.7 million(FY 2041) |
| Mission: | Serve as a flight training center | IRP/MMRP Sites Final RIP/RC: | FY 2014/None |
| HRS Score: | 42.40; placed on NPL in December 1989 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in October 1990 | | |
| Contaminants: | Ammonia, asbestos, benzene, cyanide, heavy metals, paints, PCBs, pesticides, phenols, chlorinated and nonchlorinated solvents, plating wastes | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



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 machine shops, a foundry, 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 15 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 installation was placed on the NPL in December 1989 and a federal facility agreement was signed in October 1990. The installation formed a technical review committee in FY90 and converted it to a Restoration Advisory Board in FY94. In FY03, the installation completed a 5-year review.

Pensacola NAS has identified 61 sites. Ten Records of Decision (RODs) have been signed by the installation, including five for no further action (NFA). The ROD for Site 1 was completed. The cleanup progress at Pensacola NAS for FY01 through FY04 is detailed below.

In FY01, the installation completed the remedial design for Site 15, and the remedial action (RA) began. The RCRA permit application was submitted for SWMU 1. The RA plans were completed for USTs 1107, 1120, and 1159. The site assessment reports (SARs) for UST Sites 15, 20, 21, and 25 were also completed. Additional investigative fieldwork began at Sites 8, 24, 38, 40, and 41. Pensacola NAS submitted document addenda for these sites. The installation also continued groundwater monitoring at Site 1 and SWMU 1, and began an interim RA (IRA) for Site 43. The installation completed its first annual groundwater monitoring report, and updated the administrative record.

In FY02, the installation completed SARs for UST Sites 19 and 24, and RA plans (RAPs) for UST Sites 15, 21 and 25. It also completed the IRA at Site 43 and initiated the 5-year review. The installation began groundwater monitoring at Site 15 and continued monitoring at Site 1. The RCRA permit for SWMU 1 was renewed. The Navy completed an inventory of all Military

Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation removed the groundwater recovery system and continued monitoring for SWMU 1. The installation also completed the 5-year review. An IRA was initiated at Sites 8 and 24. The installation began RAPs for UST Sites 20 and 24.

In FY04, Pensacola NAS continued groundwater monitoring at SWMU 1, and completed RAPs for UST Sites 20 and 24. The IRA was completed. The Navy has identified no MMRP sites at this installation.

FY05 IRP Progress

Pensacola NAS completed the NFA ROD for Site 40 Operable Unit (OU) 15. It completed remedial investigation at Sites 44, 45, and 46. The installation completed groundwater monitoring at SWMU 1 and cleanup at USTs 15 and 21.

Regulatory issues delayed the ROD with land use controls (LUCs) for Sites 8 and 24 (OU 13), and the NFA ROD for Site 2. Additionally, regulatory issues delayed the fieldwork at Site 01 (OU 01).

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Finalize the NFA ROD for Site 02 (OU 03) in FY06.
- Finalize the ROD with LUCs for Sites 8 & 24 (OU 13) and Site 38 (OU 11) in FY06.
- Implement optimization fieldwork at Site 01 (OU 01) in FY06.
- Continue groundwater monitoring at SWMU 1, Site 01 (OU 01), and Site 15 (OU 04) in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | PA317002775600, PA317002219800, and PA317002241800 | Funding to Date: | \$ 20.4 million |
| Size: | 1,494 acres | Estimated Cost to Completion (Completion Year): | \$ 0.8 million(FY 2002) |
| Mission: | Provide logistical support for ships and service craft; overhaul, repair, and outfit ships and craft; conduct research and development; test and evaluate shipboard systems | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | POLs, heavy metals, PCBs, solvents, VOCs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Philadelphia Naval Complex comprises Philadelphia Naval Shipyard (NSY), Naval Station (NS), and Naval Hospital. In December 1988, the BRAC Commission recommended closure of the Philadelphia Naval Hospital, and in July 1991, recommended closure of the Philadelphia NS and the Philadelphia NSY. 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. A preliminary assessment and site inspection completed in FY88 identified 15 sites. The complex formed a technical review committee in FY89 and later established a Restoration Advisory Board (RAB). The installation formed a BRAC cleanup team (BCT) and prepared a BRAC cleanup plan (BCP) in FY94. The BCP was revised in FY97. In FY95, an information repository was established and a community relations plan was written. In FY01, a technical assistance for public participation grant was obtained to provide the RAB with input during the property transfer process. Upon completion of all property transfer, the RAB shifted its focus to the Navy-retained property at the Naval Surface Warfare Center-Ship System Engineering Station. The installation completed a 5-year review in FY04.

Philadelphia Naval Complex has identified 31 sites. The installation has signed eight Records of Decision and has transferred 1,218 acres of property. The cleanup progress at Philadelphia Naval Complex for FY01 through FY04 is detailed below.

In FY01, the installation continued long-term management (LTM) at Sites 4 and 5. The Naval Hospital was demolished by the City of Philadelphia. BCT actions ended with the major property transfer and the final property transfer was scheduled.

In FY02, the installation completed the final property transfer, the transfer of utilities and acquired RCRA-closure. LTM at Sites 4 and 5 continued. The installation identified damage to several monitoring wells and to the riverbank-stabilizing gabion baskets during LTM activities. It also initiated 5-year reviews for Sites 4 and 5. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed the 5-year review pending a final signature. In addition, the installation completed the LTM well repair, and repair of the banks and gabion baskets; however, additional work was needed on one well. The installation continued the LTM for Sites 4 and 5.

In FY04, Philadelphia Naval Complex received the final signature on the 5-year review. The installation also completed the well repair for one well and the replacement of another. The Navy petitioned regulators to end LTM at Sites 4 and 5. The Navy has identified no MMRP sites at this installation.

FY05 IRP Progress

Regulatory issues delayed completion of LTM at Sites 4 and 5.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Finalize decision from regulators regarding LTM in FY06.
- Perform maintenance and repairs to Sites 4 and 5 landfills in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | NY257002477400 | Funding to Date: | \$ 58.0 million |
| Size: | 3,447 acres | Estimated Cost to Completion (Completion Year): | \$ 13.4 million(FY 2084) |
| Mission: | Former bomber and tanker aircraft operations | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2006 |
| HRS Score: | 30.34; placed on NPL in November 1989 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in July 1991 (effective September 1991) | | |
| Contaminants: | Organic solvents, pesticides, fuels, PCBs, lead | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Plattsburgh Air Force Base (AFB) was placed on the NPL in November 1989 after the former fire training area was determined to be a source of chlorinated solvents and benzene, toluene, ethyl benzene, and xylene contamination in groundwater. Site types include underground storage tanks, aboveground storage tanks, landfills, industrial facilities, spill sites, and training areas. In FY91, the installation signed a federal facility agreement and formed a technical review committee (TRC). The installation established the administrative record in the local library. In FY94, the installation converted the TRC to a Restoration Advisory Board (RAB) to support cleanup efforts. In FY95, an installationwide environmental impact statement and a comprehensive land reuse plan were completed, and a community relations plan was drafted. In FY97, the Environmental Baseline Survey was updated. The BRAC cleanup plan was updated in FY04. Five-year reviews were completed in FY99 and FY04.

Environmental studies at Plattsburgh AFB have identified 41 sites for investigation and cleanup. To date, regulatory concurrence has been received for the closeout of 21 sites. Records of Decision (RODs) have been completed for 36 sites to date. The cleanup progress at Plattsburgh AFB for FY01 through FY04 is detailed below.

In FY01, RODs were signed for two sites. The installation completed an evaluation of miscellaneous environmental factors and initiated recommended actions for closeout. The installation completed a draft cultural resources management plan, an interactive cultural resources Web site, and recordation of a historic Cold War building.

In FY02, the installation completed a cultural resources management plan, and submitted the interactive cultural resources Web site and historic cold war buildings recordation data for approval. A no further action (NFA) ROD was finalized for one site. Cleanup progress included completing a removal action using soil vapor extraction and initiating contaminated soil removal.

In FY03, the Air Force signed a final ROD for one site and an interim ROD for the former fire training area (FTA), Site FT002, to facilitate construction of the selected remedy. The installation

initiated construction of the final remedy for this site.

In FY04, the installation partially completed construction of the remedy at FT002 and initiated remedial action (RA) operation. The installation completed a preliminary assessment and site inspection at the former Weapons Storage Area. NFA was recommended and the appropriate documentation was completed. NFA decision documents were also completed for two other SI sites. The second 5-year review was completed. The RAB conducted a tour of the FT002 RA construction. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed construction of the FT002 remedy. The installation also continued operation of remedial systems and long-term monitoring activities at other restoration sites. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed completion of RODs for three sites.

The RAB held two meetings.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Finalize RODs for three sites in FY06.
- Continue operation of remedial systems and long-term monitoring activities in support of remedial programs in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|-------------------------|---------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | ME117002201900 | Estimated Cost to Completion (Completion Year): | \$ 29.5 million(FY 2019) |
| Size: | 278 acres | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2005 |
| Mission: | Maintain, repair, and overhaul nuclear submarines | Five-Year Review Status: | Planned |
| HRS Score: | 67.70; placed on NPL in May 1994 | | |
| IAG Status: | Federal facility agreement signed in 1999 | | |
| Contaminants: | PCBs, pesticides, VOCs, Heavy metals | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 49.4 million | | |



Progress To Date

The Portsmouth Naval Shipyard (NSY) maintains, repairs, and overhauls nuclear submarines. Preliminary assessment (PA) and a site inspection identified four potentially contaminated sites. A RCRA facility assessment in FY86 identified 28 solid waste management units (SWMUs). Site types at the installation include a landfill, a salvage and storage area, and waste oil tanks. In FY92, the installation completed a RCRA facility investigation. The installation formed a technical review committee in FY87, which was converted to a Restoration Advisory Board in FY95. Portsmouth NSY developed a community relations plan, which was updated in FY97. The installation was placed on the NPL in May 1994 because of groundwater contamination at sites on the island, and because past activities may have adversely impacted sensitive wetland communities around and downstream of the facility. The installation signed a federal facility agreement in FY99.

Portsmouth NSY has identified 35 sites. The installation completed and signed a no further action (NFA) document for SWMUs 12, 13, 16, and 23. The installation completed one Record of Decision (ROD). The cleanup progress at Portsmouth NSY for FY01 through FY04 is detailed below.

In FY01, the installation completed the feasibility study (FS), the proposed plan, and the ROD for Operable Unit (OU) 3. It began the remedial design (RD) for OU 3. NFA decision documents under CERCLA for Sites 26 and 27 were completed.

In FY02, the installation completed interim remediation goals for OU 4, and the work plan and fieldwork for the Site 10 additional investigation. Portsmouth NSY also initiated the work plan for Site 31 (Topeka Pier) and began remedial action (RA) for OU 3. The RA for OU 3 started earlier for consolidating a portion of the landfill. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation completed the Site 10 additional investigation report and construction of the OU 3 wetlands. In addition, the installation completed the RD for OU 3. Portsmouth NSY also completed the remedial investigation (RI) work plan for Site 32. A site visit for the PA was performed.

In FY04, Portsmouth NSY completed the Phase I RI data package for Site 32 as well as the engineering evaluation and cost analysis for Site 30. The installation also started the Site 10 work plan and continued the RA for OU 3. It identified and excavated 1,000 cubic yards of waste in sediment offshore of OU 3. The installation also continued interim offshore monitoring for OU 4, and started rounds 1 through 7 of the trending report for interim offshore monitoring.

FY05 IRP Progress

Portsmouth NSY completed the RA for OU 3. The installation initiated OU 2 FS and continued interim offshore monitoring for OU 4. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The installation postponed Site 10 fieldwork to resolve technical issues with regulators.

FY05 MMRP Progress

Portsmouth NSY finalized the PA for MMRP.

Plan of Action

Plan of action items for Portsmouth Naval Shipyard are grouped below according to program category.

IRP

- Complete Site 10 fieldwork in FY06.
- Initiate additional scrutiny report for OU 4 in FY06.
- Continue interim offshore monitoring for OU 4 in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

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|------------------------|--------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | CO821382072500 | Funding to Date: | \$ 121.5 million |
| Size: | 23,121 acres | Estimated Cost to Completion (Completion Year): | \$ 88.0 million(FY 2023) |
| Mission: | Store chemical munitions, plan for future closure. | IRP/MMRP Sites Final RIP/RC: | FY 2015/FY 2016 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Heavy metals, POLs, VOCs, pesticides, explosives, PCBs, UXO, SVOCs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In December 1988, the BRAC Commission recommended realignment instead of closure of the Pueblo Depot Activity, primarily because of the future chemical demilitarization mission. In October 1996, the Army placed Pueblo Depot Activity under the Chemical and Biological Defense Command (now the Chemical Materials Agency) and changed its name to Pueblo Chemical Depot. 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 FY94, the installation formed a Restoration Advisory Board (RAB) and a BRAC cleanup team, and 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. Prior to FY00, the Army completed a major groundwater treatment system, an explosives-contaminated soil removal, installed a carbon filter unit on a drinking water source well contaminated with explosives constituents, and investigated off-site contamination in public drinking wells associated with the TNT washout facility and provided drinking water to affected off-site well water users.

The cleanup progress at Pueblo Chemical Depot for FY01 through FY04 is detailed below.

In FY01, the Army completed design and construction of an explosives/nitrate groundwater treatment system for Solid Waste Management Unit (SWMU) 17. The installation completed remediation of the CM1 Hot Spot (SWMU 58). The state approved the installation's no further action (NFA) methodology and the installation selected six SWMU sites to petition for NFA status. The installation developed a depotwide reuse and cleanup exit strategy, which it submitted to the command for approval. The installation had a total of 29 unexploded ordnance (UXO) sites. The Army completed surface clearance for most sites and performed subsurface clearance on roughly two-thirds of the sites.

In FY02, the Army made modifications to the groundwater treatment system at SWMU 17 to improve groundwater capture. Work began on a second pilot study to evaluate in situ biotechnology for expediting groundwater cleanup. The Army completed soil bioremediation and stored the treated soil pending approval from the state for onsite disposal. The Army constructed the SWMU 14 soil vapor extraction (SVE) system and operation commenced. The installation achieved NFA status for two sites and was in the final stages of a petition for NFA at another six sites. The Army also initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with UXO, discarded military munitions, or munitions constituents. The installation identified areas designated for wildlife reuse for early transfer. The installation initiated a UXO management plan to establish consensus for UXO clearance requirements with the state.

In FY03, the installation initiated additional investigations and pilot studies at the Southwest Terrace (SWMU 17) and South Central Terrace (SWMUs 14, 28, 36, 58) to evaluate in situ groundwater treatment technologies for accelerating cleanup and reducing long-term operations. The installation received state approval for the SWMU 20 NFA and completed sump remediation at SWMU 36. The installation completed modifications to the groundwater treatment system at SWMU 17. The Army completed the inventory of CTT ranges and sites with UXO, discarded military munitions, or munitions constituents. It identified 14 Military Munitions Response Program (MMRP) sites at the installation and approved 3 other sites for NFA for UXO clearance.

In FY04, the installation maintained compliance for the groundwater treatment system at SWMU 14. The Army constructed an air-sparging system at SWMU 14 to enhance the SVE system and initiated in situ groundwater treatment pilot studies at SWMUs 28, 36, and 58. The installation submitted NFA petitions for SWMUs 53, 54, and 55. The installation initiated a corrective action, which involved the installation of additional extraction and injection wells, and conducted a Phase II pilot study for in situ groundwater treatment for SWMU 17. The Army identified a new groundwater flow channel that bypasses the current groundwater treatment system at SWMU 17. Treatment of domestic wells in off-site areas continued successfully. The state reviewed the UXO management plan.

FY05 IRP Progress

The installation completed in situ groundwater treatment pilot studies at 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 them to the state for review. Three in situ pilot studies for the SWMU 17 groundwater plume were completed. The Army received state NFA approval at two sites. The installation coordinated with the state to optimize long-term groundwater monitoring requirements resulting in lower cost with continued assurance that potential groundwater releases from SWMUs can be identified. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed one in situ pilot study for the SWMU 17 groundwater plume. Regulatory issues delayed state NFA approval at one site.

FY05 MMRP Progress

The installation completed the draft conceptual site model for SWMU 34 and submitted it for regulatory review.

Plan of Action

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

IRP

- Receive approval on CMS for South Central Terrace Area SWMUs in FY06-FY07.
- Complete CMS for former TNT Washout Facility and SWMU 18 in FY06-FY07.
- Receive approval on investigations at SWMU 19 and SWMU 41 in FY06-FY07.
- Receive state NFA approval on five additional sites in FY06-FY07.

MMRP

- Receive approval on the conceptual site model for SWMU 34 in FY06-FY07.

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|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FFID: | WA017002341800 and WA017002342600 |
| Size: | 1,392 acres |
| Mission: | Provide logistical support for assigned ships and service craft; perform authorized work in construction, overhaul, and other tasks; provide housing for active duty families and healthcare for eligible personnel |
| HRS Score: | 50.00; placed on NPL in May 1994 |
| IAG Status: | Bremerton Naval Complex 1998; Jackson Park Housing Complex 2004 |

| | |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Contaminants: | Heavy metals, VOCs, POLs, grit, paint, solvents, construction debris, acids, silver nitrate, ordnance compounds, munition items |
| Media Affected: | Groundwater, surface water, sediment, soil |
| Funding to Date: | \$ 172.9 million |
| Estimated Cost to Completion (Completion Year): | \$ 76.5 million(FY 2031) |
| IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2013 |
| Five-Year Review Status: | Completed |



Progress To Date

EFA NW manages all Installation Restoration Programs (IRP) and Military Munitions Response Programs (MMRPs) at Bremerton Naval Complex (BNC) and Jackson Park Housing Complex (JPHC). Most of BNC, which includes the Puget Sound Naval Shipyard, is built on contaminated fill material. Metals and petroleum/oil/lubricants (POLs) are the primary contaminants. Initial assessment studies identified 6 sites for BNC and 8 for JPHC. The main sources of contamination are past operations, such as cleaning and demilitarization of ordnance, and ship construction, maintenance, and demolition. JPHC and BNC formed technical review committees in FY91 and FY92, respectively. Both were converted to Restoration Advisory Boards in FY94. Both installations were placed on the NPL in May 1994. An interagency agreement (IAG) was signed for BNC in 1998, and another was signed for JPHC in FY05. A 5-year review was completed for BNC in FY02, and for JPHC in FY05.

To date, 37 sites have been identified at these installations. BNC completed Records of Decision (RODs) for Operable Unit A (OU A), OU B M (Marine), OU B T (Terrestrial) OU D, and OU Naval Supply Center (NSC). JPHC completed a ROD for OU 1. The cleanup progress at BNC and JPHC for FY01 through FY04 is detailed below.

In FY01, the BNC OU B T remedial investigation (RI) was completed and the feasibility study (FS) continued. The JPHC continued the remedial action (RA) for OU 1 and completed design and construction for the benzene seep RA at Site 110. Negotiations began on the IAG for JPHC. Removal action of under water ordnance continued.

In FY02, the BNC planned RA construction for OU B Marine was completed; finalization of the remedial action operation (RA-O) plan was held pending continued investigation of post construction contamination. BNC completed the FS and proposed plan (PP) for OU B T. It also initiated the OU B T ROD negotiations and the remedial design (RD). The facilitywide petroleum management plan was completed. The facility completed the draft 5-year review report for BNC. The JPHC completed the RA for OU 1. The Navy identified two MMRP sites at JPHC; OU 3T JPHC and OU 3M. Completed Archive Search Report for JPHC.

In FY03, BNC completed negotiations with regulatory and resources agencies for the OU B M RA-O monitoring plan. The installation initiated biological and sediment monitoring. The OU B M response action characterization requirements were negotiated and characterization of impacted sediment was completed. The installation also completed remedy selection, and completed the draft final ROD for OU B T and the RD for OU B T remedial construction. The installation initiated removal actions and a long-term monitoring plan for OU B T. The installation completed a focused RI/FS and capping removal action for OU D. The installation continued monitoring and a remedy inspection at OU A, OU NSC and OU C, and initiated remedy maintenance at OU A. At JPHC, the installation continued ROD required long-term monitoring at OU 1. The draft no further action PP for OU 2 was submitted to the regulators. The OU 3 M preliminary assessment and site investigation was completed. The installation completed OU 3T JPHC PA/SI, Munition Hazard Assessment, sited temporary storage munition magazines and initiated the OU 3T RI. The installation completed approximately 30 percent of the Phase I field work.

In FY04, BNC completed the OU D focused RI/FS and capping removal action, the OU B T ROD and construction of the pavement cap and shoreline stabilization remedy components. The installation also finalized the OU B T monitoring plan and well installation, and issued an explanation of significant differences and completed OU B M response action. The installation also conducted ROD required monitoring for all applicable BNC OUs and JPHC OU 1. The installation continued discussions with the regulators regarding the JPHC OU 2 PP, and completed OU 3T Phase I RI fieldwork. The installation completed side scan sonar and bathymetric survey for JPHC OU 3M.

FY05 IRP Progress

Puget Sound Naval Shipyard continued long-term monitoring at BNC OU A, OU C and OU NSC. The installation also completed the final component of the shoreline erosion control system and vegetated cap at BNC OU B T. BNC conducted RA-O sampling at the OU B M. The Navy signed a ROD for OU D and began implementing the remedy. JPHC continued LTM and conducted an additional investigation to address benzene seep for OU 1. JPHC identified free product in new deep wells.

The cost of completing environmental restoration at this installation has changed significantly due to regulatory issues.

FY05 MMRP Progress

JPHC completed geophysical data interpretation and a field summary report at Site OU 3 T for RI Phase I. The installation completed draft RI/FS work plans for Site OU 3M.

Plan of Action

Plan of action items for Puget Sound Naval Shipyard are grouped below according to program category.

IRP

- Finalize PP and begin ROD preparation for JPHC OU 2 in FY06.
- Transfer BNC OU D property in FY06.
- Initiate partnering and facilitated meetings with regulators for JPHC sites in FY06.
- Continue LTM and examine options to address benzene seep free product at JPHC OU 1 in FY06.
- Continue sampling, operation, and maintenance for BNC LTM in FY06-FY07.

MMRP

- Complete JPHC Site OU 3 Terrestrial RI Phase II field work in FY06.
- Initiate RI/FS field work at JPHC OU 3 Marine in FY06.
- Initiate RI/FS report at JPHC OU 3 Terrestrial in FY07.
- Complete RI/FS and initiate RI/FS report for JPHC OU 3 Marine in FY07.

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|------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | TX621382073800 | Funding to Date: | \$ 45.1 million |
| Size: | 19,113 acres | Estimated Cost to Completion (Completion Year): | \$ 49.7 million(FY 2015) |
| Mission: | Provide maintenance for light combat vehicles, support rubber production, store ammunition, and conduct training | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2014 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | TCE | | |
| Media Affected: | Groundwater, surface water, sediment | | |



Progress To Date

In 1995, the BRAC Commission realigned Red River Army Depot by moving the M113 vehicle mission to other depots. The installation retained its Bradley Fighting Vehicle, the intern training, Patriot Missile, and rubber production missions. Areas of environmental concern at the depot include the oil-water separator lagoons, spill sites associated with previous industrial and pre-RCRA disposal activities, and spill sites associated with pesticide storage and mixing activities. Trichloroethylene (TCE) is the main contaminant affecting groundwater at the installation. In FY95, the installation formed a BRAC cleanup team (BCT) and the community formed the Red River Redevelopment Authority (RRRA). In FY96, the installation formed a Restoration Advisory Board and prepared a BRAC cleanup plan (BCP). The BCP was updated in FY01. The installation maintains a partnership with the Texas Natural Resource Conservation Commission through the Defense and State Memorandum of Agreement program.

To date, the installation removed more than 2,000 cubic yards of contaminated sediment from the north and south stormwater drainage ditches in the Western Industrial Area (WIA). The Army transferred 625 acres of the 797 acres of BRAC property to the RRRA. The cleanup progress at Red River Army Depot for FY01 through FY04 is detailed below.

In FY01, the Army updated the BCP and transferred acreage to the RRRA. The Army calibrated the WIA groundwater modeling study. The BCT was active in all reviews related to property transfer. The installation closed out two stormwater lagoons located on excess property. The Army cleaned out and refilled the north lagoon, and removed sludge from the south lagoon as hazardous waste due to high metal concentrations.

In FY02, the installation completed the cultural resources memorandum of agreement and submitted it to the regulators for review. It closed the south lagoon and initiated the WIA risk assessment. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. The inventory identified five Military Munitions Response Program (MMRP) sites at the non-BRAC, active portion of this installation. It identified no BRAC MMRP sites.

In FY03, the installation completed the groundwater modeling study in the WIA and submitted the study to the regulators. The Army repaired the chrome and storm sewers by relining with cured-in-place-piping. The installation completed the Hays Plant Affected Property Assessment Report (APAR). The Army awarded a contract for the removal of the chrome beds at the industrial waste treatment plant. The installation expanded sampling at the X 1 Sewer Treatment Plant to define the extent of contamination. The Army presented its proposal to conduct a pilot study of dual phase extraction to determine the potential for removal of TCE from contaminated soils and groundwater. The regulators agreed to the proposal as a sound method for determining the technical practicability for removal of dense non-aqueous phase liquid (DNAPL). The Army Environmental Center analysis of the groundwater modeling projected a negligible environmental impact from groundwater discharge to Panther Creek. The installation initiated an MMRP site inspection in the active portion of the installation.

In FY04, the installation completed a pilot study to determine the treatability of TCE in the groundwater, which determined that treatment of DNAPL was not feasible using available technology. The Army removed contaminated soil from the former pesticide pit, the former Hays Sewer Treatment Plant, and the chrome drying beds, and submitted the APAR and response action completion report for these sites. The Army anticipated no further action at these sites. The Army installed four monitoring wells offsite to determine the degree of contaminant migration from the installation. Three of the wells were non-detect for TCE and one well had detections of TCE below the action level. The installation took additional soil, groundwater, surface water and sediment samples to define the extent of contamination at the X 1 Sewer Treatment Plant. The installation completed a finding of suitability to transfer approximately 14 acres. The Army submitted release investigation reports for the former diesel transfer station at Building 172 and the Industrial Waste Treatment Plant.

FY05 IRP Progress

The installation completed a soil remediation project at the former Incinerator Building 722. In addition, the installation awarded a performance-based contract for achieving response complete at 14 contaminated sites. The Army submitted a corrective measures implementation plan to the state for the

closed hazardous waste landfill. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY05 MMRP Progress

The installation completed a draft site inspection and historical record review reports for MMRP sites.

Plan of Action

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

IRP

- Complete the APAR for the WIA, Building 373, and the X 1 Sewer Treatment Plant in FY06-FY07.
- Complete and implement the response action plan for the WIA, a used oil tank facility, Buildings 371, 373, 1027, and the X 1 Sewer Treatment Plant in FY06-FY07.
- Implement groundwater monitoring plan for the closed hazardous waste landfill, WIA, Buildings 371, 373, and used oil tank facility in FY06-FY07.
- Complete two findings of suitability to transfer, totalling 38 acres to transfer to the RRRA in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

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|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | AL421382074200 | Funding to Date: | \$ 131.2 million |
| Size: | 38,300 acres | Estimated Cost to Completion (Completion Year): | \$ 301.7 million(FY 2043) |
| Mission: | Various, includes the Army Aviation and Missile Command, the Space and Missile Defense Command, Redstone Technical Test Center, and the Missile and Space Intelligence Center | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2018 |
| HRS Score: | 33.40; placed on NPL in June 1994 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | Heavy metals, solvents, MEC, perchlorate, CWM, pesticides | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Past operations at the Redstone Arsenal (RSA) include 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. RSA currently conducts military training, research and development; manages procurement; and supports the Army's aviation and missile weapons systems. EPA placed the installation on the NPL in June 1994. 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. RSA has a Technical Review Committee, but repeated surveys of community interest in forming a Restoration Advisory Board have drawn little interest.

Studies beginning in FY77 identified 169 sites at RSA, some of which are sites at Marshall Space Flight Center under the responsibility of NASA. The installation completed six interim Records of Decision (RODs) and three final RODs, including one in FY04. Cleanup progress at RSA for FY01 through FY04 is detailed below.

In FY01, the installation published the results of a karst study investigation and completed construction of soil caps and fencing. The Army concluded the dye trace study work plan for Operable Unit (OU) 5. The installation completed all site investigation reports. It focused investigation activities on completing all work at certain high-risk sites before addressing sites that do not pose as high a risk.

In FY02, the installation developed and implemented a site access control program that will facilitate site usage controls from the investigative phase all the way to the final ROD implementation. It completed fencing for all sites that posed an imminent threat to human health. The installation developed and published a detailed implementation plan containing schedules, manpower curves, and funding requirements for the RSA Installation Restoration Program (IRP). The installation continued to participate in the Alabama Partnering Initiative and developed time and cost-saving process controls as a result. The installation developed a web-based document review

process. The Army separated RSA into groundwater OUs and surface media OUs. The Army completed all fieldwork for the Phase II karst study. The Army conducted an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents that identified 22 Military Munitions Response Program (MMRP) sites.

In FY03, the installation prepared remedial investigation and feasibility study (RI/FS) reports for two sites and a draft proposed plan for RSA 099. The installation transferred five IRP sites to the Army environmental compliance program for ongoing activities. The Army conducted a program review and initiated a re-prioritization effort. The installation completed an archive search report and initiated an in-depth evaluation of the information and visual site investigations. The installation completed the treatability studies work plan for groundwater site RSA 146 and began the fieldwork. The Army determined that the initial inventory of active, inactive, and CTT ranges were incorrect.

In FY04, the installation completed one RI/FS for RSA 099 and one corrective action plan (the RCRA equivalent of an RI/FS) for RSA 143. The installation developed the surface water and sediment background dataset and submitted it for regulatory review. The Army completed the ROD for RSA 099. The Army initiated limited site assessments at new potential source areas sites. The Army is currently updating the active, inactive, and CTT range inventory for RSA.

FY05 IRP Progress

The Army awarded a performance-based contract for the installation. The installation submitted RI reports for RSA 011, 057, 096, 098, 146, and 183. Additionally, the installation submitted an FS report for RSA 057. The Army submitted the preliminary assessment and site investigation (PA/SI) reports for RSA 145, 146, 147, 148, and 149. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Regulatory issues delayed FS reports for RSA 011 and 089. Technical issues delayed the RI/FS for RSA 087. Regulatory issues delayed the federal facilities agreement (FFA).

FY05 MMRP Progress

The installation corrected the MMRP inventory which includes only four sites.

Plan of Action

Plan of action items for Redstone Arsenal are grouped below according to program category.

IRP

- Complete a no further action decision document (DD) for MSFC 074 and proposed plans for RSA 011, 049, 057, and 098 in FY06.
- Submit DD or ROD for RSA 047, 057, and A in FY06.
- Continue FFA negotiations in FY06.
- Complete PAs for RSA 150, 151, 152, 153, 154, 155, and 157 in FY06.
- Submit RI reports for RSA 053, 060, 087, 088, 094, 095, 097, 122, and MSFC 002 in FY06.
- Submit FS reports for RSA 049, 087, and 122 in FY06.

MMRP

- Initiate the installationwide MMRP SI in FY06.

| | | | |
|------------------------|-----------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | TX657152409100 | Funding to Date: | \$ 106.7 million |
| Size: | 2,987 acres | Estimated Cost to Completion (Completion Year): | \$ 27.6 million(FY 2034) |
| Mission: | Conducted pilot training | IRP/MMRP Sites Final RIP/RC: | FY 1999/FY 2006 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement signed in 1987 and terminated in June 1999 | | |
| Contaminants: | VOCs, POLs, metals, pesticides, herbicides, TCE | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1995, the BRAC Commission recommended closure of Reese Air Force Base (AFB), which was used for pilot training and related activities. The installation closed in September 1997. The federal facility agreement, signed in 1987, was terminated in June 1999. Sites identified at the installation include landfills, surface impoundments, underground storage tanks, sludge spreading areas, industrial drain lines, and fire training areas. The installation formed a Restoration Advisory Board (RAB) in FY95 and a BRAC cleanup team (BCT) in FY96. An Environmental Baseline Survey and an environmental impact survey were completed in FY97. The installation reached the final remedy in place milestone in FY99.

Environmental studies have identified 13 sites. To date, the installation has transferred 2,578 acres of property to the Lubbock Reese Reuse Authority. The cleanup progress at Reese AFB for FY01 through FY04 is detailed below.

In FY01, the installation transferred 1,700 acres of property to the Lubbock Reese Reuse Authority. The BCT developed the criteria for documenting an operating properly and successfully (OPS) determination for a corrective action system. The BCT reviewed and approved the finding of suitability to transfer for the transfer of the Airfields and Hurlwood Area. Data collection for OPS determinations at three sites (POL Area [SS001], Southwest Landfill [LF003], and Fire Training Area [FT009]) requiring long-term corrective actions was completed, and report preparation began. Data collection continued to support the OPS determination at a fourth site requiring long-term corrective action (Tower Area [SS002]). Groundwater treatment and monitoring also continued.

In FY02, four additional corrective action wells were installed for the Tower Area plume. Operation of the groundwater treatment system continued, as did long-term groundwater monitoring. A request for funding to expand the groundwater treatment system due to the possible migration of contaminants was submitted.

In FY03, 70 acres were transferred.

In FY04, 141 acres were transferred and EPA approval of OPS was obtained for two sites (SS001 and LF003). The Air Force also completed the installation of additional monitoring wells and corrective action wells for the Tower Area plume. Groundwater data was collected to support the OPS determination for the Tower Area. A guaranteed fixed price remediation (GFPR) with insurance contract was issued to complete cleanup at Reese. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation initiated preparation of the first 5-year review. The Air Force conducted pilot studies to test possible enhancement of remedies for the Tower Area and Southwest Landfill plumes under the GFPR contract. In addition, the installation completed the expansion of the Tower Area pump and treat system, initiated an OPS demonstration for the third site, and continued to gather data for an OPS demonstration for the fourth site. The installation continued complying with the EPA 7003 Order by supplying approximately 50 off-base residents with alternate water supplies. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Funding issues delayed the OPS determination for the third site, which delayed property transfer.

The RAB and BCT continued to meet as scheduled.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Obtain OPS for the third site in FY06.
- Transfer all remaining property (409 acres)

- in FY06.
- Complete the 5-year review in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | |
|-------------------------|-------------------------------------------------------|
| FFID: | MO757002429200 |
| Size: | 429 acres |
| Mission: | Housed the 442d Fighter Wing; supported A-10 aircraft |
| HRS Score: | N/A |
| IAG Status: | None |
| Contaminants: | POLs, PAHs, PCBs, VOCs, heavy metals |
| Media Affected: | Groundwater, surface water, sediment, soil |
| Funding to Date: | \$ 10.9 million |

| | |
|--------------------------------------------------------|-------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 2.0 million(FY 2030) |
| IRP/MMRP Sites Final RIP/RC: | FY 2004/None |
| Five-Year Review Status: | Planned |



Progress To Date

Environmental studies at Richards-Gebaur Air Reserve Station (ARS) began in FY82. In July 1991, the BRAC Commission recommended closure of Richards-Gebaur Air Reserve Station. The installation was closed on September 30, 1994. Prominent 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 (USTs). An Environmental Baseline Survey (EBS) was completed in FY94. The installation formed a Restoration Advisory Board (RAB) in 1994, which adjourned in FY04.

The basewide evaluation and consolidation study, completed in FY99, identified 23 sites. Of the 23 sites, 3 sites required no further response action planned (NFRAP) decision documents (DDs), 16 sites required remedial investigations (RIs), and the remaining 4 sites, as well as 6 subsequently identified sites, required closure under Missouri RCRA-C UST regulations. The installation completed the Records of Decision (ROD) for Operable Unit (OU) 1 and 2 in FY04. The cleanup progress at Richards-Gebaur for FY01 through FY04 is detailed below.

In FY01, the installation submitted an RI report and received regulatory concurrence. An engineering evaluation and cost analysis (EE/CA) and a basewide removal action to address contaminated soil were initiated. An EBS site investigation was also initiated.

In FY02, a supplemental RI report was submitted to regulators for two new sites identified as a result of the EBS site investigation. The EE/CA was approved by regulators and remedial actions (RAs) were completed to address contaminated soil sites. RAs for the EBS sites were completed. A draft feasibility study (FS) and proposed plan (PP) were completed. The Air Force, along with the U.S. Army Corps of Engineers, held quarterly RAB meetings to keep the public informed of ongoing environmental activities at the base.

In FY03, the draft ROD for OUs 1 and 2 was completed and submitted to regulators. The interim action report for soil and sediment for OU 1, the focused FS for OU 1, and the FS for OU 2 were completed and received regulatory concurrence. NFRAP DDs were completed for Sites Area of Concern 001 (AOC 001), AOC 002, OT010, and ST007, which attained

residential soil remediation goals. The NFRAP DDs for Sites AOC 001, AOC 002, and OT010 were signed. The installation completed a finding of suitability to transfer for Parcels K and L. A PP was completed and presented to the community.

In FY04, the ROD for OUs 1 and 2 was completed and signed. The NFRAP DD was completed and signed for site ST007. The community relations plan was updated to indicate the status of remediation efforts and identify ongoing opportunities for community involvement. The RAB adjourned after the members unanimously agreed that their mission had been completed. The Air Force conducted an inventory of Military Munitions Restoration Program (MMRP) sites. No MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed the land use control/institutional control (LUC/IC) management plan and updated the groundwater monitoring plan. The installation also conducted semi-annual groundwater monitoring at six sites and annual LUC/IC inspections. In addition, the installation transferred the remainder of base property to the City of Kansas City and the U.S. Marine Corps Reserves. The cost of completing environmental restoration at this installation has changed significantly due to technical and regulatory issues.

FY05 MMRP Progress

The Air Force has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Richards-Gebaur Air Reserve Station are grouped below according to program category.

IRP

- Continue semi-annual groundwater monitoring and annual LUC/IC inspections in FY06.
- Complete 5-Year review in FY06.
- Transfer liability for Sites SS003 and SS009 to the U.S. Marine Corps Reserves in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | OH557002454400 | Funding to Date: | \$ 25.8 million |
| Size: | 2,076 acres | Estimated Cost to Completion (Completion Year): | \$ 2.4 million(FY 2026) |
| Mission: | Provide base of support for one fighter wing, one refueling wing, and one airlift group | IRP/MMRP Sites Final RIP/RC: | FY 2001/None |
| HRS Score: | 50.00; proposed for NPL in January 1994 | Five-Year Review Status: | Underway and planned |
| IAG Status: | None | | |
| Contaminants: | Pesticides, paint, spent fuel, waste oil, solvents, heavy metals | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In July 1991, the BRAC Commission recommended closure of Rickenbacker Air National Guard (ANG) Base, which had supported aircraft operations. In July 1993, realignment was recommended rather than base closure. The installation was realigned on September 30, 1994. Rickenbacker was proposed for listing on the NPL because of the potential effects of contamination on underlying groundwater in January 1994. A Restoration Advisory Board formed and a basewide Environmental Baseline Survey was completed in FY94. In FY95, a final environmental impact statement was published. From FY96 through FY97, a supplemental remedial investigation report was completed. Remedial actions (RAs) included removal of 59 underground storage tanks, 28 aboveground storage tanks, and asbestos; closure of abandoned fuel lines; and demolition of the heat and water plant lagoons. In FY04, the installation initiated the first 5-year review.

To date, all Records of Decision have been signed. The Air Force has transferred approximately 1,739 acres to the local redevelopment authority (LRA). No further RA planned documents were signed for 16 Installation Restoration Program (IRP) sites and 3 areas of concern. Seven other IRP sites were closed with regulatory concurrence. The cleanup progress at Rickenbacker ANG Base for FY01 through FY04 is detailed below.

In FY01, the final scientific management decision point paper was published and the decision document for IRP Sites 25 and 27 (SD025 and SD027) was signed. The Site 1 (SS001) conditional regulatory approval of soil cleanup and groundwater treatment levels was obtained, and soil removal and groundwater treatment were completed at this site. RA operation (RA-O) of groundwater treatment at two petroleum-contaminated sites and RA-O of monitored natural attenuation (MNA) at five IRP sites were conducted. Additional soil was removed at Site 42 (SS042).

In FY02, the amended Site 1 closure and post closure plan was approved. The draft land use control/institutional control (LUC/IC) layering strategy plan was updated and submitted to regulators for comment.

In FY03, the installation transferred 310 acres to the LRA and published the final investigation report for Site 12/597 (SS012).

In FY04, the installation completed the 2-year report for IRP Sites 2, 21, 41, 42, and 43 (SS002, SS021, SS041, SS042 and SS043), and finalized the LUC/IC management plan. After review of groundwater data, the basewide groundwater restriction was removed. The installation shut down the groundwater treatment system at Site 2 and initiated MNA. The two vacuum-enhanced recovery systems at Pumphouses 898/899 and Segment G of the 1942 fuel line were turned off. A remedial process optimization (RPO) study was completed. The first 5-year review was initiated. The Air Force Real Property Agency (AFRPA) conducted an inventory of Military Munitions Response Program (MMRP) sites. No MMRP sites were identified on the BRAC portion of the installation.

FY05 IRP Progress

The installation obtained approval letters for operating properly and successfully (OPS) demonstrations at IRP Sites 21 and 42. A Statement of Basis for No Further Action (NFA) was signed for Site 43 contingent upon the land use requirements. The installation transferred 47 acres of Parcel D3A and 15 acres of Parcel D3B containing the POL Bulk Storage area to the LRA. The installation continued to work on the draft 5-year review. The Air Force awarded a performance-based contract to close the remaining IRP Sites, Sites 1, 2, 21, and 42. The installation also implemented the RPO recommendations identified during the FY04 study. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The installation did not obtain OPS for IRP Site 2 because the remedy changed from groundwater treatment to MNA. IRP Site 43 no longer requires OPS because of the NFA determination. Administrative issues delayed anticipated property transfers to the LRA and the Ohio Army National Guard. Closure of Site 43 was delayed, contingent upon identification of land use requirements.

The BRAC cleanup team reviewed the draft 5-year review and held one meeting.

FY05 MMRP Progress

AFRPA has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Implement site closure acceleration enhancements at Sites 41 and 42 and overall long-term monitoring optimization in FY06.
- Complete transfer of Parcels D3K, D3C, D3D, D3F, and D3G to the LRA, and Site 43 to the Ohio Army National Guard in FY06.
- Finalize the 5-year review in FY06.
- Complete OPS determination document and obtain EPA approval letter for Site 2 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|----------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | CA921382075900 | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2017) |
| Size: | 172 acres | IRP/MMRP Sites Final RIP/RC: | FY 1998/FY 2017 |
| Mission: | Manufacture grenades, projectiles, and steel cartridge casings | Five-Year Review Status: | Completed and underway |
| HRS Score: | 63.94; placed on NPL in February 1990 | | |
| IAG Status: | IAG signed in April 1990 | | |
| Contaminants: | Chromium, cyanide, zinc | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 54.7 million | | |



Progress To Date

In 1942, the Army constructed what is now 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. In FY85, a preliminary assessment and site inspection identified the following sites: an industrial wastewater treatment plant, an abandoned landfill, and four evaporation and percolation ponds located north of the plant near the Stanislaus River. The Army identified one additional Military Munitions Response Program (MMRP) site in FY03. The installation detected chromium in drinking water wells at residences west of the installation. EPA placed the installation on the NPL in February 1990. EPA and the Army signed an interagency agreement in April 1990. The installation formed a technical review committee in FY94. In FY97, the Army submitted a petition to delete the installation from the NPL; however, EPA determined that NPL deletion was premature since groundwater cleanup goals had not been met. EPA approved the preliminary closeout report and the remedial action completion report. Therefore, Riverbank AAP became the first DoD installation on the NPL to reach the construction complete milestone. The Army completed a 5-year review in FY01.

To date, the installation has completed one installationwide Record of Decision. The cleanup progress at Riverbank AAP for FY01 through FY04 is detailed below.

In FY01, the State of California approved the discharge of higher nitrates levels. The installation continued groundwater treatment system (GWTS) optimization efforts by obtaining permission to use the city's publicly owned treatment works for discharge of treated water. The installation explored the idea of awarding a contract for a fluidized bed treatment system for reduction and or elimination of nitrates. The Army completed a 5-year review.

In FY02, the Army procured a fluidized bed treatment system for the treatment of nitrates. With the installation of the fluidized bed reactor at the GWTS, the installation was no longer dependent on the City of Riverbank discharge agreement for its

treated water. The installation continued to explore in situ treatment of the chromium-contaminated soil at the source to reduce the overall cleanup duration. The Army initiated an inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY03, the installation continued to work towards implementing a pilot test for in situ treatment of the chromium-contaminated soil in the source area to reduce the overall cleanup duration, including negotiations with the California Regional Water Quality Control Board (RWQCB) regarding the need for an additional waste discharge permit for this pilot test. Work continued on an evaluation of background groundwater and surface water conditions at the Evaporation/Percolation (E/P) ponds. The installation shut down the fluidized bed reactor because it was no longer needed. Work began on the bench scale test for cyanide source destruction. The Army completed the inventory of CTT ranges and sites. The inventory identified one MMRP site (a closed small arms range).

In FY04, the installation converted Monitoring Well 109B to an extraction well and put it into service. Studies of the well's performance showed that it improved the efficiency of the groundwater containment system and reduced the amount of pumping required to provide full capture, resulting in lower costs. The Army obtained the permit from the RWQCB for the in situ chromium treatment pilot project and initiated testing in the primary source area. The Army completed the bench-scale component of the in situ cyanide destruction pilot test and initiated discussions with RWQCB regarding regulatory requirements for implementing a field test. The Army issued a performance-based contract to accelerate completion of the groundwater cleanup. Work continued on evaluating background groundwater and surface water conditions at the E/P ponds as part of the effort to get a permanent increase in the allowable nitrate discharge limit.

FY05 IRP Progress

Riverbank AAP initiated optimization efforts for the extraction scenario from off-site wells. The installation completed the in situ chromium treatment pilot test in the primary source area. The cost of completing environmental restoration at this

installation has changed significantly due to regulatory and estimating criteria issues.

The installation did not initiate field-testing of the in situ cyanide destruction technology as it determined that the technology and the treatment were incompatible.

FY05 MMRP Progress

The installation awarded a contract to conduct a historical review and archive search for the small-arms range.

Plan of Action

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

IRP

- Continue to optimize the current groundwater treatment system in FY06.
- Complete the second 5-year review in FY06.
- Initiate in situ treatment of groundwater in FY06.
- Evaluate groundwater data in order to optimize long-term management requirements in FY06.

MMRP

- Conduct a historical records review and archive search for the small arms range in FY06.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | GA457172433000 | Funding to Date: | \$ 158.0 million |
| Size: | 8,855 acres | Estimated Cost to Completion (Completion Year): | \$ 132.6 million(FY 2028) |
| Mission: | Provide logistics support for aircraft | IRP/MMRP Sites Final RIP/RC: | FY 2005/None |
| HRS Score: | 51.66; placed on NPL in July 1987 | Five-Year Review Status: | Planned |
| IAG Status: | IAG signed in July 1989 | | |
| Contaminants: | VOCs, paint strippers and thinners, paints, solvents, phosphoric and chromic acids, oils, cyanide, carbon | | |
| Media Affected: | Groundwater, surface water, sediment, and soil | | |



Progress To Date

The mission of Robins Air Force Base (AFB) is to provide logistics support for aircrafts. The installation was placed on the NPL in July 1987 and signed an interagency agreement in July 1989. Primary contaminants at the site include trichloroethylene (TCE) and tetrachloroethane in soil and groundwater. This installation has formed a Restoration Advisory Board (RAB).

The NPL Site at Robins AFB is divided into three operable units (OUs): source control (OU 1), wetlands (OU 2), and groundwater (OU 3). An interim Record of Decision (ROD) has been signed for OU 2 and the final ROD for OUs 1 and 3 was completed in FY04. The cleanup progress at Robins AFB for FY01 through FY04 is detailed below.

In FY01, the corrective action plans (CAPs) for Landfill 001 (LF 001), LF 002, and Site SS 035 were completed. The remedial action construction (RA-C) was installed for Sites OT 038 and SS 039, and final approval was obtained for site closeout (SC) of Site SS 009.

In FY02, the installation completed CAPs for Sites OT 020, OT 023, OT 037, OT 041, and SC Sites OT 022, SS 035, SS 036, OT 038, and SS 010. RAs were installed for Sites OT 037 and OT 041. A feasibility study for OU 2 at LF 004 was completed. Based on negotiations with the regulators, no RA was required for Site SS 036, and the site was closed. The study phases were completed for Sites LF 004, OT 020, OT 023, OT 037, OT 041, and SS 036.

In FY03, the installation completed the proposed plan and remedial design for OU 2 at LF 004; however, a ROD was not necessary since the remediation will be completed under RCRA. The installation completed the CAP for Site SS 040 and installed RAs for Sites OT 020 and SS 040. A 5-year performance-based contract was awarded to perform the CAP for Site DC 34 and remediate the site until no further action is necessary. Operations and maintenance (O&M) activities continued at 12 environmental restoration sites.

In FY04, the installation completed the RA for Site OT 023 and began the RA for OU 2 at LF 004. The installation also completed the ROD for OU 1 and OU 3 at LF 004. In addition, Robins AFB began the installation of the RA at Site DC 034.

The draft CAP for Site DC 034 was prepared and submitted for regulatory review. The installation completed RAs at Sites OT 029 and SS 042 and the sites achieved response complete (RC) status. Area of Concern 15 and Site RW 015 also achieved RC status. O&M activities continued at nine environmental restoration sites. The Robins AFB RAB, made up of 17 community participants, regulators, and base members, met quarterly to discuss ongoing restoration activities.

FY05 IRP Progress

Robins AFB completed the CAP and the installation of the RA for Site DC 34. The Air Force completed the RA for OU 2 and the RA for Site SS 039. Robins AFB obtained SC for Site SS 042 and conducted O&M activities at nine sites. The installation has obtained remedy in place for all Installation Restoration Program (IRP) sites at the base. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The RAB met quarterly to discuss ongoing restoration activities.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Obtain SC for SS 039 in FY06.
- Complete 5-year review in FY06.
- Perform O&M activities at eight sites in FY06.
- Maintain land use controls at four sites in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | CO821382076900 | Funding to Date: | \$ 1,420.6 million |
| Size: | 17,228 acres | Estimated Cost to Completion (Completion Year): | \$ 517.6 million(FY 2099) |
| Mission: | Manufactured and stored chemical munitions | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 58.15; placed on NPL in July 1987 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG and federal facility agreement signed in FY89 | | |
| Contaminants: | Pesticides, chemical agents, VOCs, chlorinated organics, PCBs, UXO, heavy metals, solvents | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Rocky Mountain Arsenal (RMA) operated as a chemical munitions production facility from 1942 until 1982. It has been the focus of an aggressive soil and groundwater contamination cleanup program since the 1980's. Contaminated sites included liquid waste in unlined and lined lagoons and basins, open burning and detonation areas, structures, and landfills that received both liquid and solid wastes. Primary contaminants of concern are compounds used for chemical weapons materiel production and pesticides. Contaminated soil responses have included excavations and treatment of soil, disposing of contaminated soil in landfills, and capping contaminated soil sites. In July 1987, EPA placed the installation on the NPL. The Army and EPA signed an interagency agreement and federal facility agreement in FY89. The installation was divided into two operable units (OUs), one containing all on-post sites and another for off-post. In 1994, the Army converted its technical review committee into a Restoration Advisory Board (RAB). In 1996, the Army and Shell Oil Company (a potentially responsible party) formed an oversight partnership that developed a remedial design (RD) implementation schedule for the On-Post OU. The initial 5-year review covering both OUs was completed in FY01. In FY03, EPA delisted 957 acres from the NPL.

Environmental studies identified 209 sites, potentially requiring remediation, at this installation. To date, the Army has transferred approximately 5,984 acres, including 5,055 acres in FY04. The Army and regulators signed Records of Decision (RODs) for both OUs at the installation in FY96. Prior to the signing of the RODs, the Army completed 14 interim responses at 17 sites at the arsenal, including the installation of five groundwater extraction and treatment systems on-post and one off-post. The cleanup progress at RMA for FY01 through FY04 is detailed below.

In FY01, the Army completed remedial actions (RAs) for the Toxic Storage Yards soil remediation and the Lake Sediments remediation projects. RODs for the Buried M-1 Pits soil remediation, South Plants Balance of Areas and Central Processing Area soil remediation, and the North Plants structure demolition and removal projects were also completed. As part of RA activities for the Miscellaneous RMA structure demolition and removal project, 10 M139 bomblets containing

the chemical agent sarin were discovered. The Army destroyed the bomblets using the Explosive Destruction System. The Army completed the first 5-year review report, which covered both OUs.

In FY02, the installation completed the RD of the last disposal facility, the Enhanced Hazardous Waste Landfill (HWL) and the Section 35 soil remediation projects. The RAs for the South Plants structure demolition, the M-1 Pits soil remediation and the South Plants Balance of Areas & Central Processing Area soil remediation projects were completed. The Army continued implementation of all installationwide programs and the operation and maintenance of its five groundwater treatment systems. The RAB continued to focus on providing input and comments to remediation designs, as well as sharing information with other interested stakeholders.

In FY03, the Army completed the RD for the Section 36 Balance of Areas soil remediation and the Basin F Wastepile remediation projects. The installation completed the RA for the post-ROD removal actions for structures. The Army continued to implement installationwide programs and operate groundwater treatment systems. EPA deleted 957 acres from the NPL, 929 of which were transferred to the General Services Administration (GSA) for disposal. RMA completed an inventory of closed, transferred, and transferring ranges and placed the inventory in the on-site library. The inventory identified 25 closed unexploded ordnance, discarded military munitions, or munitions constituents sites and 3 closed military ranges totaling 459 acres. None of the sites were found to be eligible for the Military Munitions Response Program (MMRP).

In FY04, the Army began the construction of the South Plants cover and completed RAs for the Existing Sanitary Landfills (fieldwork), the Burial Trenches soil remediation, the Hex Pit soil remediation (redesign), the Section 35 soil remediation, the Secondary Basins soil remediation and the North Plants structure demolition and removal projects. The installation continued operation of the RCRA HWL and the Basin A Consolidation Area. The Army transferred approximately 4,929 acres to the U.S. Department of the Interior and 126 acres to local governments, reducing the area at the RMA listed on the NPL from an original total of 27 square miles to approximately 16 square miles. The installation completed RA for the Existing (Sanitary) Landfill remediation and the Hex Pit soil remediation

projects. The GSA completed the sale of the Western Tier Parcel, totaling 929 acres.

FY05 IRP Progress

The installation awarded RAs for the Shell Disposal Trenches remediation and the Basin F Wastepile remediation projects. The installation completed the construction completion report for the Existing (Sanitary) Landfill remediation project as well as operations at the Groundwater Intercept & Treatment System north of the Basin F Well. The Army initiated a 5-year review.

Regulatory issues delayed RDs for the Shell Disposal Trenches restoration cover, the North Plants soil remediation, the former Basin F Principal Threat, and the Section 36 Lime Basins projects. Regulatory issues delayed the RA for the Munitions Testing soil remediation project.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Rocky Mountain Arsenal are grouped below according to program category.

IRP

- Complete RDs for the Shell Disposal Trenches remediation cover and the North Plants soil remediation projects in FY06.
- Complete RA for the Munitions Testing soil remediation project, including the recently added demolition range exclusion zone in FY06.
- Begin RDs for the former Basin F Principal Threat soil remediation and the Section 36 Lime Basins soil remediation projects in FY06.
- Complete the second 5-year review in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA921382078000 | Funding to Date: | \$ 63.4 million |
| Size: | 485 acres | Estimated Cost to Completion (Completion Year): | \$ 21.7 million(FY 2024) |
| Mission: | Repaired and maintained communications and electronic equipment | IRP/MMRP Sites Final RIP/RC: | FY 1997/None |
| HRS Score: | 44.46; placed on NPL in July 1987 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in FY88 | | |
| Contaminants: | Oil and grease; solvents; metal plating wastes; and wastewater containing caustics, cyanide, metals | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

When in operation, Sacramento Army Depot provided support for communications and electronic equipment. In July 1987, the BRAC Commission recommended closure of the Sacramento Army Depot and EPA placed the installation on the NPL. During FY88, the installation signed an interagency agreement. In FY93, the installation completed a BRAC cleanup plan and a CERFA report. The installation formed a Restoration Advisory Board in FY94. The Army closed the installation in March 1995. The installation completed a 5-year review in FY01.

All acreage has been transferred. The Army divided its contaminated sites into four operable units (OUs). During FY92, the Army signed Records of Decision (RODs) for all four OUs, and in FY95 signed an installationwide ROD. The cleanup progress at Sacramento for FY01 through FY04 is detailed below.

In FY01, the Army completed the 5-year review as planned. The installation initiated the closeout and monitoring plan for Parking Lot 3, and the installationwide closeout and monitoring plan. The closure plan for the horizontal wells and subsequent destruction of the wells were completed. The installation received regulatory concurrence on the finding of suitability to transfer (FOST) for the final parcel.

In FY02, the regulators approved the 5-year review. The installation completed the Parking Lot 3 closeout and monitoring plan and submitted it to regulators. It completed destruction of the horizontal wells. The Army completed transfer of Parcel 3 and the FOST for Parcel 2B. The installation received the approved closeout report from EPA and the State of California. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents; it identified no Military Munitions Response Program (MMRP) sites.

In FY03, the installation completed and received approval from EPA on an interim remedial action for groundwater report. The report contained an addendum to a plume capture assessment report that resolved regulatory issues. The installation submitted a supplemental biological assessment to the U.S. Fish and Wildlife Service and received concurrence.

In FY04, the installation completed the fate-and-transport phase of groundwater modeling.

FY05 IRP Progress

The Army signed the 2B Parcel Deed and transferred the final installation acreage to the City of Sacramento. The installation began groundwater and soil sampling at the South Post Plume. The information from this sampling will be used in the forthcoming optimization plan and model. The installation reviewed all leases in support of groundwater monitoring; several were renewed, and one was terminated. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues. Technical and funding issues delayed the optimization evaluation of the groundwater treatment system.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete soil and groundwater sampling at the South Post Plume in FY06.
- Finalize the optimization evaluation of the groundwater treatment system in FY06.
- Evaluate the feasibility of enhanced reductive dechlorination of residual contamination associated with the Parking Lot 3 Plume in FY06-FY07.
- Complete 5-year review in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | CA99799F558700 | Funding to Date: | \$ 7.4 million |
| Size: | 1,663 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2012) |
| Mission: | Served as World War II Engineer storage depot, Quartermaster repair facility, and prisoner of war camp | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 1995 |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | IAG signed in July 1997 | | |
| Contaminants: | TCE, PCE, freon 11 and 12 | | |
| Media Affected: | Groundwater | | |



Progress To Date

The U.S. Army leased the property comprising San Bernardino Engineering Depot beginning in 1941. The Army used the depot for military storage, as a tent repair facility, and as a prisoner of war camp. The site served as part of the communications zone of the Desert Training Center, a large multi-state area where the Army held troop maneuvers. Operations included routine vehicle maintenance, supply, storage, tent repair, motor pool operations, a sewage disposal system, and a station hospital. The Army closed the camp in 1947, and terminated all leases by the end of 1948. Uses of the property after the Army's departure included a steel rolling mill, mineral processing, machine shops, steel fabrication, poultry farms, agricultural commodity storage, gasoline service stations, and various private manufacturing and warehousing operations. There are five parcels of depot property within the Newmark groundwater contamination site. EPA added this site to the NPL in May 1994 after discovery of groundwater contamination. The Army and EPA signed an interagency agreement in July 1997.

The U.S. Army Corps of Engineers (USACE) completed an archive search report and issued a declaration of No Defense Action Indicated. The cleanup progress for San Bernardino Engineering Depot for FY01 through FY04 is detailed below.

In FY01, USACE completed site investigation reports for the upper portions of Parcel 1. Regulators reviewed the reports and provided comments. A fourth work plan underwent review, and comment resolution began. USACE acquired no new data that indicated the presence of contaminant plumes.

In FY02, EPA continued the review of the fourth work plan and comment resolution continued. USACE completed the review cycle for the upper portions of Parcel 1 and received regulatory and public comments. USACE submitted the final document to EPA and the City of San Bernardino.

In FY03, USACE completed all fieldwork for the fourth work plan and submitted a draft final data report for regulatory and community review.

In FY04, USACE concurred with the Department of Justice on the negotiated consent decree for settlement. No further actions will be required once the consent decree is issued. USACE

submitted the final data report to EPA. USACE has identified no Military Munitions Response Program (MMRP) work at this property.

FY05 IRP Progress

The Federal Court issued a consent decree on March 15, 2005. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues. No further FUDS action is required for this project and this will be the final installation narrative.

FY05 MMRP Progress

USACE has identified no MMRP sites at this property.

Plan of Action

Plan of action items for San Bernardino Engineering Depot are grouped below according to program category.

IRP

There are no IRP actions scheduled for FY06 or FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | CA917002320200 | Funding to Date: | \$ 35.1 million |
| Size: | 541 acres | Estimated Cost to Completion (Completion Year): | \$ 6.1 million(FY 2008) |
| Mission: | Provided recruit training for enlisted personnel and specialized training for officers and enlisted personnel | IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Paint, pesticides, solvents, POLs | | |
| Media Affected: | Groundwater, sediment, soil | | |



Progress To Date

In July 1993, the BRAC Commission recommended closure of San Diego Naval Training Center (NTC) and relocation of personnel, equipment, and mission support to other Naval training centers. Certain installation facilities and activities were retained to support other Navy operations in the San Diego area. The installation closed in April 1997. In FY86, an initial assessment study identified 12 sites that might present environmental problems: 5 sites are being addressed under CERCLA and 7 under the underground storage tank (UST) program. Sites include a landfill and petroleum-contaminated areas. A community relations plan was developed in FY92 and updated in FY95. A Restoration Advisory Board (RAB) and an information repository containing the most current documents of the administrative record were established in FY94. The installation's BRAC cleanup plan was updated in FY99.

Nine sites have been identified at this installation. The installation has signed one Record of Decision. The cleanup progress at San Diego NTC for FY01 through FY04 is detailed below.

In FY01, the installation executed the early transfer of the Site 1 landfill to the Port of San Diego. It also obtained the formal no further response action designations for Site 15 and the USTs at Building 361. Finding of suitability to transfer documents and final transfers were completed for all parcels except the two associated with the Site 12 boat channel. The Navy continued to negotiate with the Regional Water Quality Control Board (RWQCB) regarding the remedial investigation (RI) recommendation of no action for Site 12.

In FY02, the Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. There were no MMRP sites identified at this installation.

In FY03, the installation initiated a preliminary assessment for Site 101.

In FY04, the installation completed the RI for the Site 12 boat channel. The City of San Diego requested initiation of actions necessary to accomplish an early transfer of the Boat Channel. The installation also closed Site 101. The installation continued

facilitating the RAB meetings.

FY05 IRP Progress

San Diego NTC received comments from the RWQCB and prepared a scope of work and preliminary cost estimates for a feasibility study (FS). The installation continued to pursue an early transfer with the City of San Diego. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for San Diego Naval Training Center are grouped below according to program category.

IRP

- Continue to pursue early transfer with the City of San Diego in FY06.
- Conduct an FS for Site 12 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | IL59799F221600 | Funding to Date: | \$ 1.7 million |
| Size: | 43,000 acres | Estimated Cost to Completion (Completion Year): | \$ 38.9 million(FY 2043) |
| Mission: | Manufacture and load ordnance for shipping | IRP/MMRP Sites Final RIP/RC: | FY 2019/FY 2043 |
| HRS Score: | 43.70; placed on NPL in July 1987 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | IAG signed in September 1991 | | |
| Contaminants: | Organic solvents, inorganic compounds, PAHs, PCBs, munitions, heavy metals | | |
| Media Affected: | Groundwater and 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 (USFWS'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. Initially, 33 areas were identified 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 (EMMA) OU. EPA placed the property on the NPL in July 1987. The Army and EPA signed an interagency agreement in September 1991. In FY96, U.S. Army Corps of Engineers (USACE) began fieldwork for the munitions and explosives of concern (MEC) engineering evaluation and cost analysis. The parties involved determined that USFWS must provide preliminary investigations for uncharacterized sites. The remedial action (RA) for MEC begun by USACE in FY98 at the EMMA OU was completed in FY01, concluding all Military Munitions Response Program (MMRP) work. The USFWS established a technical working group (TWG) in FY00 consisting of USFWS, EPA, Illinois Environmental Protection Agency (IEPA) and USACE. An electronic administrative record was developed for the EMMA OU in FY04.

The cleanup progress for Sangamo Electric Dump/Crab Orchard National Wildlife Refuge for FY01 through FY04 is detailed below.

In FY01, USACE completed the RA for the EMMA OU; all ordnance was removed. USACE completed all restoration work pertaining to the MMRP.

In FY02, USACE performed additional tree planting for erosion control, which completed the RA for the EMMA OU.

In FY03, USACE continued long-term management (LTM) and performed one round of groundwater monitoring well sampling in the EMMA OU. The results were provided to IEPA, EPA, and USFWS. The TWG met three times to discuss the land use control (LUC) plan for the entire Crab Orchard National Wildlife Refuge.

In FY04, USACE continued LTM by performing two rounds of groundwater monitoring in the EMMA OU, the results of which it reported to IEPA, EPA, and USFWS. USACE also reviewed the draft propertywide USFWS LUC plan. In addition, the former Illinois Ordnance Plant developed an electronic administrative record file for the EMMA OU and provided electronic copies to IEPA, EPA, and USFWS. The TWG continued to hold meetings about potentially responsible party (PRP) sites.

FY05 IRP Progress

USACE continued LTM by performing two rounds of groundwater monitoring in the EMMA OU and reported the results to IEPA, EPA, and USFWS. USACE also reviewed the draft propertywide USFWS LUC plan and prepared a draft insert for the EMMA OU portion. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The TWG continued to hold meetings about PRP sites and USACE attended one of the meetings.

FY05 MMRP Progress

No MMRP actions were conducted at this property.

Plan of Action

Plan of action items for Sangamo Electric Dump/Crab Orchard National Wildlife Refuge are grouped below according to program category.

IRP

- Continue LTM at the EMMA OU in FY06.
- Complete input and review comments on the LUC Plan to USFWS in FY06.
- Complete the PRP INPR revision in FY06.
- Participate in propertywide 5-year review in FY06.
- Obtain regulatory concurrence on project closeout for the EMMA OU in FY06.

MMRP

- Obtain regulatory concurrence on project

closeout for the EMMA OU MMRP project in FY06.

| | | | |
|------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | IL521382080300 | Funding to Date: | \$ 104.7 million |
| Size: | 13,062 acres | Estimated Cost to Completion (Completion Year): | \$ 99.4 million(FY 2040) |
| Mission: | Receive, store, and demilitarize ammunition; manufacture ammunition-specific equipment | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2011 |
| HRS Score: | 42.20; placed on NPL in March 1989 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | IAG signed in FY89 | | |
| Contaminants: | Explosives, metals, solvents, POLs, VOCs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Savanna Army Depot began operation in 1917 as the Savanna Proving Grounds. EPA placed the installation on the NPL in March 1989. The Army and EPA signed an interagency agreement in FY89. During the 1920s, the mission changed to include storage, receipt, issuance, demilitarization, and renovation of ammunition. In July 1995, the BRAC Commission recommended closure of the Savanna Depot Activity and relocation of the U.S. Army Defense Ammunition Center and School to McAlester Army Ammunition Plant in Oklahoma. Contaminants were released at landfills; the open burning and open detonation ground; the fire training area; and ammunition load, assemble, and pack facilities. In FY96, the Army formed a BRAC cleanup team (BCT) and a Restoration Advisory Board (RAB). In FY97, the installation completed a BRAC cleanup plan and updated it in FY04 and FY05. In FY00, the Army formed a Strategic Management, Analysis, Requirements and Technology (SMART) Team to address ordnance and explosives hazards at the installation. The team included senior level officials of the Army, EPA, Illinois Environmental Protection Agency, and the U.S. Fish and Wildlife Service.

To date, the Army and regulators have signed one Record of Decision and the Army has transferred approximately 4,200 acres of land. The cleanup progress at Savanna Army Depot for FY01 through FY04 is detailed below.

In FY01, the installation obtained funding and began design work for the removal action on the old battery storage and small-arms/artillery tunnel areas. Design work began on removals for Sites 24 and 76. The Army completed all laboratory work for the Old Burning Grounds (OBG) ecological risk assessment (ERA) project and initiated development of the remedial investigation (RI) report. The Army initiated a removal action and Phase II sampling for Zone L, and the three planned site investigations. The RAB met to discuss projects, policies, and the accomplishments of the team. The SMART Team worked successfully to resolve environmental issues that included assisting the BCT in completing remediation plans for a large pesticide burial area.

In FY02, the Army successfully completed a removal action at the Pesticide Burial Area. RI fieldwork in the lower post was completed. The installation completed the draft OBG (Sites 13

and 14) ERA and submitted it for review. The Army initiated an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

In FY03, the Army completed findings of suitability to transfer (FOSTs) and environmental conditions of property statements (ECOPS) that contributed to the transfer of 3,002 acres to the U.S. Fish and Wildlife Service and 221 acres to the local redevelopment authority (LRA). Both transfers were preceded by completion of a memorandum of agreement with each transferee. The installation initiated removal actions at Sites 15/33, 25, 44, and 76AD. The installation also initiated consolidation of all RI efforts at Sites 13 and 14. The Army completed the Military Munitions Response Program (MMRP) inventory and identified 15 MMRP sites at the Savanna Army Depot. The Army awarded the contract for munitions and explosives of concern (MEC) investigation of six large tracts of land once part of open detonation and artillery impact area operations. The installation completed the Zone L Phase II investigation and initiated Phase III.

In FY04, the installation completed Phase I of the MEC investigations on the Small Arms area behind Buildings 134/140, the Zone F area, River Road strip, Primm's Pond area, and Central E-Area. The Army completed the required transfer steps (including FOSTs and ECOPs) on the Apple River Island parcel, the Primm's Pond parcel, the LRA Parcel 1, and the LRA Parcel 4, and transferred approximately 437 acres. The installation completed removal actions on Sites 15/33, 25, 44, and 76AD, and determined that the groundwater plume is only located under Site 15/33, which is located on LRA Parcel 7. The installation continued partnering with the Savanna BCT, the SMART Team, and the RAB to expedite cleanup and land transfers.

FY05 IRP Progress

Savanna Army Depot completed RIs for three major areas of the Depot. Additionally, the Army awarded a performance-based contract (PBC) for nine sites. The installation, Army Environmental Center, and Corps of Engineers determined that the number of sites suitable for the PBC was 9 rather than 11. The Army completed all FOSTs and ECOPs for the transfer of 515 acres to the LRA.

Technical issues delayed the remedial design for the contaminated buildings in the Washout and Plant area. However, the Army awarded the design contract which is underway. Decontamination of the buildings will be initiated upon completion of the design.

FY05 MMRP Progress

The installation completed the RI/feasibility study for the OBG.

Contractual issues delayed Phase I MEC investigations of the A Area Detonation Pits, 155mm High Explosive Proof Range, and Grenade Burial Area. Contractual issues delayed Phase II MEC follow-on investigations of Zone F, the River Road Strip, Primm's Pond area, and E Area. Funding and contractual issues delayed Phase III MEC action on Zone L. Weather and contractual issues delayed the MEC investigation of the OBG.

Plan of Action

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

IRP

- Initiate Phase I of PBC remediation contract on Site 192 in FY06.
- Complete FOST and transfer Parcel 11A in FY06.
- Complete finding of suitability for early transfer for all remaining property scheduled for transfer to LRA in FY06.
- Complete remediation of Site 82SS in FY06.

MMRP

- Complete Phase III MEC actions at Zone L in FY06.
- Complete Phase I MEC investigations of the A Area Detonation Pits, 155mm High Explosive Proof Range, and Grenade Burial Area in FY06.
- Complete Phase II MEC investigations of the OBG, Zone F, Primm's Pond area, Road River Strip, and E Area in FY06.

| | | | |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | NY221382083000 | Funding to Date: | \$ 98.4 million |
| Size: | 10,594 acres | Estimated Cost to Completion (Completion Year): | \$ 45.2 million(FY 2031) |
| Mission: | Received, stored, distributed, maintained, and demilitarized conventional ammunition, explosives, and special weapons | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2016 |
| HRS Score: | 37.30; placed on NPL in August 1990 | Five-Year Review Status: | Planned |
| IAG Status: | Federal facility agreement signed in January 1993 | | |
| Contaminants: | Chlorinated solvents, radioactive isotopes, heavy metals, petroleum hydrocarbons | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

In July 1995, the BRAC Commission recommended closing Seneca Army Depot, except for an enclave that will store hazardous materials and ores. The installation closed in September 2000. EPA placed the installation on the NPL in August 1990. The Army and EPA signed a federal facility agreement in January 1993. During its operation, the installation stored munitions and supplies and distributed them to the Army. Such operations included demilitarization and disposal of munitions and explosives. Since FY78, Army 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 (USTs), spill areas, fire training areas, and munitions disposal areas. Interim actions include removal of several USTs and associated contaminated soil, and removal and treatment of approximately 35,000 cubic yards of soil from the ash landfill. In FY96, the installation converted its technical review committee to a Restoration Advisory Board (RAB) and established a BRAC cleanup team (BCT). The community formed a local reuse authority (LRA) and began developing a land reuse plan.

In FY94, the installation completed a solid waste management classification study, identifying 72 solid waste management units. Thirty-six units required either no further action (NFA) or completion reports, 8 required removal actions, and 28 required remedial investigations and feasibility studies (RI/FSSs). The 28 sites requiring RI/FSSs were divided into 13 groups. In FY03, the Army identified 18 Military Munitions Response Program (MMRP) sites at this location. By the end of FY03, 13 achieved response complete (RC) status. To date, the Army has signed 5 Records of Decision (RODs) and transferred over 7,900 acres. The cleanup progress at Seneca for FY01 through FY04 is detailed below.

In FY01, the BCT met every other month to discuss issues, reuse priorities, and overall progress. The RAB continued to meet regularly.

In FY02, the interim remedial actions (IRAs) at the radioactive waste burial site, sludge piles, and paint disposal areas continued. The Army submitted NFA RODs to regulators for approval. The installation completed an investigation at the

small-arms range at the airfield and initiated the IRAs in preparation for transfer.

In FY03, the installation completed 10 IRAs for the sludge piles, paint disposal areas, volatile organic compounds (VOCs), and metals. The Army signed the ROD for 22 no action/NFA sites, closing these sites. The installation also accomplished work to close RCRA storage units. The installation transferred 6,981 acres of property. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. It identified 18 MMRP sites at the installation. By the end of FY03, 13 had already reached RC.

In FY04, the Army signed two RODs with land use controls. The installation completed three IRAs and continued work on additional IRAs. The installation investigated 6 operable units and removed 13 USTs. The Army transferred 25 acres to the LRA. The installation initiated site investigations (SIs) at three MMRP sites using geophysical equipment to locate all potential munitions and explosives of concern. The BCT met every other month to discuss issues, reuse priorities, and overall progress. The RAB continued to meet regularly and received briefings on site activities.

FY05 IRP Progress

The installation completed 1 ROD and transferred 967 acres of property. The Army continued to develop a second ROD that addresses 14 sites. The installation completed three IRAs and initiated a remediation project that uses mulch to treat groundwater with trichloroethylene (TCE) contamination. Additionally, the Army continued to address termination of the Nuclear Regulatory Commission license for the storage of depleted uranium rounds.

The RAB continued to meet quarterly.

FY05 MMRP Progress

The installation completed an SI and initiated IRAs at three MMRP sites.

Regulatory issues delayed the ROD for the 14 sites with MMRP and CERCLA hazardous substances.

Plan of Action

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

IRP

- Award performance-based contract for remediation of three sites in FY06.
- Complete RAs at two sites in FY06.
- Complete ROD for 14 sites in FY06.

MMRP

- Initiate RAs at three MMRP sites in FY06.
- Complete ROD and initiate RA for 14 sites with MMRP and CERCLA hazardous substances in FY06.
- Address concern of residual chemical contamination at MMRP sites in FY06.

| | | | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | CA921382084300 | Media Affected: | Groundwater and soil |
| Size: | 96,930 acres | Funding to Date: | \$ 76.9 million |
| Mission: | Receive, store, and maintain conventional ammunition to support demilitarization of conventional ammunition and receive, store, maintain, and issue operational project stocks and general supplies | Estimated Cost to Completion (Completion Year): | \$ 78.3 million(FY 2014) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2014 |
| IAG Status: | Two-party federal facility agreement signed in May 1991 | Five-Year Review Status: | Planned |
| Contaminants: | Petroleum products, solvents (including TCE), explosives | | |



Progress To Date

In 1995, the BRAC Commission recommended realignment of Sierra Army Depot (SIAD). The Army and EPA signed a federal facility agreement in May 1991. The Army identified approximately 64,996 acres as excess. Contamination at the depot originated 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. Investigations identified 23 sites; 12 sites required no further action. In FY96, the installation formed a BRAC cleanup team. The latest version of the BRAC cleanup plan was published in FY97. In FY97, the installation established a Restoration Advisory Board (RAB). The installation completed a 5-year review in FY02.

Records of Decision (RODs) address 20 sites. Ongoing operations include a pump and treat system for groundwater at the Building 210 Area and a soil vapor extraction system at the Defense Reutilization and Marketing Office Trench Area. The installation completed one property transfer, in FY99, to the Federal Bureau of Prisons. It also transferred the Herlong Parcel, Honey Lake, and the ordnance and explosives (O&E) clean portion of the Airfield and East Shore parcels in FY03, and transferred the Susanville Road parcel, the Cross Depot Access parcel, and 885 additional acres in FY04. The installation transferred 136 acres of the East Shore area in FY05. The Army has transferred approximately 62,636 acres to date. The cleanup progress at Sierra Army Depot for FY01 through FY04 is detailed below.

In FY01, the installation initiated the 5-year review of monitored natural attenuation (MNA) at the TNT area. The installation operated a pump and treat system at B210 and completed all BRAC cleanup. All BRAC property, excluding the ordnance impact area, was on schedule for transfer. Federal, state, Susanville Indian Rancheria, and Lassen County Local Reuse Association representatives formed a stakeholders team to confirm reuse plans, allowing the Army to develop ordnance and explosives cleanup requirements.

In FY02, the Army completed the 5-year review of MNA at the TNT area and completed bioventing at the Diesel Spill Area. The Army initiated an inventory of closed, transferred, and

transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. The Army completed a draft engineering evaluation and cost analysis (EE/CA) project design for the BRAC East Shore and Airfield parcels.

In FY03, the installation completed the vegetation survey of Honey Lake and a protocol survey for the Carson Wandering Skipper on two BRAC parcels (Cross Depot Access and Honey Lake). The installation received concurrence from the U.S. Fish and Wildlife Service and the State Historic Preservation Office to transfer all BRAC parcels. The Army transferred the Herlong Parcel, Honey Lake, and the O&E clean portion of the Airfield and East Shore parcels. The Army awarded a guaranteed fixed price remediation (GFPR) contract that addressed all open restoration sites at SIAD with the exception of two sub-areas with the Upper Burning Grounds. The Army completed the CTT range and site inventory for both the BRAC and active portions of the installation. The inventory identified 5 BRAC Military Munitions Response Program (MMRP) sites and 11 active/closed MMRP sites at Sierra. The RAB met three times to review the findings of suitability to transfer for the Herlong Parcel, the O&E clean portion of the Airfield and East Shore, and Honey Lake, the finding of suitability to lease for the clean portion of Honey Lake, and the Environmental Baseline Survey addendums for Susanville Road and the Cross Depot Access Parcel.

In FY04, the installation completed the EE/CA and the munitions and explosives of concern response action on 885 acres of the East Shore, Airfield, and north Cross Depot Access parcels. The Army transferred the property with completed response actions and the Susanville Road and the Cross Depot Access parcels. The installation drafted the EE/CA for the Honey Lake Demolition Area and began a GFPR contract for all active sites. The Army initiated the MMRP site inspection (SI).

FY05 IRP Progress

The installation completed a ROD for the Upper Burning Grounds, Old Popping Furnace, and Building 79 Yard. Biological enhancements were injected into the groundwater at four sites. The Army completed the Honey Lake Demolition Area EE/CA. In addition, the Army completed the response action at the East Shore area and transferred the remaining

136 acres. The pump and treat system and the soil vapor extraction system continued operations. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

The installation renewed its RAB charter.

FY05 MMRP Progress

The Army completed the MMRP SI for all inactive sites, with the exception of the recently identified Upper Burning Grounds Area.

The Army briefed RAB members on MMRP activities.

Plan of Action

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

IRP

- Construct correction action management units at Hansen's Hole and Old Popping Furnace in FY06.
- Continue pump and treat system and soil vapor extraction system operations in FY06.
- Continue groundwater enhancement technologies at four sites in FY06.

MMRP

- Complete the SI at the Upper Burning Grounds Area in FY06.

| | | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | MA117002202200 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 2,094 acres | Funding to Date: | \$ 43.5 million |
| Mission: | Provided administrative coordination and logistical support for Reserve units; provided logistical support for the Marine Air Reserve Training Detachment South Weymouth | Estimated Cost to Completion (Completion Year): | \$ 42.8 million(FY 2033) |
| HRS Score: | 50.00; placed on NPL in May 1994 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2007 |
| IAG Status: | Federal facility agreement signed in April 2000 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| Contaminants: | Petroleum hydrocarbons, solvents, acids, paints, metals, photographic chemicals, industrial wastes, UXO | | |



Progress To Date

In July 1995, the BRAC Commission recommended closure of the South Weymouth Naval Air Station (NAS). Operations were transferred to Brunswick NAS, and aircraft, personnel, and equipment were relocated. The installation was closed in September 1997. Initially, eight CERCLA sites and one RCRA underground storage tank (UST) site were identified at the installation. Prominent site types include a landfill, a tank underground storage area, a tank farm where jet fuel tank farm is stored, sewage treatment facilities rubble disposal area, and a fire training area. EPA placed the installation on the NPL in May 1994, and the installation signed a technical facilities agreement in April 2000. The installation established a technical review committee in FY92 and converted it to a Restoration Advisory Board (RAB) in FY94. In FY92, the installation established an administrative record and four information repositories, and completed its community relations plan, which was updated in FY98. A BRAC cleanup plan was released. A technical assistance for public participation grant was awarded to the RAB in FY99. In FY99, the installation also completed the environmental baseline survey (EBS) Phase II work plan and the surface debris removal action for four Installation Restoration Program (IRP) sites.

Fourteen sites have been identified at this installation. The installation has completed a Record of Decision (ROD) for Site 3. The cleanup progress at South Weymouth NAS for FY01 through FY04 is detailed below.

In FY01, the installation completed remedial investigation (RI) Phase II risk assessments and reports for Sites 2, 3, and 4. It began feasibility studies (FSs) for Sites 1 and 2, and determined that Sites 3 and 4 did not require FSs. A proposed plan (PP) and a ROD were initiated for Site 3. The installation determined that two former UST sites included CERCLA waste in both the soil and the groundwater. Work continued to prepare the property for transfer.

In FY02, the installation completed the RI Phase II risk assessments and reports for four CERCLA sites. The installation completed an FS for Site 2 and initiated FSs for Sites 1 and 7. It also completed the Site 9 pilot study and submitted the RI work plan. The installation completed the PP and ROD for Site 3 and initiated the Site 9 and 10 RI work

plans. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

In FY03, the installation completed an FS at Site 1. The installation also completed a field program and released the Site 4 PP for public comment. The installation continued to incorporate the EBS to the base-wide report work. The Navy completed an inventory of all MMRP sites. Preliminary assessments were completed and no further action (NFA) is planned.

In FY04, the Site 2 and Site 4 RODs were signed and the PP was completed for Site 4. South Weymouth NAS completed the Site 2 remedial design (RD) and the remedial action (RA) began.

FY05 IRP Progress

The installation continued to complete RAs at Site 2 consistent with the ROD. South Weymouth Air Station collected supplemental groundwater data for Site 5 and favorable results allowed the NFA PP to be finalized. The installation continued RI work plan development for Sites 9, 10, and 11. A revised reuse plan was adopted by the local redevelopment authority and the affected communities. Sites 3 and 4 were issued corrective action demands by the state and remedial efforts began. A revised draft final PP for Site 1 was submitted after revised reuse plan approval. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The Site 2 RA was not completed due to technical and regulatory issues.

FY05 MMRP Progress

There were no MMRP actions conducted at this installation.

Plan of Action

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

IRP

- Finalize PP for Site 1, execute ROD and begin RD in FY06.
- Execute ROD for Site 5 in FY06.
- Complete required actions at Sites 3 and 4 in FY06.
- Complete RIs and initiate FSs for Sites 9, 10, and 11 in FY06-FY07.
- Complete FS, initiate PP and ROD, and complete RD and action for Site 7 in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | VA317002758100 | Funding to Date: | \$ 10.8 million |
| Size: | 490 acres | Estimated Cost to Completion (Completion Year): | \$ 21.2 million(FY 2013) |
| Mission: | Provide radar testing range and various administrative and warehousing facilities for the nearby Norfolk Naval Shipyard and other local Navy activities | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | 50.0; placed on NPL in August 2000 | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Pesticides, heavy metals, explosives, SVOCs, solvents | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Historically, the St. Juliens Creek Annex has been used since 1849 for storing, loading, assembling, issuing, and receiving naval gun ammunition. Contamination resulted from past handling of, and operations involving, hazardous materials. The assessment study revealed low concentrations of ordnance materials throughout the facility. However, the identified sites were determined to pose no threat to human health and the environment and no confirmation study was needed. An administrative record was established in FY99. The EPA placed the facility on the NPL in August 2000, and the Navy signed a federal facilities agreement (FFA) in 2004. The installation formed a Restoration Advisory Board in FY00 and completed a community relations plan (CRP) in FY01.

Fifteen sites and 12 areas of concern (AOCs) have been identified at this installation. The installation completed a Record of Decision (ROD) for Site 6 in FY03 and a ROD for Site 4 in FY04. The cleanup progress at St. Juliens Creek Annex for FY01 through FY04 is detailed below.

In FY01, the installation completed the CRP and the facility background concentration investigations. A final site investigation (SI) was completed for Site 17. A draft site screening assessment (SSA) was completed for 21 AOCs.

In FY02, the installation finalized the engineering evaluation and cost analysis (EE/CA) and action memorandum for Sites 3 and 6, and the interim remedial action (IRA) was initiated. SSA Sites 10, 18, 20, and AOCs 2-12 were closed. The ecological risk assessment (ERA) work plan for Sites 3, 4, 5, and 6 was completed. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed a draft remedial investigation (RI)/human health risk assessment (HHRA)/ERA for Site 2, as well as a draft feasibility study for Site 4. The installation also completed the final RI/HHRA/ERA report for Sites 3, 4, 5, and 6. The installation also completed a draft work plan for the IRA at Site 3. In addition, the installation completed a final work plan for the SSA addendum at Site 8 and AOCs 13, 14, and K and SI at Sites 19, 21, and AOC 1. A final site specific work plan and sampling and analysis plan basewide

groundwater background investigation report was completed. The final technical memorandum site delineation/supplemental RI for Site 3 was completed. The final Site 6 closeout report and Site 3 removal summary was completed. The master project plan was updated and finalized. The final ROD for Site 6 was completed. The final work plan for the Blows Creek baseline ERA (BERA) (Phase I) was also completed.

In FY04, the installation conducted supplemental investigations for Sites 2 and 5, and a BERA for Blows Creek. The installation completed the RI/HHRA/ERA for Site 2, as well as a final FFA. Additionally, the background investigation report addendum for groundwater was completed. A draft Phase II expanded RI work plan technical memo for Site 2 was completed, along with a supplemental SI technical memo of Sites 19 and 21. The installation also completed a final ROD and remedial decision for Site 4. The installation completed a final IRA (Phase II) work plan for Site 3 and conducted the removal action. The final confirmation closeout report and construction closeout report for the Site 3 IRA (Phase II) were also completed. The installation completed a draft SSA addendum at Site 8 and AOCs 13, 14, and K, along with a draft SI at Sites 8, 19, 21 and AOC 1. The installation also completed a draft watershed contaminated source document for the southern branch of the Elizabeth River watershed.

FY05 IRP Progress

The installation conducted a draft expanded RI for Site 2 and completed the final proposed remedial action plan and draft ROD for Site 3. It also completed the final specifications, work plan and basis of design for Site 4 as well as the construction of the soil cover for Site 4. For Site 5, the installation completed the draft final RI/HHRA/ERA and the draft EE/CA. The installation completed the final supplemental SI report and draft EE/CA for Site 19. The Navy awarded a contract for hot spot removal. The installation conducted screening site inspection (SSI) and completed a work plan for additional groundwater delineation activities at Site 21. It completed the Phase II Blow's Creek BERA work plan and conducted the field activities. The Navy developed a draft updated CRP. The installation finalized the watershed contaminated source document for the Southern Branch of the Elizabeth River Watershed. The installation implemented engineering controls at various Installation Restoration Program (IRP) sites. The cost of completing

environmental restoration at this installation has changed significantly due to estimating criteria issues.

Administrative issues delayed completion of the draft Phase II BERA report for Blows Creek.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for St. Juliens Creek Annex are grouped below according to program category.

IRP

- Complete Site 21 SSI and reporting for storm sewer video and repair in FY06.
- Conduct final RI for Sites 2 and 5, and treatability study for Site 2 in FY06.
- Conduct remedial action cost engineering and requirements, and performance monitoring for Site 4 in FY06.
- Conduct closeout report for Site 19 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|-----------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | CT121382292400 | Funding to Date: | \$ 18.1 million |
| Size: | 78 acres | Estimated Cost to Completion (Completion Year): | \$ 27.6 million(FY 2017) |
| Mission: | Manufacture engines for heavy armor vehicles and rotary wing aircraft | IRP/MMRP Sites Final RIP/RC: | FY 2017/None |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | PCBs, asbestos, fuel-related VOCs, solvents, metals, PAHs | | |
| Media Affected: | Groundwater, soil, soil vapor, sediment | | |



Progress To Date

In July 1995, the BRAC Commission recommended closure of the Stratford Army Engine Plant. The installation closed in September 1998. Prior to closure, the installation manufactured engines. Since FY91, environmental studies at the installation have identified the following sites: transformers that contain polychlorinated biphenyls (PCBs), underground storage tanks (USTs), sludge lagoons, a fire training and explosives equipment testing area, hazardous materials and hazardous waste storage areas, and buildings constructed with asbestos-containing materials. Studies show that contaminants include PCBs, fuel-related volatile organic compounds (VOCs), solvents, metals, polyaromatic hydrocarbons (PAHs), and asbestos. Interim actions at the installation have included removal of 27 USTs, capping of 3 sludge lagoons, and removal of chromium-contaminated soil. In FY96, the installation formed a BRAC cleanup team and a Restoration Advisory Board (RAB). The community formed a local redevelopment authority to address socioeconomic issues related to closure of the installation and to develop a land reuse plan. The installation drafted a BRAC cleanup plan and updated the plan in FY97 and FY99. In FY98, the Army initiated the process for terminating the Nuclear Regulatory Commission license by preparing decommissioning plans and conducting radiological surveys, and completed decommissioning in FY99. The installation implemented a community relations plan, which included the establishment of an on-site public information repository.

The cleanup progress at Stratford Army Engine Plant for FY01 through FY04 is detailed below.

In FY01, the Army submitted the draft remedial investigation (RI) to the State and the RAB for review. The Army completed the decision document for the causeway and proceeded with construction of an erosion control cap on the causeway.

In FY02, the installation completed cap construction on the causeway. The Army continued RI work in response to comments from regulators by conducting more investigation. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. The

inventory identified no Military Munitions Response Program (MMRP) sites.

In FY03, the installation submitted the draft final RI to regulators and the RAB for review. The Army completed the final inspection of the causeway cap. The installation worked with the State to develop feasibility study (FS) alternatives.

In FY04, the installation completed the RI sampling and submitted the final RI to regulators. The installation initiated compliance sampling of subsurface soil gas. Additionally, the installation drafted an FS.

FY05 IRP Progress

The installation submitted the draft FS and proposed plan (PP). The PP outlines the preferred remedial alternatives to address the unacceptable risks associated with soil, soil vapor, and groundwater.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Stratford Army Engine Plant are grouped below according to program category.

IRP

- Complete FS and PP in FY06.
- Prepare Record of Decision in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|-------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | KS721382087800 | Estimated Cost to Completion (Completion Year): | \$ 58.6 million(FY 2008) |
| Size: | 9,065 acres | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2003 |
| Mission: | Manufactured smokeless powder and propellants | Five-Year Review Status: | Completed |
| HRS Score: | 50.00; proposed for NPL in February 1995 | | |
| IAG Status: | None | | |
| Contaminants: | Nitrates, sulfates, lead, chromium, propellants | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 39.3 million | | |



Progress To Date

The Sunflower Army Ammunition Plant (SFAAP) began operations in 1942. SFAAP's primary mission was to manufacture smokeless powder and propellants. Additional installation operations included the manufacture and regeneration of nitric and sulfuric acids and munitions proving. SFAAP no longer has a mission, and the Army designated all real property excess to its needs. EPA proposed placing SFAAP on the NPL in February 1995 after evaluating five propellant manufacturing surface impoundments as potential sources of hazardous waste. Prominent site types at SFAAP include landfills, open burning and open detonation areas, propellant production areas, dump sites, settling ponds, wastewater lagoons, and drainage ditches. An analysis indicated heavy metal contamination of soil and sediment, and nitrate contamination in groundwater. SFAAP has developed a community relations plan. The installation formed a Restoration Advisory Board (RAB) in FY98.

To date, sources of contamination at the SFAAP include production lines, magazine storage areas, 67 solid waste management units (SWMUs), and 22 areas of concern (AOCs). The cleanup progress at SFAAP for FY01 through FY04 is detailed below.

In FY01, the installation completed removal actions for SWMUs 10, 11, and 50. SFAAP conducted confirmatory sampling for SWMUs 2 and 42 soil. Long-term monitoring continued for SWMUs 13 and 27, and began for SWMUs 11, 41, 48, and 50.

In FY02, SFAAP initiated an installationwide stream study, including SWMU 14. The Army completed interim remedial actions for SWMUs 18, 32, 33, 34, and 35 and a grazing study. The Agency for Toxic Substances and Disease Registry completed a public health assessment for SFAAP that identified no specific environmental or public health concerns related to SFAAP. SFAAP initiated RCRA facility investigations (RFIs) for SWMUs 1, 21, 39, 45, and 47. Long-term monitoring continued for SWMUs 11, 13, 27, 41, 48, and 50. RAB meetings informed the community about past, present, and future actions taken under the Installation Restoration Program (IRP) at SFAAP.

In FY03, SFAAP continued RFIs for SWMUs 1, 21, 39, 45, and 47. Long-term monitoring continued for SWMUs 11, 13, 27, 41, 48, and 50. SFAAP continued the installationwide stream study. SFAAP initiated a remedial action (RA) for SWMU 22. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. The inventory identified two Military Munitions Response Program (MMRP) sites at SFAAP, which have already been clean closed. SFAAP conducted a site tour for the RAB and gave a presentation that described the risk assessment process.

In FY04, the installation began RFIs for SWMUs 3, 10, 14, 18, 20, 25, 38, 44, and 53. The installation continued long-term monitoring for SWMUs 11, 13, 27, 41, 48, and 50. The Army initiated an installationwide explosive safety assessment and an installationwide treatability study (TS). Additionally, the installation initiated an engineering evaluation and cost analysis (EE/CA) for on-site versus off-site disposal of non-hazardous contaminated soils. The installation continued RA for SWMU 22.

FY05 IRP Progress

The installation completed RFIs for SWMUs 1, 3, 10, 14, 18, 21, 25, 38, 39, 44, 45, 47, and 53. The Army completed the installationwide explosive safety assessment, TS, and EE/CA. Additionally, the installation completed RAs for SWMUs 10 and 22. Long-term monitoring continued for SWMUs 11, 13, 27, 33, 35, 41, 48, and 50. The installation completed its first 5-year review. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Contracting issues delayed transfer of Army property to Sunflower Redevelopment LLC into early FY06. Funding issues delayed RFIs for SWMUs 51, 58, 60, and AOCs 14 and 22.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete RCRA facility assessment and confirmation study for SWMUs 55, 56, and AOCs 4, 5, 19, 20, and 21 in FY06.
- Complete RFI for SWMU 60 and AOCs 18, 22, 23, and 24 in FY06.
- Complete corrective measures study for SWMUs 1 and 60, and AOCs 18, 22, 23, and 24 in FY06.
- Complete corrective measures implementation for SWMUs 1, 3, 14, 60, and AOCs 18, 23, and 24 in FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | |
|-------------------------|--------------------------------------------|
| FFID: | OK657172439100 |
| Size: | 5,041 acres |
| Mission: | Repair aircraft, weapons, and engines |
| HRS Score: | 42.24; placed on NPL in July 1987 |
| IAG Status: | IAG signed in December 1988 |
| Contaminants: | Organic solvents, heavy metals, petroleum |
| Media Affected: | Groundwater, surface water, sediment, soil |
| Funding to Date: | \$ 202.2 million |

| | |
|--------------------------------------------------------|---------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 103.8 million(FY 2023) |
| IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| Five-Year Review Status: | Completed and planned |



Progress To Date

The mission of Tinker Air Force Base (AFB) is to repair aircrafts, weapons, and engines. EPA placed the installation on the NPL in July 1987 and the Air Force signed an interagency agreement in December 1988. Environmental studies at Tinker AFB revealed a 220-acre contaminant plume in the upper aquifer at Soldier Creek and Building 3001. Additional sites include landfills, underground storage tanks (USTs), waste pits, fire training areas (FTA), spill sites, and low-level radioactive waste sites. The installation has implemented numerous interim actions, including removal of contaminated soil and USTs and installation of landfill caps, free product recovery systems, bioventing systems, a biostripping system, and a solidification and stabilization system. The installation formed its Restoration Advisory Board in FY94. In FY99 and FY03, the installation completed 5-year reviews.

To date, Records of Decision (RODs) have been signed for Building 3001 and Soldier Creek. The cleanup progress for Tinker AFB for FY01 through FY04 is detailed below.

In FY01, the decision documents (DDs) necessary to achieve remedy in place (RIP) and response complete (RC) status for five of the six landfills were completed. The treatment system at 290 Fuel Farm was completed, with the relative risk reduced from medium to not required, and RIP status was achieved. The purge facility turnaround soil site was closed. FTA 2 was also closed.

In FY02, the installation completed the DD necessary to achieve RIP and RC status for Landfill 4. The interim remedial action construction (IRA-C) was completed at Industrial Waste Pit 1, enabling the removal and treatment of 13,000 cubic yards of waste sludge/soil. The installation also completed the IRA-C of city water supply lines in a neighborhood near the Southwest Groundwater Management Unit (CG 38).

In FY03, the Air Force completed the risk assessment necessary to achieve site closeout for Industrial Waste Pit 2. The 5-year reviews were submitted to regulators. The Northwest Groundwater Management Unit (CG 37) feasibility study was completed and recommended monitored natural attenuation as the remedy.

In FY04, the Air Force achieved site closeout status for the Soldier Creek sediment and surface water OU (OT 02). A deep permeable reactive barrier was installed to further protect the neighborhood near Site CG 38. In addition, the DD was completed and RIP was achieved for the Industrial Water Treatment Plant soils site (OT 34).

FY05 IRP Progress

Tinker AFB completed the DD and achieved RIP/RC status for the Four Fuel Sites (ST 08). The installation also achieved RIP for Site CG 38. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed the remedial design proposed plan for the SCOBGW OU. Technical issues also delayed the completion of the study phases, DDs and RIPs for the East Groundwater Management Unit (CG 39) and the Gator Facility Groundwater Management Unit (CG 40).

FY05 MMRP Progress

The Air Force updated its Military Munitions Response program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

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

IRP

- Complete the ROD and RD and achieve RIP at SCOBGW (OT 05) in FY06.
- Complete the study phase and DD for the Industrial Waste Pit #1 (WP 18) in FY06.
- Complete the study phases, DDs, and RIPs for the East Groundwater Management Unit (CG 39) and the Gator Facility Groundwater Management Unit (CG 40) in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | PA321382089200 | Funding to Date: | \$ 15.2 million |
| Size: | 1,293 acres | Estimated Cost to Completion (Completion Year): | \$ 4.1 million(FY 2014) |
| Mission: | Provide logistics for communications and electronics equipment | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2014 |
| HRS Score: | 37.93; placed on NPL in August 1990 | Five-Year Review Status: | Completed and planned |
| IAG Status: | IAG signed in September 1990 | | |
| Contaminants: | Heavy metals, solvents, VOCs, PCBs, POLs, UXO | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Tobyhanna Army Depot (TYAD) provides support for communications and electronics equipment. Environmental studies at TYAD began in FY80. Identified 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. The most prominent sites are the burn areas and a drum staging area, which constitute Operable Unit (OU) 1. Contamination at these sites 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. EPA placed the installation on the NPL in August 1990. An interagency agreement was signed in September 1990. During FY95, the installation formed a Restoration Advisory Board, followed by a new community relations plan in FY98. In FY99, the installation completed a closeout document for 18 no further action sites. The Army completed its first 5-year review in FY02.

Environmental studies identified 65 areas of concern (AOCs) covering 1,296 acres at the installation; EPA partially delisted 62 of the AOCs from the NPL in FY01. The installation completed six Records of Decision, including five in FY00. The cleanup progress at TYAD from FY01 through FY04 is detailed below.

In FY01, groundwater monitoring continued at OU 1 and OU 5. Those OUs required long-term monitoring, including semi-annual sampling and analysis for the following three years. Because of successful partnering with EPA and the Pennsylvania Department of Environmental Protection and the use of innovative technologies, TYAD reduced its cleanup costs for sites significantly. TYAD became the first federal facility in EPA Region 3 to become partially delisted from the NPL.

In FY02, the Army completed the installation's first 5-year review. Five groundwater monitoring wells were installed at TBAD 067 for quarterly sampling to determine the extent of tetrachloroethylene (PCE) contamination. The Army completed the closed, transferred, and transferring (CTT) ranges and sites inventory and identified two Military Munitions Response

Program (MMRP) sites. TYAD constructed a barbed wire fence with warning signs around its UXO area, TBAD 055.

In FY03, the installation continued groundwater monitoring at OU 1 and OU 5. The Army initiated an installationwide MMRP site inspection (SI). The installation provided information regarding the UXO area and a former machine gun range (TBAD 029) to the Army Environmental Center for inclusion in the CTT range inventory.

In FY04, the installation continued groundwater monitoring at OU 1 and OU 5. The installation maintained the UXO fence and warning signs. The Army performed the SI fieldwork for all eligible MMRP sites.

FY05 IRP Progress

The installation continued groundwater monitoring at OU 1 and OU 5. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY05 MMRP Progress

The Army issued the final SI MMRP report. The installation repaired the existing UXO fence at OU 4 and fenced an additional 45 acres based on the recommendations in the SI report. The Army continued to control access to OU 4.

Plan of Action

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

IRP

- Continue groundwater monitoring at OU 1 and OU 5 in FY06.

MMRP

- Maintain the UXO fence and warning signs at OU 4 in FY06.
- Continue to control access to OU 4 in FY06.

| | | | |
|-------------------------|------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | UT821382089400 | Estimated Cost to Completion (Completion Year): | \$ 72.2 million(FY 2032) |
| Size: | 24,732 acres | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2018 |
| Mission: | Store and demilitarize munitions | Five-Year Review Status: | Completed and planned |
| HRS Score: | 53.95; placed on NPL in August 1990 | | |
| IAG Status: | Federal facility agreement signed in September 1991 | | |
| Contaminants: | Explosives, petroleum hydrocarbons, PCBs, Solvents, metals | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 109.0 million | | |



Progress To Date

In 1993, the BRAC Commission recommended realignment of the Tooele Army Depot (TEAD) maintenance missions with the installation retaining its conventional ammunition storage and demilitarization mission. EPA placed TEAD on the NPL in August 1990. The Army and EPA signed a federal facility agreement in September 1991. Identified sites 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. A CERCLA federal facility agreement and a RCRA corrective action permit regulate TEAD's environmental programs. During FY94, the installation formed a BRAC cleanup team and a Restoration Advisory Board (RAB). The installation conducted a 5-year review for all sites in FY02.

To date, the Army has completed three Records of Decision (RODs), addressing six operable units (OUs). The installation transferred 41 acres to the Tooele City Redevelopment Agency in FY96 and the remaining excess BRAC property (1,663 acres) in FY99. The Army retained 23,610 acres for the conventional ammunition mission. Cleanup progress at TEAD for FY01 through FY04 is detailed below.

In FY01, the Army initiated a pilot study to evaluate the effectiveness of soil vapor extraction for remediation of soil contamination. The installation completed Phase I off-post RCRA facility investigation fieldwork for delineation of groundwater contamination, and completed corrective measures at ten RCRA sites. The RAB reviewed all work plans and reports that were prepared, and participated in quarterly project reviews.

In FY02, the installation completed confirmation sampling and prepared a closure report for the final underground tank site. TEAD awarded a contract for the Phase II groundwater and vadose zone investigation of the BRAC industrial area, and initiated corrective measures for 19 RCRA sites. The installation completed a draft final feasibility study for OU 9 and submitted it for regulatory review. The installation completed a RCRA corrective measures study (CMS) for four sites, and completed a 5-year review for all sites at the installation.

In FY03, TEAD completed all required corrective measures at 17 RCRA sites. It also initiated corrective measures at two RCRA sites. EPA approved and signed the ROD for OU 4 and the Army implemented all required remedies. The installation completed CMSs for four sites, and initiated decision documents (DDs) for these sites. The Army completed an inventory of operational, closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance (UXO), discarded military munitions, or munitions constituents at TEAD. The inventory identified five Military Munitions Response Program (MMRP) sites within the active portion of this installation. The Army also developed cost estimates for addressing the CTT ranges and sites with UXO, discarded military munitions, or munitions constituents.

In FY04, the installation signed DDs and initiated corrective measures at three sites. The Army signed a ROD for OU 8 and initiated remedial action at Sites 6 (Old Burn Area) and 8 (Small Arms Firing Range). The installation initiated an alternative measure evaluation of ground water treatment technologies for SWMU 2 (Industrial Waste Lagoon), and began field activities for the Phase II groundwater and vadose investigation of SWMU 58 (the BRAC industrial area and impacted off-site property). The Army implemented a groundwater management area monitoring program as an interim action for off-site groundwater contamination originating from the BRAC industrial area.

FY05 IRP Progress

The installation consolidated and capped lead-contaminated soil at the former Bomb Washout Facility, Solid Waste Management Unit 42 (SWMU 42), completing corrective measures at the site. The installation completed corrective measures consisting of soil and vegetation improvements at the former Sanitary Landfill, SWMUs 12 and 15. The installation completed planned soil stabilization and solidification of lead-contaminated soil at the former Small Arms Firing Range, Site 8. Additionally, the installation continued the evaluation of alternative corrective measures for management of groundwater contamination at the former Industrial Waste Lagoon, SWMU 2 and the investigation of groundwater contamination and source areas at SWMU 58.

The discovery of unexpected munitions components delayed

corrective measures at the Gravel Pit Disposal Area, SWMU 56. Additional site characterization will be required prior to completion of cleanup. Funding issues delayed the composting of explosive-contaminated soil at the former TNT Washout Ponds, SWMU 10. The planned soil stabilization and solidification of lead-contaminated soil at the former Burn Area, SWMU 6 were delayed due to unforeseen site conditions (excess metal debris) that could not be addressed by the proposed remedy.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

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

IRP

- Complete corrective measures at SWMU 56 in FY06.
- Continue the evaluation of alternative corrective measures for groundwater at SWMU 2 and the investigation of groundwater contamination and source areas at SWMU 58 in FY06.
- Initiate composting of explosive-contaminated soil at SWMU 10 in FY06.
- Evaluate and implement alternative remedies for SWMU 6 in FY06 and FY07, respectively.

MMRP

- Initiate preliminary assessment and site investigation for the five MMRP sites in FY06.

| | | | |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| FFID: | CA957182457500 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 6,383 acres | Funding to Date: | \$ 94.4 million |
| Mission: | Provide air refueling and strategic airlift services for troops, cargo, and equipment | Estimated Cost to Completion (Completion Year): | \$ 49.0 million(FY 2042) |
| HRS Score: | 29.49; placed on NPL in November 1989 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2013 |
| IAG Status: | Federal facility agreement signed in September 1990 and amended in May 1993, October 1995, July 1996, November 1997, and July 1998 | Five-Year Review Status: | Completed and planned |
| Contaminants: | VOCs, heavy metals, POLs, PAHs | | |



Progress To Date

Travis Air Force Base (AFB) was established in 1943. Historical activities at the installation resulted in the release of metals, pesticides, fuels, solvents, and petroleum/oils/lubricants (POLs), which have migrated into the soil, sediment, surface water and groundwater. Contaminated sites include old landfills, a closed sewage treatment plant, four fire training areas, disposal pits, spill areas, a storm sewage drainage system, a pesticide disposal site, and a low-level radioactive waste burial site. Interim actions at the installation have included the removal of 27 underground storage tanks and the installation of groundwater treatment systems to address the primary groundwater chemical of concern, trichloroethylene (TCE). In FY95, the installation formed a Restoration Advisory Board (RAB) to provide for public involvement in the installation’s cleanup decision-making process. The installation signed a federal facility agreement in September 1990 and amended it in May 1993, October 1995, July 1996, November 1997, and July 1998. The installation received technical assistance for public participation funding in FY99. The installation conducted a 5-year review of interim groundwater action in FY03.

Since 1985, assessments, inspections, investigations and feasibility studies have identified 42 sites. In order to facilitate remedial investigations, the installation was divided into four operable units (OUs), and later consolidated by similar contaminants into two OUs. To date, interim Records of Decision (RODs) have been signed for groundwater in the North, East, and West Industrial OUs (NEWIOU) and for soil and groundwater in the West/Annexes/Basewide OU (WABOU). The cleanup progress at Travis AFB for FY01 through FY04 is detailed below.

In FY01, the installation completed construction on one area of Landfill 2. It also installed two additional dual-phase extraction wells and a thermal oxidizer as part of an expansion of the interim removal action (IRA) for the groundwater plume at Site SS 016. Construction of the IRAs at LF 008 and DP 039 finished, and a removal action was completed at Cypress Lakes Golf Course. The RAB reviewed 21 documents and conducted two base tours for members of the public.

In FY02, the installation completed the WABOU soil ROD.

In FY03, a land access agreement was established with a base neighbor, allowing IRA construction at the second of three off-base groundwater plumes. The installation completed remedial actions (RAs) at six soil sites in the WABOU and conducted a 5-year review of the basewide interim groundwater actions.

In FY04, the installation developed a pre-draft NEWIOU soil, sediment, and surface water ROD for coordination with HQ Air Mobility Command (HQ AMC)/Air Staff and completed 1 of 12 planned remedial designs (RDs) for soil sites in the NEWIOU. The installation completed an IRA operation at one site, installing conveyance piping and solar power to two extraction wells, and began the installation of three new extraction wells at site FT 004 to enhance removal of TCE.

FY05 IRP Progress

Travis AFB completed the risk assessment process for the NEWIOU sites and issued the draft NEWIOU soil, sediment and surface water ROD. The installation completed RDs at two NEWIOU soil sites and awarded a contract for RAs at five NEWIOU soil sites (SD 001, FT 003, FT 005, LF 007, and SD 033) and developed the RA work plans for these five sites. Clean soil from on-base construction projects was stockpiled to use as clean backfill at excavated Environmental Restoration Program (ERP) sites. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The installation held a response to comments meeting to discuss regulatory agency comments on the draft NEWIOU soil, sediment and surface water ROD, and developed the revised draft NEWIOU soil, sediment and surface water ROD. One public tour of on-base ERP sites was held during the summer and the RAB voted to meet semi-annually based on the installation’s cleanup progress.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Finalize NEWIOU soil, sediment, and surface water ROD in FY06.
- Award RA contract for Sites FT 004 and SD 045 soil sites in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|----------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | CA917002333000 | Media Affected: | Groundwater and soil |
| Size: | 1,075 acres | Funding to Date: | \$ 106.2 million |
| Mission: | Provide services and materials to support units of operating forces and shore activities | Estimated Cost to Completion (Completion Year): | \$ 31.3 million(FY 2011) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| IAG Status: | Federal facility site remediation agreement signed in September 1992 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| Contaminants: | Petroleum hydrocarbons, VOCs, SVOCs, chlorinated solvents, metals, pesticides, PCBs | | |



Progress To Date

In July 1993, the BRAC Commission recommended closure of Treasure Island with relocation of the Naval Reserve Center and the Naval Technical Training Center. Operational closure was completed in September 1997. Contamination is largely the result of migration of petroleum products from fueling operation areas and disposal of waste materials. In FY92, the installation established two information repositories and an administrative record and completed a community relations plan (CRP), which was updated in FY02. The installation signed a federal facility site remediation agreement in September 1992. The technical review committee was converted to a Restoration Advisory Board (RAB) in FY94. The RAB received a technical assistance for public participation grant in FY99 for review of a remedial investigation (RI).

Thirty-three sites, including 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 have been identified to date. The installation has signed one Record of Decision (ROD). The cleanup progress at Treasure Island Naval Station for FY01 through FY04 is detailed below.

In FY01, the draft corrective action plans for, and initial cleanup of, all petroleum sites were underway. During removal of the two remaining underground storage tanks (USTs), the installation found additional USTs and two additional sections of fuel line, and initiated further investigation. It also completed pilot studies at four sites on the use of in situ remedial technologies instead of traditional technologies.

In FY02, Treasure Island Naval Station received closure concurrence for Sites 1 and 3. CERCLA Sites 30 and 31 were added. The installation completed a removal action for polychlorinated biphenyl (PCB)- and polycyclic aromatic hydrocarbon (PAH)-contaminated soil at five buildings in the Site 12 housing area. The RI was completed for the offshore Operable Unit Sites 13 and 27. A full-scale in situ soil vapor extraction system operated at Petroleum Sites 14, 22, and 25. Soil removal actions were completed or were underway at other petroleum sites, and a number of former UST sites received closure letters from the State Water Board. The installation completed the update of the CRP. The Navy completed an inventory of all Military Munitions Response Program (MMRP)

sites. No MMRP sites were identified at this installation.

In FY03, the installation established petroleum remedies for 95 percent of sites. The installation completed the draft documentation for the transfer of all property not impacted by CERCLA or by petroleum sites. The installation submitted an engineering evaluation and cost analysis for a removal action in portions of Site 12 for review. The installation completed additional soil sampling for Site 12. The installation installed a pilot study for in situ remediation at Site 24.

In FY04, the installation completed remedies in place for all petroleum sites. A historical radiological assessment (HRA) began. Additionally, the installation initiated petroleum remedies for the remaining 5 percent of sites. Sites 32 (Former Training Area) and 33 (Waterline Replacement Area) were added to the Installation Restoration Program (IRP). The findings of suitability for transfer (FOSTs) and findings of suitability for early transfer (FOSETs) were deferred pending completion of additional investigation for PCBs at electrical equipment sites, and for PAHs at petroleum sites. Closure of Site 7 is pending review of additional sampling conducted at adjacent Site 32.

FY05 IRP Progress

Treasure Island Naval Station completed regulatory concurrence for no further action (NFA) at four petroleum sites. The RI reports for Sites 9, 10, and 30 were completed. The NFA ROD for Site 13 offshore sediments was signed. The installation installed a groundwater pilot study for in situ bioremediation at Site 21 and completed a groundwater investigation at Site 33.

Due to additional scope and programmatic constraints, the RI reports for Sites 6, 8, 12, 21, 24, 28, 29, 31, 32, and 33 were not completed, but are in progress. Technical issues delayed the HRA and closure of Site 7. Regulatory issues delayed offshore skeet range Site 27 feasibility study (FS). Regulatory issues delayed the FOST for all transferable property.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

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 Sites 6, 25, and Pipeline D1B Groundwater in FY06.
- Complete RI reports for Sites 6, 8, 11, 12, 21, 24, 28, 29, 31, 32 and 33 in FY06.
- Complete FSs for offshore Site 27, and onshore Sites 30 and 31 in FY06.
- Complete FOST for Treasure Island and Yerba Buena Island for all FOST property, and complete HRA in FY06.
- Complete No Action Proposed Plans for Sites 9 and 10 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|--------------------------------------|-------------------------------------|--------------------------|
| FFID: | NJ217002269500 | Estimated Cost to Completion | \$ 16.3 million(FY 2031) |
| Size: | 529 acres | (Completion Year): | |
| Mission: | Test engine systems and components | IRP/MMRP Sites Final RIP/RC: | FY 2000/None |
| HRS Score: | N/A | Five-Year Review Status: | Completed |
| IAG Status: | None | | |
| Contaminants: | TCE, freon, mercury, solvents, fuels | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 23.9 million | | |



Progress To Date

In July 1993, the BRAC Commission recommended closure of Trenton Naval Air Warfare Center Aircraft Division. Operations were transferred to the Arnold Engineering Development Center and the Patuxent River Naval Air Station in December 1998, which was the date of operational closure. 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. Residues of fuels and solvents were detected in groundwater and soil. Site types include underground storage tanks (USTs), disposal areas, and spill sites. A technical review committee was formed in FY91 and converted to a Restoration Advisory Board in FY93, which was formally disbanded in FY01. The Environmental Baseline Survey (EBS) Phase II report was finalized, and remediation was completed at the remaining EBS areas of concern. In FY04, the installation completed a 5-year review.

Studies at the installation have identified nine CERCLA sites and two UST sites. The cleanup progress at Trenton Naval Air Warfare Center Aircraft Division for FY01 through FY04 is detailed below.

In FY01, the installation completed a finding of suitability to transfer for Parcels A and D and continued off-site groundwater investigations. It also completed the report on mercury monitoring. The installation initiated operation and maintenance (O&M) of the Site 1 treatment plant.

In FY02, the installation continued groundwater monitoring and O&M, and transferred Parcel B. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation continued O&M.

In FY04, the Navy continued O&M and completed a 5-year review at this installation.

FY05 IRP Progress

Trenton Naval Air Warfare Center Aircraft Division completed O&M and a biannual review. The installation also completed a work plan and fieldwork for a bioaugmentation pilot study for groundwater.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

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 in FY06.
- Complete a bioaugmentation pilot study report in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | AZ957282593400 | Funding to Date: | \$ 13.7 million |
| Size: | 84 acres | Estimated Cost to Completion (Completion Year): | \$ 32.1 million(FY 2017) |
| Mission: | Provide Air National Guard training | IRP/MMRP Sites Final RIP/RC: | FY 1997/None |
| HRS Score: | 57.86; placed on NPL in September 1983 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in October 1994 | | |
| Contaminants: | TCE, tetrachloroethylene, chromium, petroleum hydrocarbons, and POLs | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Tucson International Airport provides training for the Air National Guard. EPA placed the installation on the NPL in September 1983 and the Air Force signed a federal facility agreement in October 1994. Sites identified at the installation include fire training areas, solvent dumping areas, storm drainage discharge areas, the old wash rack area, petroleum/oil/lubricant (POLs) areas, and spill areas. Waste disposal and spill sites have had the greatest effect on the environment. The principal contaminant is trichloroethylene (TCE) in groundwater. Tetrachloroethylene (PCE) and chromium also have affected groundwater to a lesser extent and total petroleum hydrocarbons have been detected in soil at the installation. A Restoration Advisory Board was formed at this installation. To aid in environmental cleanup, the installation has established successful partnerships with citizens and regulators through the Unified Community Advisory Board (UCAB). In FY03, a 5-year review was completed.

Environmental studies have identified eight sites at Tucson. To date, one Record of Decision was completed for contaminated soil cleanup. The cleanup progress at Tucson International Airport for FY01 through FY04 is detailed below.

In FY01, the installation continued a partnership with EPA Region 9 and Arizona Department of Environmental Quality (ADEQ). Operation of the groundwater extraction and treatment system continued. Participation in the UCAB continued.

In FY02, the installation continued a partnership with EPA Region 9 and ADEQ. Operation of the groundwater extraction and treatment system continued. Participation in the UCAB continued.

In FY03, the installation continued a partnership with EPA Region 9 and ADEQ. Operation of the groundwater extraction and treatment system continued, as well as participation in the UCAB. The 5-year review was completed.

In FY04, the installation continued to partner with EPA Region 9 and ADEQ and continued participation in the UCAB. Operation of the groundwater extraction and treatment system continued.

FY05 IRP Progress

Tucson International Airport continued operating groundwater extraction treatment and recharge system. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The chemical oxidation pilot study was delayed because it was not feasible to initiate the treatment in FY05.

The installation continued partnering with EPA and ADEQ, and participated in the UCAB.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

Plan of action items for Tucson International Airport are grouped below according to program category.

IRP

- Continue operating groundwater extraction treatment and recharge system in FY06.
- Continue partnership with EPA and ADEQ in FY06.
- Continue participation in UCAB in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|--------------------|-------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| FFID: | CA917302478300 | Contaminants: | VOCs, dichloroethane, dichloroethene, TCE, TCP, BTEX, naphthalene, petroleum hydrocarbons, pentachlorophenol, MTBE |
| Size: | 1,603 acres | Media Affected: | Groundwater and soil |
| Mission: | Formerly supported operations of the Third Marine Aircraft Wing | Funding to Date: | \$ 59.5 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 28.4 million(FY 2035) |
| IAG Status: | Federal facility site remediation agreement signed in August 1999 | IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| | | Five-Year Review Status: | Planned |



Progress To Date

In July 1991, the BRAC Commission recommended closure of Tustin Marine Corps Air Station (MCAS) with retention of the family housing and related personnel facilities to support El Toro MCAS. In FY93, El Toro was recommended for closure, which included those support facilities retained at Tustin. A Restoration Advisory Board (RAB) and a BRAC cleanup team were formed in FY94. The Navy regularly updated two administrative records and two information repositories. The installation signed a federal facility site remediation agreement in August 1999 and issued a draft CERFA basewide Environmental Baseline Survey in FY99.

Studies since FY85 have identified 16 CERCLA sites, 288 areas of concern (AOCs), 129 underground storage tank (UST) sites, and 25 aboveground storage tank sites. The installation has signed 5 Records of Decision (RODs) and transferred over 1,300 acres of property. The cleanup progress at Tustin Marine Corps Air Station for FY01 through FY04 is detailed below.

In FY01, the installation finalized the action memorandum (AM) for operable unit (OU) 1A (a trichloropropane plume) and began the fieldwork, which is linked to the cleanup of the MTBE plume (UST Site 222). It also finalized a two-phase corrective action plan encompassing both areas. The installation designed and installed interim remedies for both sites. Data from these interim remedies indicated plume stabilization and containment.

In FY02, the installation coordinated interim actions at UST Site 222 and OU 1A. The installation issued the OU 1B proposed plan (PP). The installation finalized the OU 3 ROD, and drafted the long-term operation and management (O&M) plan and land use control implementation and certification plan (LUCICP) for agency review. Additional data gathering was also conducted at low-risk sites to support the OU 4 feasibility study (FS). The installation used over a decade of environmental actions and data to support the economic development conveyance (EDC) transfer of 1,152 acres to the City of Tustin and the EDC transfer of 24 acres. Other support was provided for the public sale of 235 acres. The Navy completed an inventory for Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation issued the OU 1A FS supported by data from the FY02 interim action and evaluated the permanent remedy and the draft ROD, which included enhancement of the interim groundwater removal action treatment system along with a soil and groundwater hotspot removal. The installation continued operations and explored opportunities for enhancement of the UST Site 222 MTBE groundwater treatment system. The installation issued the draft final version of the OU 1B ROD, which included a groundwater treatment and soil removal remedy at two sites, after modifications to incorporate the recent Navy/EPA Land Use Controls Principles and Procedures Agreement. The installation implemented the OU 3 O&M Plan/LUCICP and completed the operating properly and successfully (OP&S) certification. The installation completed revising the remedy strategy at ST-16A/B to a petroleum corrective action for polyaromatic hydrocarbons (PAHs). It also completed developing the removal strategy at the arsenic AOC site in partnership with redevelopment activities by the City of Tustin. The installation also completed sampling at several OU 4 sites to support a dual exit strategy for these low-risk sites.

In FY04, Tustin MCAS obtained OP&S concurrence for the Moffet Trenches landfill and OU 3. The installation also completed additional soil removal and treatment system enhancements at the UST Site 222 MTBE site. In addition, the installation continued development of the OU 1B remedial design (RD), completed the petroleum corrective action at ST-16A/B, and initiated the removal action at the arsenic AOC site. The Navy issued a draft RD for OU 1.

FY05 IRP Progress

Tustin MCAS completed a time-critical removal action (TCRA) for OU 1A and issued a final ROD/remedial action plan (RAP). The installation completed selected soil removal activities associated with the OU 1A remedial action. The Navy issued the final ROD/RAP for OU 1B and completed a work plan and field activities. Long-term monitoring continued at OU 3. The installation issued a final No Further Action ROD/RAP for OU 4A. The installation issued an FS for OU 4B. The installation finalized the closure report for the arsenic AOC. Tustin MCAS developed and obtained concurrence from California Regional Water Quality Control Board of closure criteria for the MTBE groundwater site. The installation closed the last AOC in the

compliance program. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete RD/remedial action work plan for groundwater at OU 1A and OU 1B in FY06.
- Continue LTM at OU 3 in FY06.
- Complete final FS and PP for OU 4B in FY06.
- Initiate preparation of first CERCLA 5-year review documentation for OU-3 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | MN721382090800 | Funding to Date: | \$ 154.0 million |
| Size: | 2,370 acres | Estimated Cost to Completion (Completion Year): | \$ 33.8 million(FY 2040) |
| Mission: | Modified caretaker; provide support to Department of Defense tenants; formerly manufactured small-arms ammunition and projectile casings | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | 59.60; placed on NPL in September 1983 | Five-Year Review Status: | Completed and planned |
| IAG Status: | Federal facility agreement signed in August 1987 | | |
| Contaminants: | VOCs, PCBs, heavy metals | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Twin Cities Army Ammunition Plant (AAP) formerly manufactured small arms ammunition and projectile casings, and currently supports DoD tenants. 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 the installation. In September 1983, EPA placed the installation on the NPL. The Army, State of Minnesota, and EPA signed a federal facilities agreement in 1987. In FY95, the installation completed an unexploded ordnance (UXO) sweep in support of the CERCLA site cleanups. Twin Cities AAP established a technical review committee in 1985 and a Restoration Advisory Board (RAB) in FY96. From FY86 to FY93, the Army installed soil and groundwater extraction and treatment systems. The installation constructed a boundary groundwater containment system to contain and treat VOC-contaminated groundwater at the installation's southwest boundary. The Army provided a groundwater treatment system for the City of New Brighton and a municipal water supply hookup at Lowry Grove Trailer Park. The Army procured a technical assistance for public participation contract to support the RAB in FY99. The Army completed 5-year reviews of Operable Units (OUs) 1, 2, and 3 in FY99 and FY04.

The installation grouped 25 sites, including former landfills, burning and burial grounds, ammunition testing and disposal sites, industrial operations buildings, and sewer system discharge areas, into 3 OUs. To date, the Army has signed three Records of Decision (RODs). The cleanup progress at Twin Cities AAP for FY01 through FY04 is detailed below.

In FY01, the Army began operations and maintenance of all remedial actions (RAs) at OU 1 and OU 3 and shut down the extraction well for OU 3. The Army completed the closeout report for Site B and remedial action construction (RA-C) fieldwork at Sites E and H. Fieldwork continued at Sites 129-3 and 129-15. The Army completed construction and system startup for the soil vapor extraction air-sparging system at Site A and began RA operations. It also completed construction for a groundwater containment system at the Site C phytoremediation demonstration area and began operations.

In FY02, the Army completed RA-C fieldwork at Sites 129-3 and 129-15 and began the RA-C reconfiguration of the Twin Cities AAP groundwater recovery system (TGRS) for OU 2. The installation completed the remedial design and RA workplan for Site D metals. Staged completion of the OU 3 requirements continued. The regulators approved a revised cleanup goal at Site G, resulting in no further action for VOC-contaminated soil at the site. The installation initiated design work for a cover over the dump at Site G. The regulators approved the 135 and 535 Primer/Tracer Area preliminary assessments and the 135 workplan site investigation (SI). The SI work commenced at the Building 135 Primer/Tracer area. The Army abandoned 31 unused monitoring wells, both on and off the installation. The regulators approved closeout reports for the Grenade Range and the Outdoor Firing Range.

In FY03, the Army completed RA-C fieldwork at Site A (VOC soils), Site D (metal soils), and the removal of the corrective action management unit (CAMU) and submitted the respective closeout reports. The regulators approved the closeout reports for Site 129-3 and Site 129-15, with the exception of land use control (LUC) requirements. The regulators approved the reconfiguration plan for the TGRS. The installation completed the SI fieldwork for both the 135 and 535 Primer/Tracer areas. RA-C fieldwork began to upgrade the cover for the Site G dump and to place a cover at the 1900 Yard Range. At Site C, the Army obtained approval for a work plan and performed additional characterization work. The Army commissioned a Phase I/Phase II environmental site assessment to support future property transfers. The Army conducted an inventory of closed, transferred, and transferring ranges and sites with UXO, discarded military munitions, or munitions constituents that identified no Military Munitions Response Program (MMRP) sites at the installation.

In FY04, the installation completed the cover construction at Site G. The regulators approved the closeout reports for Site A (1945 Trench) and Site D, both with the exception of LUCs, the closeout report for the CAMU (with no LUCs), and the second 5-year review.

FY05 IRP Progress

Twin Cities AAP obtained regulatory approval for the Tier II ecological risk assessment for various water bodies, and the Army initiated a feasibility study (FS) to evaluate remedies. Regulators also approved the closeout report for Site G (except LUCs), the SI reports for the 135 and 535 Primer/Tracer Areas, and an evaluation report for the vapor intrusion pathway off the installation. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Technical and regulatory issues delayed approval for a revised remedy at Site C, which in turn delayed resolution of LUC issues and development of ROD amendments for various soil sites. Data evaluation reports were approved for OU 1 and OU 3 in support of ROD amendments. However, regulatory delays with the proposed plan prevented execution of the OU 3 ROD amendment documenting shut-off of the extraction system as a final decision.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Obtain regulatory approval for a revised remedy at Site C in FY06.
- Resolve LUC issues and develop ROD amendments for various soil sites in FY06.
- Execute a ROD amendment documenting shut-off of the OU 3 extraction system as a final decision in FY06.
- Obtain regulatory approval and trustee concurrence for the aquatic sites FS in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|--------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | FL457152412400 | Funding to Date: | \$ 18.5 million |
| Size: | 28,824 acres | Estimated Cost to Completion (Completion Year): | \$ 29.0 million(FY 2033) |
| Mission: | Provide advanced F-15 and F/A-22 fighter training | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2019 |
| HRS Score: | 50.00; placed on NPL in April 1997 | Five-Year Review Status: | Planned |
| IAG Status: | Agreement negotiation underway. | | |
| Contaminants: | POLs, chlorinated solvents, pesticides, metals, PCBs, and general refuse | | |
| Media Affected: | Groundwater, soil, sediment | | |



Progress To Date

Tyndall Field was activated in 1941 as the Flexible Gunnery School of the U.S. Army Air Corps. The installation became Tyndall Air Force Base (AFB) in 1947. The current mission is F-15 Eagle and F/A-22 Raptor fighter training under the 325 Fighter Wing. EPA placed the installation on the NPL in April 1997. The primary site responsible for the base's inclusion on the NPL, OT029 Shoal Point Bayou, has DDT contamination in the bayou sediments. Tyndall AFB is involved in a Florida partnering initiative with EPA, the State, and natural resource trustees serving as the installation's technical review committee (TRC). In FY94, FY97, FY00, and FY03 there were efforts to establish a Restoration Advisory Board, but public response indicated no need. The TRC includes community members providing public input into the restoration process.

Environmental studies, beginning in FY81, have identified 37 Environmental Restoration Account sites under the Installation Restoration Program (IRP). The cleanup progress at Tyndall AFB for FY01 through FY04 is detailed below.

In FY01, remedial investigations (RIs) were conducted for Sites Landfill 006 (LF 006), LF 007, and FT 017. Draft RIs were conducted for Sites SS 026 and OT 029. Draft feasibility studies (FSs) were conducted for LF 006 and LF 007.

By FY02, the installation finalized RIs for Sites LF 006, LF 007, FT 017 and SS 026 and FSs for Sites LF 006, LF 007, and FT 017. Sites OT 004, LF 009, LF 010, LF 012, OT 024, LF 002, and OT 025 received no further remedial action planned (NFRAP) regulatory concurrence. The RI/baseline risk assessment (BRA) was completed for Site SS 0026 and a draft RI/BRA was completed for Site OT 029. Several additional members were added to the TRC to increase public input.

In FY03, the installation began source removal pilot projects at Petroleum Sites SS015 and FT023. Remedial action (RA) began at Site FT 016. The installation developed a final proposed plan and draft Record of Decision (ROD) for Sites LF 006, LF 007, FT 017, and SS 026. The Air Force conducted an innovative environmental assessment at an off-site location (OT 018) using the Triad approach.

In FY04, the Air Force began developing and implementing

performance-based changes to the IRP program. Tyndall awarded three contracts covering seven sites resulting in cost avoidances over \$6.16 million. Performance-based contractors initiated five-year contracts to address RA design and implementation for seven sites (LF 006, LF 007, SS 015, FT 017, SS 019, FT 023 and SS 026). The RI/BRA was finalized and post RI and FS work began at Site OT 029.

FY05 IRP Progress

Tyndall AFB received NFRAP concurrence for three sites (LF 001, LF 003, and SS 014) and completed draft RI studies recommending NFRAP for two additional sites (LF 005 and OT 037). The installation also submitted three sites (LF 001, LF 003, and SS 014) for NFRAP regulatory concurrence. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed the performance based RODs for Sites LF 006, LF 007, FT 017, and SS 026. Administrative issues delayed development of the performance-based interagency agreement (IAG).

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Submit performance based IAGs in FY06.
- Finalize three performance based draft decision documents (LF 006/007, FT 017, and SS 026) in FY06.
- Complete remedy in place for four sites (LF 006, LF 007, SS 019, and FT 023) in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

| | | | |
|------------------------|------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| FFID: | NJ221382070400 | Funding to Date: | \$ 89.6 million |
| Size: | 6,500 acres | Estimated Cost to Completion (Completion Year): | \$ 146.4 million(FY 2036) |
| Mission: | House the Army Armaments Research, Development, and Engineering Center | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2018 |
| HRS Score: | 42.92; placed on NPL in February 1990 | Five-Year Review Status: | Completed |
| IAG Status: | IAG signed in July 1991 | | |
| Contaminants: | VOCs, explosives, PCBs, heavy metals | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

In 1880 Dover Powder Depot, now known as Picatinny, was established to store the gunpowder needed to manufacture ammunition. From 1898 to the early 1970s, the installation manufactured explosives, propellants, and ammunition. It now houses the Armament Research, Development and Engineering Center (ARDEC). EPA placed ARDEC on the NPL in February 1990. The Army and EPA signed an interagency agreement in July 1991. In FY91, the installation identified 156 sites including a burning ground, landfills, underground storage tanks, former production areas, and former testing sites. Releases of volatile organic compounds (VOCs), explosives, and heavy metals from these sites have contaminated groundwater, surface water, sediment, and soil. The remedial investigation and feasibility study (RI/FS) in FY91 divided the 156 sites at the installation into 16 areas. In FY96, the installation's technical review committee was converted to a Restoration Advisory Board (RAB). In FY98, the installation procured a technical assistance for public participation (TAPP) contract to provide technical support for the RAB. In FY99, the Army and the State of New Jersey agreed that the Army would implement institutional controls or low-cost engineering controls for soil at sites, on a case-by-case basis, where contaminant levels were above state standards but where risk was acceptable per National Contingency Plan criteria. A 5-year review was completed in FY02.

Environmental studies initially identified 175 sites at the installation, 113 of which are response complete (RC), mostly through consolidation and identifying ineligible sites from the original list. The Army and EPA have signed four Records of Decision (RODs). The cleanup progress at ARDEC for FY01 through FY04 is detailed below.

In FY01, the installation completed, and the regulators approved, groundwater FSs for Areas B, D, and E. The installation initiated a plan to use iron filings to treat Area B groundwater. EPA and the New Jersey Department of Environmental Protection approved remedial design (RD) and treatment for Site 20 and Site 24.

In FY02, The installation submitted the report on the effects of contaminated or potentially contaminated fish in ponds and lakes. Treatment of tetryl-contaminated soil using bioslurry

continued. EPA conducted a 5-year review of the Army's interim action for the pump and treat system for Area D groundwater.

In FY03, the installation completed FSs for Sites 180 and 25/26. Regulators determined that an FS for Site 22 was not needed. Eight sumps, drywells and other structures were investigated and eliminated. The installation signed a decision document addressing six lead-contaminated areas around the arsenal. The installation completed the cap for Site 20/24. Midvalley groundwater was investigated and RI reports on over 60 sites were submitted to the regulators. The installation combined RI concept sites based on geography and plan of action, resulting in RC for 84 sites. The installation completed the Phase III inventory of closed, transferred, and transferring (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. Military Munitions Response Program (MMRP) sites were identified.

In FY04, the Army and EPA signed the Area D Groundwater ROD for the replacement of the pump and treat hydraulic barrier with a permeable reactive barrier and monitored natural attenuation (MNA). The installation completed the removal of sediment for the retention basin of Bear Swamp Brook and the proposed plans (PPs) for Site 25/26 and Area E. The installation removed lead-contaminated soils at six sites and submitted the RI Report for all sites in Area H, I, J, and K. The Army approved FSs for Site 64/104, Site 180, Group 1, and Group 3. Under the MMRP, the Army provided the CTT report to regulators for review and information. The installation informed the RAB of the future MMRP site investigation (SI) project.

FY05 IRP Progress

The installation completed three RODs for the Post Farm Landfill, Green Pond Brook and Site 34 of the Burning Grounds. Six major RI reports have been approved that address over 70 sites. The installation submitted FSs for the former Defense Reutilization and Marketing Office (DRMO) Yard and 25 sites. Additionally, sump and drywell removals have been completed. The installation completed five pilot studies of contaminated groundwater, including magnus techniques for biomediation and a nano-iron groundwater study.

Regulatory issues delayed RODs for Area E, Site 22, Site 25/26 and 13 sites with institutional controls. Regulatory issues also delayed PPs for Site 180 and Area B as well as an FS for Building 31/33. RD for the permeable reactive wall, MNA for Area D, and Green Pond Brook removals and long-term monitoring were delayed until the award of the performance-based contract.

The RAB conducted a site tour and created a Web site. The Army approved a TAPP contract for the installation.

FY05 MMRP Progress

The installation briefed the RAB on the MMRP.

Plan of Action

Plan of action items for U.S. Army Armament Research, Development and Engineering Center are grouped below according to program category.

IRP

- Complete RODs for Site 22, Site 25/26, Site 61/104, and 13 sites with institutional controls in FY06.
- Submit PPs for Group 1, Group 3, former DRMO Yard, Area C, Site 25, and Bldg 31/33 in FY06.
- Submit FSs for Building 31/33 and the Midvalley area in FY06.
- Initiate RD for the permeable reactive wall and MNA for Area D and Green Pond Brook, Post Farm removals and long-term monitoring in FY06.
- Submit ecological risk assessment for Phases I and III in FY06.
- Finalize PPs for Site 180 and Area B in FY06.
- Award a performance-based contract for most sites in FY06.

MMRP

- Update community relations plan in FY06.
- Conduct an SI for all installation MMRP sites in FY06.

| | | | |
|------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | MA121382063100 | Funding to Date: | \$ 37.7 million |
| Size: | 78 acres | Estimated Cost to Completion (Completion Year): | \$ 7.0 million(FY 2015) |
| Mission: | Research and develop food, clothing, equipment, and materials for military operations | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Underway |
| IAG Status: | None | | |
| Contaminants: | Pesticides, herbicides, pentachlorophenol, solvents, PCBs, VOCs | | |
| Media Affected: | 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. Operations used various volatile organic compounds (VOCs), including tetrachloroethylene (PCE), trichloroethylene (TCE), carbon disulfide, benzene, and chloroform. Site types include contaminated buildings, spill sites, storage areas, disposal pits, dry wells, and underground storage tanks. The installation made efforts to partner with state and federal regulators and to communicate with the community after EPA placed the installation on the NPL in 1994. The installation established a Restoration Advisory Board (RAB) in FY95.

To date, the installation has signed one Record of Decision (ROD) for Building T 25. The installation has performed several interim actions, including removal of waste and contaminated soil and pavement from the drum storage area. The installation also removed a 1,000-gallon waste oil storage tank and associated contaminated soil, as well as polychlorinated biphenyl (PCB)-contaminated soil from an exploded transformer. The cleanup progress at the Soldiers Systems Center for FY01 through FY04 is detailed below.

In FY01, the Army awarded the contract to begin interim removal actions at the gymnasium site and scheduled fieldwork. The Army awarded a contract for the Tier III ecostudy and completed the interim remedial action (IRA) at the Boiler Plant site. The Army and EPA signed the Building T 25 ROD, which contained a unique partnering cooperative agreement involving the Town of Natick, the Massachusetts Department of Environmental Protection (MA DEP), EPA, and the Army. Remedial actions resulted from the ROD. The cooperative agreement between EPA, MA DEP, the Town of Natick, and the Army greatly increased public participation and produced cost savings for the Army.

In FY02, the Army completed the IRA at the former proposed gymnasium site. The installation completed revegetation of the grounds behind the Boiler Plant site. Fieldwork associated with the remedial investigation and feasibility study (RI/FS) for the

Buildings 22 and 36 site continued. The installation initiated the RI/FS for the Buildings 13 and 14 site.

In FY03, the Army installed three groundwater extraction wells and placed them in service. The Army completed an inventory of closed, transferred, and transferring ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents. The Army identified no Military Munitions Response Program (MMRP) sites at this installation.

In FY04, the Army installed four additional off-site monitoring wells to track and monitor the T 25 area plume location. The installation updated and expanded the sitewide groundwater model to reflect additional monitoring and recovery wells and additional plumes in the vicinity of the former Post Drinking Water Wells and Buildings 22 and 36. Additionally, the Army installed 10 additional on-site monitoring wells to delineate groundwater contamination in the vicinity of the former Post Drinking Water Wells. The RAB met three times and provided comments on all draft and final reports.

FY05 IRP Progress

The Army initiated IRA soil removals at NRDEC 03/13 (Buildings T 62 and T 68 site) and NRDEC 09/12 (Building 14 and former Building 13 site), and replaced monitoring well MW 35B. The installation updated the site investigation for NRDEC 11 (former Post Drinking Water Wells site) and the RI for NRDEC 16 (Buildings 22 and 36). In addition, the installation submitted the Tier III sediment ecological and fish consumption human health study to EPA for review. A 5-year review is underway. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the completion of the IRA soil removals at NRDEC 03/13 (Buildings T 62 and T 68 site) and NRDEC 09/12 (Building 14 and former Building 13 site). Contractual issues delayed the RI for NRDEC 11 (former Post Drinking Water Wells site) and the FS for NRDEC 16 (Buildings 22 and 36).

The RAB met four times and provided comments on all draft and final reports. The Soldier Systems Center continued a cooperative work relationship with EPA and MA DEP.

FY05 MMRP Progress

The Army has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for U.S. Army Soldiers Systems Center are grouped below according to program category.

IRP

- Complete IRA soil removals at NRDEC 03/13 and NRDEC 09/12 in FY06.
- Complete RI for NRDEC 11 in FY06.
- Complete FS for NRDEC 16 in FY06.
- Complete remedial design for three sediment sites in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|-----------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | OR021382091700 | Estimated Cost to Completion (Completion Year): | \$ 8.7 million(FY 2023) |
| Size: | 19,729 acres | IRP/MMRP Sites Final RIP/RC: | FY 2003/FY 2009 |
| Mission: | Store ammunition | Five-Year Review Status: | Completed and planned |
| HRS Score: | 31.31; placed on NPL in July 1987 | | |
| IAG Status: | Federal facility agreement signed in October 1989 | | |
| Contaminants: | Explosives, UXO, heavy metals, pesticides, nitrates | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 54.2 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. EPA placed the installation on the NPL in July 1987. Identified sites include explosives-washout lagoons, an open burning and open detonation area, pesticide disposal pits, a deactivation furnace, and landfills. In December 1988, the BRAC Commission recommended realignment of the installation. EPA and the Army signed a federal facility agreement in October 1989. In FY93, the installation transferred its conventional weapons mission to another installation. In FY94, the commander formed a BRAC cleanup team (BCT) and converted the installation's technical review committee to a Restoration Advisory Board. In FY98, the installation officially changed its name from Umatilla Ordnance Depot to Umatilla Chemical Depot (UMCD). Significant remedies completed include bioremediation of explosives contaminated soil from a number of sites, landfill closure capping, and removal of all underground storage tanks. In FY99, the installation completed an environmental baseline survey at the 100/200 Series warehouses and a depotwide 5-year review. The installation also completed a 5-year review in FY04.

Environmental studies identified 119 sites at this installation, grouped into 9 operable units (OUs). The Army signed eight Records of Decision (RODs) to date. The cleanup progress at UMCD for FY01 through FY04 is detailed below.

In FY01, the BCT conducted informal dispute resolution regarding the 60 percent design document for the supplemental soil cleanup in the Ammunition Demolition Activity Area (ADA) OU (Site 19). The Army completed the 100 percent design and prepared an explanation of significant differences for the ADA ROD. It also completed geophysical mapping of the Quality Assurance Function Range (QAFR) (Site 39).

In FY02, the Army completed soil remediation at Site 19, the ADA.

In FY03, the installation completed the function range intrusive investigation and the remedial action (RA) report for ADA OU.

The Army completed the closed, transferred, and transferring ranges and sites inventory. It identified one Military Munitions Response Program (MMRP) site, the QAFR (Site 39). The installation completed an engineering evaluation and cost analysis for the range.

In FY04, the installation completed the addendum RA report for ADA Sites 19E and 19F. The installation completed the 5-year review for ADA and groundwater OUs. The Army completed a draft ROD for the UMCD Landfill for selenium cleanup. The installation installed additional monitoring wells. The Army completed a draft revised monitoring plan for the UMCD Landfill. The installation completed the proposed plan and draft ROD for the QAFR under the MMRP.

FY05 IRP Progress

Technical issues delayed RA for groundwater treatment, while a ROD for UMCD Landfill was delayed due to an internal Army Review. Regulatory issues delayed the final revision of the monitoring plan for the UMCD Landfill.

FY05 MMRP Progress

The installation completed a ROD for QAFR.

Plan of Action

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

IRP

- Complete RA report for groundwater treatment in FY06.
- Complete ROD for UMCD Landfill in FY06.
- Complete revised monitoring plan for the UMCD Landfill in FY06.

MMRP

- Complete remedial design at the QAFR in FY06.
- Begin RA at the QAFR in FY07.

| | | | |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| FFID: | VA321382093100 | Contaminants: | Metals, cyanide, VOCs, petroleum hydrocarbons, pesticides, PAHs, PCBs, photographic wastes, asbestos |
| Size: | 696 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Provide logistical support for assigned signal intelligence and electronics warfare weapon systems and equipment; provide communication jamming and intelligence fusion material capability | Funding to Date: | \$ 10.8 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 4.4 million(FY 2010) |
| IAG Status: | None | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| | | Five-Year Review Status: | Completed and planned |



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. During FY90, a preliminary assessment (PA) identified 26 sites, including underground storage tanks (USTs), landfills, lagoons, storage areas, pit areas, fire training areas, disposal areas, spill sites, areas with asbestos-containing materials, lead-based paint areas, and transformers containing polychlorinated biphenyls (PCBs). Also in FY90, soil and groundwater sampling revealed petroleum and solvent contamination. The installation conducted removal actions for USTs, contaminated soil, and PCB-containing transformers. In 1993, the BRAC Commission recommended closure of Vint Hill Farms Station. The installation formed a Restoration Advisory Board in FY95. Vint Hills Farm Station officially closed on October 1, 1997. The Army completed a 5-year review in FY05.

Environmental studies following the PA identified a total of 39 sites at Vint Hills Farms Station requiring additional investigation or cleanup. With the exception of Area Requiring Environmental Evaluation (AREE) 34, discovered post transfer, all environmental investigation and remediation is complete. The Army has transferred the entire 696 acres, including the final 5.3 acres transferred in FY03. The cleanup progress at Vint Hill Farms Station for FY01 through FY04 is detailed below.

In FY01, the Army investigated groundwater contamination in AREE 34. The Army completed the Phase II finding of suitability to transfer (FOST) and transferred an additional five acres.

In FY02, the Army completed remedial actions (RAs) at three of the remaining four sites, concluding cleanup of the remaining nontransferred acres.

In FY03, the Army completed FOST 3 and transferred the only remaining five acres by deed, completing the transfer of the entire 696 acres. Investigation of AREE 34 defined a shallow localized area of groundwater contamination, as well as some contamination in the deep aquifer. Contamination is upgradient of Production Well #1, which provides water to the new residents living on the property. Due to this potential exposure pathway, additional characterization was required to determine

the need for an RA. The Army completed its Military Munitions Response Program (MMRP) inventory for this installation. Vint Hill Farms Station had one site, a pistol range, remediated under the Installation Restoration Program (IRP).

In FY04, the Army performed the final sampling of Site 20 (former Army/Air Force gas station) and received a no further action letter from the regulators. Environmental regulators reduced the Site 1 quarterly sampling to annual sampling and decreased the list of analytes required. The installation completed the remedial investigation of AREE 34 and used sensing technology and EPA's TRIAD approach to determine the extent of contamination. The installation completed the feasibility study and proposed plan for AREE 34. The installation held a public meeting to present the proposed remedy (monitored natural attenuation and land use controls) for AREE 34.

FY05 IRP Progress

The Army completed a 5-year review of Site 1 and Site 39. All institutional controls were successfully maintained. The Army conducted annual sampling at Site 1 with results consistent with past sampling evolutions.

Regulatory issues delayed the decision document (DD) and remedy for AREE 34. Negotiations for a remedy at AREE 34 continued between the Army and Virginia Department of Environmental Quality.

FY05 MMRP Progress

No MMRP actions were conducted at this installation.

Plan of Action

Plan of action items for Vint Hill Farms Station are grouped below according to program category.

IRP

- Complete DD and implement remedy for AREE 34 in FY06.
- Perform annual sampling for Site 1 in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | PA317002454500 | Media Affected: | Groundwater and soil |
| Size: | 817 acres | Funding to Date: | \$ 24.2 million |
| Mission: | Perform research, development, testing, and evaluation for naval aircraft systems and antisubmarine warfare systems; perform associated software development | Estimated Cost to Completion (Completion Year): | \$ 22.4 million(FY 2030) |
| HRS Score: | 57.93; placed on NPL in October 1989 | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| IAG Status: | Federal facility agreement signed in September 1990 | Five-Year Review Status: | Completed |
| Contaminants: | Heavy metals, firing range wastes, fuels, land sewage sludges, non-industrial solid wastes, paints, PCBs, VOCs | | |



Progress To Date

In July 1991 and July 1995, the BRAC Commission recommended that Warminster Naval Air Warfare Center Aircraft Division be realigned and closed. The installation closed in March 1997. Site types include waste burn pits, sludge disposal pits, landfills, waste pits, and a fire training area. The installation was placed on the NPL in October 1989 and signed a federal facility agreement in September 1990. The installation's technical review committee, formed in FY88, converted to a Restoration Advisory Board in FY94. The installation also completed a community relations plan and established an administrative record in FY94. In FY99, the installation prepared an environmental baseline survey for transfer for the public benefit conveyance and the economic development conveyance parcels for Phase I, which were completed in FY00. A 5-year review was completed in FY02.

The installation has identified 10 sites and has signed Records of Decision (RODs) for Operable Unit 1 (OU 1), Area A, and Sites 6 and 7. In addition, No Further Action RODs have been signed for Site 8, Site 4 (OU 6), Areas B and D, and Site 5. The cleanup progress at Warminster Naval Air Warfare Center for FY01 through FY04 is detailed below.

In FY01, the installation consolidated perimeter and off-base monitoring with long-term management (LTM) of the extraction well network, collectively known as the performance monitoring of the remedial action operations. The installation abandoned on-base and off-base wells that were no longer needed. The installation monitored and maintained groundwater treatment systems, a soil cap, and erosion and excavation controls. A 5-year review was conducted. A pump and treat optimization study was completed.

In FY02, the installation maintained groundwater treatment systems, a soil cap, and erosion, excavation, and institutional controls. It completed the 5-year review. The installation conducted perimeter and off-base monitoring, as well as sampling of the groundwater treatment system. The installation continued to optimize the treatment system through the evaluation of data. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the Navy continued its quarterly perimeter and off-base monitoring program, as well as the monthly sampling of the groundwater treatment system. The installation initiated technical discussions on the merits of monitored natural attenuation as an optimization of the groundwater treatment system. The Area C groundwater transfer line was relocated by the developer, with Navy oversight.

In FY04, the Navy conducted perimeter and off-base monitoring according to the LTM plan. It also maintained, optimized, and conducted sampling of the groundwater treatment system and maintained and operated land use controls (LUCs).

FY05 IRP Progress

Warminster Naval Air Warfare Center Aircraft Division continued perimeter and off-base monitoring according to the LTM plan. The well reduction strategy continued through discussions with the technical evaluation group. The installation continued work on groundwater treatment system, and maintained and operated LUCs.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Warminster Naval Air Warfare Center Aircraft Division are grouped below according to program category.

IRP

- Develop and implement work plan for optimization of the groundwater extraction system in FY06.
- Investigate improved alternative(s) for source removal at Area C in FY06.
- Continue to streamline the monitoring program in FY06.
- Perform an optimization study in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | DC317002431000 | Funding to Date: | \$ 23.6 million |
| Size: | 63 acres | Estimated Cost to Completion (Completion Year): | \$ 16.0 million(FY 2017) |
| Mission: | Provide resources, including administrative space, housing, training facilities, logistical support, and supplies, for Washington Navy Yard tenants and other assigned units | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2008 |
| HRS Score: | 48.57; placed on NPL in July 1998 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | Federal facility agreement signed in June 1999 | | |
| Contaminants: | PCBs, pesticides, solvents, metals | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Investigations at the Washington Navy Yard (WNY) have previously identified 18 sites, and 3 leaking underground storage tank sites. Contaminants released from past storage and disposal operations at the installation may have migrated into shallow and deep aquifers and the Anacostia River. The installation was placed on the NPL in July 1998. A RCRA consent order, signed in July 1997, was added into WNY's federal facility agreement, which was signed in June 1999. A community relations plan was developed in FY99.

The installation has identified 27 sites. To date, the installation has completed two no further action (NFA) Records of Decision (RODs). The clean-up progress at WNY for FY01 through FY04 is detailed below.

In FY01, the installation completed a data gap investigation for the remedial investigation (RI) report regarding the groundwater operable unit (OU) and Sites 4, 6, and 14. The draft human health risk assessment and ecological risk assessment were also submitted for review and comment. The installation submitted the RI report for Site 16 for review. It also completed an evaluation of ten areas of concern, and a report detailing the remaining requirements was approved. The installation combined sites that required further investigation with the current site screening areas (SSAs), and submitted an SSA work plan for comment. The Phase II RI, which includes the 11 remaining sites, began. WNY also submitted the final master project plans, which were approved. Storm sewer rehabilitation was completed.

In FY02, the installation completed the final draft RI for Sites 4, 6, and 14 and submitted it to regulators. Regulators approved the work plan for new SSAs and fieldwork began. The installation completed final RI for Site 16. The RI work plan was submitted. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation completed the draft work plan for investigation of fill as an SSA and completed the RI for two sites and a draft RI for nine sites. In addition, the installation began fieldwork for the Site 10 removal action and a facilitywide groundwater data gaps investigation.

In FY04, the installation initiated a work plan for fill as an SSA at the installation and completed draft SSA investigation reports for several SSAs. It also completed an NFA ROD for Site 4 and continued removal action for Site 10. The installation conducted fieldwork for facilitywide groundwater data gaps and completed a facilitywide groundwater draft RI report. The installation also conducted fieldwork for Site 5. The installation completed the preliminary assessment (PA) process for the listed MMRP site (The Experimental Battery), as well as the draft final report and a recommendations report.

FY05 IRP Progress

WNY continued removal actions for Site 10 and completed SSA fill field investigation. It finalized the final proposed remedial action plan and NFA ROD for Site 14. It also finalized the RI and developed the NFA proposed plan (PP) for Site 16. It completed a final feasibility study and draft PP for Site 5.

FY05 MMRP Progress

WNY provided a draft final PA to regulators and developed a Navy response to comments for regulators.

Plan of Action

Plan of action items for Washington Navy Yard are grouped below according to program category.

IRP

- Continue removal actions for Site 10 in FY06.
- Finalize OU 2 sediment work plan in FY06.
- Finalize ROD for Site 5 and 16 in FY06.
- Finalize work plan and field investigations for Site 6 extended RI in FY06.

MMRP

- Provide Navy response to comments for regulators in FY06.
- Finalize PA in FY06.

| | |
|------------------------|--------------------------------------------------------------------|
| FFID: | WV39799F346100 |
| Size: | 2,704 acres |
| Mission: | Manufactured TNT |
| HRS Score: | 35.72; placed on NPL in September 1983 |
| IAG Status: | First IAG signed in September 1987; second IAG signed in July 1989 |
| Contaminants: | TNT, DNT, organic compounds |
| Media Affected: | Groundwater, surface water, sediment, soil |

| | |
|--------------------------------------------------------|---------------------------|
| Funding to Date: | \$ 69.5 million |
| Estimated Cost to Completion (Completion Year): | \$ 135.5 million(FY 2045) |
| IRP/MMRP Sites Final RIP/RC: | FY 2045/FY 1995 |
| Five-Year Review Status: | Planned |



Progress To Date

From 1941 to 1946, West Virginia Ordnance Works manufactured TNT from toluene, nitric acid, and sulfuric acid. Byproducts of the manufacturing process included TNT, dinitrotoluene, and organic compounds, which were released into groundwater, soil, surface water, and sediment. Principal sites include TNT manufacturing areas, wastewater sewer lines, and wastewater ponds known as the "red and yellow water ponds." EPA placed West Virginia Ordnance Works on the NPL in September 1983. The Army and EPA signed the first interagency agreement (IAG) in September 1987 and signed a second IAG in July 1989. The U.S. Army Corps of Engineers (USACE) converted the technical review committee to a Restoration Advisory Board (RAB) in FY98. USACE completed 5-year reviews in FY95, FY00, and FY05. EPA partially delisted a 509-acre parcel from the NPL in FY03 and an additional 1,004 acres in FY04.

The property is now divided into Operable Units (OUs) 1-5, 7-13. To date, the Army and EPA have signed Records of Decision (RODs) for OUs 1, 2, and 11 and No Further Action (NFA) RODs for OUs 10 and 12. The former OU 6 was changed to Environmental Unit 06 (ENV 6) and is complete. OU 7 is a potentially responsible party (PRP) project with EPA Lead and OU 13 is under EPA Lead with NFA planned for the Army. The cleanup progress at West Virginia Ordnance Works for FY01 through FY04 is detailed below.

In FY01, based on additional samples of surface soil, USACE developed proposed plans (PPs) for OUs 10 and 12. USACE awarded a contract for revising the human health risk assessment for expanded site inspections (ESI) 1, OU 8, and OU 9. Groundwater issues for ESI 9 were resolved and USACE signed a NFA decision document (DD). The WV Department of Environmental Protection (WVDEP) approved the pilot study discharge points for OU 4, and pump and treat facilities were operated for the entire year. USACE completed the DD for ESI 10 and revised the inventory project report for two new projects. Ponds 7 and 11 were filled for wetland mitigation, completing ENV 6. USACE, EPA, and WVDEP implemented formal partnering, including Tier II review.

In FY02, USACE completed the corrective action at the OU 1 burning grounds. It also completed an interim feasibility study

(FS) for OU 8 (soils) and OU 9 (groundwater) in the TNT manufacturing area. EPA and USACE signed a NFA ROD for OU 12. USACE continued long-term management (LTM) as planned and completed LTM on the OU 11 property. The supplemental sampling at ESI 6 was completed. EPA, WVDEP, the EPA Biological and Technical Assistance Group (BTAG), and USACE personnel and contractors implemented a consensus agreement approach. This formal facilitated partnering process enhanced the decision-making ability of the team and resulted in both time and cost savings.

In FY03, USACE signed NFA DDs for ESIs 1, 4, and 6. USACE completed the removal action at Area of Concern (AOC) 18 and initiated the removal action at OU 5. During the removal action at AOC 18, the team used an innovative method of stabilization prior to disposal that allowed a cost savings. Another cost savings resulted from the disposal of wastewater from the composting operation by using the OU 4 treatment system. USACE signed a NFA ROD for OU 10. The team completed a comprehensive review of the property and continued operation of the groundwater extraction and treatment systems. EPA partially delisted a 509-acre parcel and USACE prepared a draft notice of intent for partial delisting of an additional 1,004 acres. The Army conducted an inventory of closed, transferred and transferring ranges and sites with unexploded ordnance, discarded military munitions or munitions constituents at this property, and found no Military Munitions Response Program (MMRP) work.

In FY04, USACE completed the removal of contaminated soils from OU 5. In addition, the property completed the second NPL partial delisting of 1,004 acres, bringing the size of the NPL boundary down to 1,184 acres. USACE also completed the draft third 5-year review report and a remedial system evaluation on the groundwater extraction and treatment facilities to address optimization of the system. USACE initiated a treatability study (TS) that uses an innovative hydrogen release compound injection to clean up the groundwater for in situ treatment of groundwater for OU 9.

FY05 IRP Progress

The Army completed the third 5-year review report on schedule. USACE also completed the TS for OU 9. The cost of completing environmental restoration at this installation has

changed significantly due to technical, regulatory, and estimating criteria issues.

Regulatory issues delayed the transfer of OU 11 to WV Department of Agriculture and technical issues delayed the PPs for OUs 8 and 9.

FY05 MMRP Progress

USACE has identified no MMRP sites at this property.

Plan of Action

Plan of action items for West Virginia Ordnance Works are grouped below according to program category.

IRP

- Complete property transfer for OU 11 to the State of West Virginia in FY06.
- Complete FSs and PPs for OUs 8 and 9 in FY06.
- Complete the OU 4 operating properly and successfully evaluation in FY06.

MMRP

- USACE plans no MMRP actions at this property.

| | | | |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------|
| FFID: | WA017002336100 | Contaminants: | PCBs, PAHs, Chlorinated solvents |
| Size: | 7,000 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Training and operations center for two squadrons; Center for U.S. Marine Corps and Navy Reserve training in the Pacific Northwest | Funding to Date: | \$ 91.5 million |
| HRS Score: | 39.64 (Seaplane Base); placed on NPL in February 1990; delisted in 1995, 48.48 (Ault Field); placed on NPL in February 1990 | Estimated Cost to Completion (Completion Year): | \$ 37.7 million(FY 2037) |
| IAG Status: | Federal facility agreement signed in September 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| | | Five-Year Review Status: | Planned |



Progress To Date

Whidbey Island Naval Station (NS) occupies four areas on Whidbey Island, Washington: Ault Field, Seaplane Base, Coupville Outlying Field, and Lake Hancock Target Range. The Seaplane Base and Ault Field were placed on the NPL in February 1990. The installation signed a federal facility agreement in September 1990. Past disposal practices from aircraft maintenance, vehicle maintenance, public works shop activities, and fire fighting training activities have contributed to contamination. In FY94, the installation converted its technical review committee to the Navy's first Restoration Advisory Board. The Seaplane Base was delisted from the NPL in 1995. The community relations plan was last updated in FY96. The installation completed a 5-year review in FY98 and FY04.

Whidbey Island NS has identified 91 sites. Investigations initially identified 52 sites at the installation, which were grouped into five operable units (OUs). The installation completed five Records of Decision. The cleanup progress at Whidbey Island NS for FY01 through FY04 is detailed below.

In FY01, Whidbey Island NS conducted interim removal actions at newly identified sources of contamination (Site 55, oil and acid pits) on OU 1. Treatment operations and groundwater monitoring continued at OU 1 and OU 5. The installation continued supporting EPA in its proposed delisting of Ault Field OUs 2, 3, and 5 from the NPL.

In FY02, the installation continued treatment operations. The installation completed a remedial investigation and feasibility study at Site 55. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation continued treatment operations at OU 1 and OU 5.

In FY04, the installation completed a 5-year review, and continued treatment operations at OU 1 and OU 5. It also supported EPA in delisting Ault Fields OUs 2, 3, and 5.

FY05 IRP Progress

Whidbey Island NS began investigating the potential for a new contaminant of concern from Area 6. The installation initiated an optimization study (OS) on a pump and treat system and a free product recovery system.

Technical issues delayed the investigation of Site 16 runway ditches recontamination.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Whidbey Island Naval Station Ault Field and Seaplane Base are grouped below according to program category.

IRP

- Complete OS at Sites 6 and 52 in FY06.
- Continue treatment operations at OU 1 and OU 5 in FY06-FY07.
- Investigate recontamination of Site 16 Runway Ditches in FY06-FY07.
- Continue investigation of contamination in off-site wells in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|---------------------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | MD317002344400 | Funding to Date: | \$ 34.2 million |
| Size: | 710 acres | Estimated Cost to Completion (Completion Year): | \$ 3.5 million(FY 2014) |
| Mission: | Research, develop, test, and evaluate ordnance technology | IRP/MMRP Sites Final RIP/RC: | FY 2005/None |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| IAG Status: | None | | |
| Contaminants: | Explosive compounds, waste oil, PCBs, heavy metals, VOCs, and SVOCs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

White Oak Naval Surface Warfare Center (NSWC) researched, developed, tested and evaluated ordnance technology. In July 1995, the BRAC Commission recommended closure of White Oak NSWC. The facility closed in July 1997. 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. The installation's technical review committee, formed in FY89, was converted to a Restoration Advisory Board (RAB) in FY96. The installation established an administrative record, an information repository, and a community relations plan (CRP) in FY94. The BRAC cleanup plan (BCP) and the CRP were updated in FY02.

White Oak NSWC has identified 37 sites. The installation has completed 12 Records of Decision (RODs) to date, including 4 in FY05. The cleanup progress at White Oak NSWC for FY01 through FY04 is detailed below.

In FY01, the installation completed a proposed remedial action (RA) plan and RODs for Sites 1 and 2, and initiated the RA. The installation carried out further investigations at Sites 3, 9, 11, 26, 27, and 28 and Operable Unit (OU) 1. It also completed the basewide ecological risk assessment. The installation prepared a draft proposed plan for Site 8 and completed a removal action at Site 3.

In FY02, the installation finalized the site screening report and declared no further action (NFA) for 24 sites. The installation completed NFA RODs for Site 8 and Site 11 soils, and completed remedy implementation at Sites 1 and 2. The installation also submitted draft remedial investigation (RI) reports for Sites 5 and 13 to regulators. It completed the removal actions at Site 28 and Building 90 ditch. The installation submitted the final RI for OU 1. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed a removal action at Site 7 and completed the final investigation report for Area of Concern (AOC) 2. The installation completed and signed NFA RODs for Site 28 and the Building 90 ditch. The installation submitted RODs for Site 7 and Site 11, which were under regulatory review. The installation held RAB and BRAC cleanup team meetings. The BCP was updated.

In FY04, White Oak NSWC completed two RODs for Sites 7 and 11 and prepared draft RODs for four sites (Sites 4, 5, 9, and 13). The installation also completed all certifications and demilitarizations of ordnance shapes. The RAB decreased meetings from bimonthly to quarterly. The installation continued partnering with EPA and the Maryland Department of the Environment.

FY05 IRP Progress

White Oak NSWC completed and signed all remaining RODs (Sites 4, 5/13, 9, and AOC 2) and restoration actions were initiated at Sites, 5/13, 7, 9, and 11. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The RAB decreased meetings from quarterly to semi-annually. The installation continued partnering with EPA and the Maryland Department of the Environment.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for White Oak Naval Surface Warfare Center are grouped below according to program category.

IRP

- Continue RA operation at Sites 5/13, 7, 9, and 11 in FY06.
- Initiate RA at Sites 4 and 49, and AOC 2 in FY06.
- Complete 5-year review in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | FL417002324400 | Funding to Date: | \$ 32.6 million |
| Size: | 3,842 acres | Estimated Cost to Completion (Completion Year): | \$ 19.1 million(FY 2033) |
| Mission: | Train student naval aviators | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2012 |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Underway |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | Pesticides, PCBs, VOCs, heavy metals, chlorinated hydrocarbons | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Studies at this installation, beginning in FY85, have identified sites at Whiting Field Naval Air Station (NAS) and the Outlying Landing Field (OLF) 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) and fuel pits, fire training areas, and drainage ditches. The NAS formed a technical review committee (TRC) in FY89. The installation updated the community relations plan (CRP) in FY93 and FY03. Whiting Field NAS formed a TRC for the OLF Barin in FY92 and completed the OLF Barin's CRP in FY93. The installation was placed on the NPL in May 1994. In FY95, both TRCs were converted to Restoration Advisory Boards (RABs). The installation completed draft 5-year reviews for Sites 1 and 2 in FY04. The installation is currently negotiating a federal facility agreement (FFA).

Whiting Field NAS has identified 46 sites. The installation has closed 17 sites: Site 5 was closed by a consent order; Sites 8, 36, and 37 were closed with no further action (NFA) necessary; and ten sites have been closed at the OLF Barin. To date, the installation has signed eight Records of Decision (RODs). The cleanup progress at Whiting Field NAS for FY01 through FY04 is detailed below.

In FY01, the installation installed a solar remediation system as part of a pilot study for Site 4 NAS, north aviation gasoline (AVGAS) tank sludge disposal area. The installation initiated the initial design of the remediation system at UST 000002, previously Site 1438. The installation started monitoring at one site, and continued monitoring at three other sites, and initiated an interim remedial action (IRA) at one site. The Navy signed RODs for six sites. Continuing implementation of land use controls (LUCs) and use of existing paving or concrete to serve as caps have resulted in most sites requiring no further remediation. The RAB voted to have a quarterly newsletter and to meet annually rather than quarterly.

In FY02, the installation initiated IRAs at four sites. Monitoring continued for Sites 1, 2, 3, 4, 6, 30, 32, and 33 and UST 000005. The installation initiated the 5-year review for Sites 1 and 2. One ROD was signed. The NAS initiated an investigation of AVGAS Pipeline. The installation completed the remedial action (RA) plan for UST 000002. The Navy

completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation completed an investigation of the AVGAS Pipeline, Section E. The installation developed the RA plan for UST 000002 and is ready for the next phase of development and design. In addition, the installation continued the monitoring for Sites 1, 2, 3, 4, 6, 30, 32, and 33, and UST 000005. The installation also continued 5-year reviews for Sites 1 and 2.

In FY04, the installation initiated the RA for Site 7 and continued monitoring LUCs for Sites 1, 2, 4, 30, 32, and 33. The installation also initiated operations at UST 000002 and monitoring at UST 000005. The installation completed RODs on five sites. The installation completed draft 5-year reviews for Sites 1 and 2.

FY05 IRP Progress

Whiting Field NAS continued RA for Site 7; continued monitoring LUCs for Sites 1, 2, 4, 30, 32, and 33; signed five no action (NA) or NFA RODs; and completed three remedial designs and RAs. The installation also continued operations at UST 000002 and monitoring at UST 000005.

Regulatory issues delayed completion of the 5-year reviews for Sites 1 and 2. Administrative issues delayed the FFA.

FY05 MMRP Progress

Regulatory issues delayed the Whiting Field NAS MMRP preliminary assessment (PA).

Plan of Action

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

IRP

- Complete 5-year reviews for Sites 1 and 2 and prepare explanation of significant differences for NFA ROD for Site 2 in FY06.
- Complete FFA in FY06.

- Continue monitoring Sites 1, 2, 4, 30, 32, and 33, and UST 000005 in FY06-FY07.
- Conduct RA operations at UST 000002 in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|-----------------------------------------------------------|--------------------------------------------------------|-------------------------|
| FFID: | AZ957002858200 | Estimated Cost to Completion (Completion Year): | \$ 8.7 million(FY 2055) |
| Size: | 4,043 acres | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2006 |
| Mission: | Supported pilot training and ground equipment maintenance | Five-Year Review Status: | Completed and planned |
| HRS Score: | 37.93; placed on NPL in November 1989 | | |
| IAG Status: | Federal facility agreement signed in FY 1990 | | |
| Contaminants: | VOCs, POLs, heavy metals, pesticides and UXO | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 52.5 million | | |



Progress To Date

In July 1991, the BRAC Commission recommended closure of Williams Air Force Base (AFB), and in September 1993, the installation closed. EPA placed the installation on the NPL in 1989, and the Air Force signed a federal facility agreement in FY90. Sites identified at the installation include the liquid fuels storage area, Fire Protection Training Area No. 2, a collapsed stormwater line, and the old pesticide/paint shop. The installation updated the BRAC cleanup plan (BCP) in FY97 and FY05. A 5-year review was completed in FY01.

Before base closure, environmental studies identified 15 sites. These sites were consolidated into three operable units (OUs). In FY93, an environmental assessment of 30 additional areas resulted in the creation of two more OUs, including 17 new Installation Restoration Program (IRP) sites. A sixth OU was created by consensus statement. To date, Records of Decision (RODs) have been signed for OU 1, OU 2, OU 3, OU 4, and OU 5. Approximately 3,855 acres have been transferred to date. The cleanup progress at Williams AFB for FY01 through FY04 is detailed below.

In FY01, the follow-on remedial investigation for Landfill (LF) 04 was submitted, and the 5-year review was completed. Regulator comments on the OU 3 ROD amendment were addressed and the ROD amendment will follow the OU 6 ROD. An action memorandum for a removal action was executed for soils at OU 6 [Spill Site 17 (SS017)]. The base initiated land farming of pesticide-contaminated soils at SS017.

In FY02, groundwater monitoring continued at OU 1 Site LF004, OU 2 Site ST012, and compliance site Building 760. The installation agreed to take more aggressive remedial actions at ST012 and drafted an explanation of significant differences for the OU 2 ROD accordingly. The installation continued the removal action (land farming of contaminated soils) at SS017.

In FY03, the Air Force continued groundwater monitoring at OU 1 Site LF004, OU 2 Site ST012, and compliance site Building 760, and initiated groundwater monitoring at OU 6 Site SS017. In preparation for innovative thermal enhanced extraction (TEE) treatment at OU 2 Site ST012, the installation obtained regulatory concurrence on a detailed conceptual site model of

the complex site geology and facilitated a peer review of thermal technology through Arizona State University. The installation initiated an evaluation of the land farming removal action at SS017.

In FY04, the installation transferred 39 acres and planned for the construction and operation of the initial phase of TEE at OU 2 Site ST012. The installation also conducted an engineering evaluation and cost assessment for the Bullet Fragment Area of Concern (AOC). Regulators continued to review the OU 6 ROD. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed a removal action at the Bullet Fragment AOC and restored the site. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Funding issues delayed the completion and operation of the TEE system at OU 2 Site ST012. The Air Force is seeking alternative remedial solutions for ST012, and the final solution will be documented in an amendment to the OU 2 ROD. Funding issues delayed the transfer of property and the resolution of issues required to complete RODs. The preliminary assessment and site investigation of the Parcel N Debris Area and the disposal of pesticide-contaminated soil was not initiated due to funding issues.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Complete the second 5-year review in FY06.
- Resolve the OU 2 remediation method for ST012 and amend the OU 2 ROD in FY06.

- Install groundwater monitoring wells at LF004 to define the off-base plume in FY06.
- Continue to transfer property and resolve issues to complete the OU 6 ROD in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

| | | | |
|------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | VA317002460500 | Funding to Date: | \$ 7.3 million |
| Size: | 1,578 acres | Estimated Cost to Completion (Completion Year): | \$ 21.6 million(FY 2012) |
| Mission: | Supply Atlantic Fleet ships and provide recreational opportunities to military and civilian personnel | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2010 |
| HRS Score: | 48.72; placed on NPL in December 2000 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | N/A | | |
| Contaminants: | SVOCs, PAHs, metals, PCBs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Williamsburg Fleet Industrial Supply Center (FISC) was placed on the NPL in December 2000 because eight of its Installation Restoration Program (IRP) sites are hydrologically connected to the Chesapeake Bay. Contaminants at the installation include semivolatiles organic compounds (SVOCs), polyaromatic hydrocarbons (PAHs), metals, and polychlorinated biphenyls (PCBs). These primarily affect groundwater, surface water, and sediment. The Navy signed a federal facilities agreement (FFA) in March 2005. The Naval Weapons Station Yorktown Restoration Advisory Board meets quarterly and addresses IRP issues for Williamsburg FISC.

The installation has identified 18 sites. To date, Sites 1, 4, 7, 9, 10, and 11, and Areas of Concern (AOCs) 1 and 2 have been investigated. A potential AOC was discovered in FY03, north of Cheatham Annex (CAX) Depot Building 14. The cleanup progress at Williamsburg FISC for FY01 through FY04 is detailed below.

In FY01, the installation conducted a remedial investigation (RI) and feasibility study for Site 1. A limited removal action for AOC 2 was performed.

In FY02, the installation completed a supplemental investigation at Site 1. Based on this investigation, the partnering team decided that the interim removal action for Site 1 was no longer required and would be incorporated in the remedial action. The final Record of Decision for Site 1 progressed. A field investigation of Site 11 and a limited field investigation of Site 12 were conducted. The installation initiated a draft no further response action planned (NFRAP) decision document (DD) for Sites 2, 3, 5, 8, 9, 10, and 12. Drafts for the site screening-level ecological risk assessment (SERA) were completed. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation completed an NFRAP DD for Sites 2, 3, 5, 6, 8, and 10. The CAX background study was completed. The installation also began an engineering evaluation and cost analysis (EE/CA) and the soil removal action for Site 1. The installation initiated a preliminary assessment (PA) for Unexploded Ordnance (UXO) 00001.

In FY04, the installation initiated a Round 2 RI for sediments at Site 1, and issued a draft RI with SERA Steps 1 and 2 for Site 11. The installation finalized an environmental geographic information system for CAX and completed an NFRAP DD for Site 12. Williamsburg FISC initiated an initial FFA for CAX and a time-critical removal action (TCRA) for shoreline protection at Site 7. The Agency for Toxic Substances and Disease Registry completed the Cheatham Annex Public Health Assessment. The installation initiated the Site 1 soil removal action, which included debris uncovered during Hurricane Isabel.

FY05 IRP Progress

The Navy signed an FFA for CAX in March 2005. The installation initiated remediation and restoration for the area of debris discovered in the treeline, south of the original soil removal action at Site 1. Williamsburg FISC completed sediment work plans for a Round 2 RI at Site 1 and initiated sampling. The installation completed the RI with SERA Steps 1 and 2 for Sites 4 and 9. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Funding issues delayed the RI with SERA Step 3a for Site 11. Technical issues delayed the EE/CA for Site 7.

FY05 MMRP Progress

The installation submitted the draft final PA for the Marine Pistol and Rifle Range (UXO 00001) to regulators.

Plan of Action

Plan of action items for Williamsburg FISC, Cheatham Annex are grouped below according to program category.

IRP

- Complete RI with SERA Steps 1 and 2 and Step 3a refinement at Site 11 in FY06.
- Initiate and complete removal action for sediments at Site 1 in FY06.
- Initiate TCRA shoreline stabilization project at Site 7 in FY06.

MMRP

- Complete PA and initiate site investigation for Marine Pistol and Rifle Range in FY06.

| | | | |
|-------------------------|-----------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | PA357122534900 | Estimated Cost to Completion (Completion Year): | \$ 1.2 million(FY 2013) |
| Size: | 210 acres | IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| Mission: | Train personnel for air transport and air evacuation activities | Five-Year Review Status: | The installation has not completed a 5-year review. |
| HRS Score: | 50.00; placed on NPL in October 1995 | | |
| IAG Status: | None | | |
| Contaminants: | VOCs, chlorinated solvents, jet fuel | | |
| Media Affected: | Groundwater, sediment, soil | | |
| Funding to Date: | \$ 4.8 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. EPA placed the installation on the NPL in October 1995. 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 currently include the bulk storage of jet propulsion fuel 8 (JP 8). The installation formed a Restoration Advisory Board (RAB).

Since FY84, seven Installation Restoration Program (IRP) sites have been identified. The cleanup progress at Willow Grove ARS for FY01 through FY04 is detailed below.

In FY01, the installation completed the evaluation of natural attenuation (NA) and the review of remedial alternatives for Site ST 01. The data indicated that NA was not effective at containing contamination. A supplemental site inspection (SI), requested by EPA, was completed at Sites SS 02, OT 03, SD 04, SS 05, OT 06, and OT 07 with no further action recommendations. Removal action soil sampling at Site OT 03 indicated that the remaining contaminant concentrations are not of concern. The RAB met quarterly.

In FY02, the installation completed a bench-scale treatability test to determine the success of Fenton's reagent to treat various compounds present in the JP 4 at Site ST 01. It also completed baseline sampling and non-use aquifer determination at Site ST 01. The final SI report for the multiple sites was submitted to the regulators for their review and concurrence. Three RAB meetings were held.

In FY03, the installation completed a pilot field test needed to design the in situ chemical oxidation portion of the remedy, and installed injection wells for interim implementation of the chemical oxidation process for ST 01. The installation installed

and sampled two monitoring wells as directed by the State; completed baseline groundwater sampling and mass-in-place calculations; and completed 70 percent of the remedial system design. Two RAB meetings were held.

In FY04, the installation implemented the chemical oxidation process at two out of eight area zones of the petroleum/oil/lubricant (POLs) Site (ST 01). The installation also completed groundwater sampling (compliance and performance) and completed the biosparging pilot test. The test was successful within the limitations imposed by the field conditions. The installation held two RAB meetings.

FY05 IRP Progress

Willow Grove ARS completed implementation of the chemical oxidation process at area zones B, D, and H. The installation completed quarterly groundwater sampling from the monitoring wells and three events of performance sampling at area zones B, D, and H. Willow Grove ARS performed a remedial process optimization study for the POL Area Site (ST 01) and completed a preliminary biosparge design reconnaissance of the POL Site to evaluate site conditions. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed the implementation of the in situ bioremediation process (biosparging) in some area zones.

Willow Grove ARS held four RAB meetings.

FY05 MMRP Progress

The Air Force updated its Military Munitions Response program (MMRP) inventory. No MMRP sites were identified at this installation during the inventory development.

Plan of Action

Plan of action items for Willow Grove Air Reserve Station are grouped below according to program category.

IRP

- Implement chemical oxidation process at the area zones A and C in FY06-FY07.

- Implement in situ biosparging at the area zones where chemical oxidation process is achieved in FY06-FY07.
- Complete quarterly compliance and performance groundwater sampling in FY06-FY07.
- Hold quarterly RAB meetings in FY06-FY07.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|-------------------------|---------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|
| FFID: | PA317002231200 | Estimated Cost to Completion (Completion Year): | \$ 6.0 million(FY 2023) |
| Size: | 1,090 acres | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| Mission: | Serve as Reserve naval air station for aviation training activities | Five-Year Review Status: | The installation has not completed a 5-year review. |
| HRS Score: | 50.00; placed on NPL in September 1995 | | |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | Heavy metals, PCBs, POLs, solvents | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 7.8 million | | |



Progress To Date

Willow Grove Naval Air Station (NAS) Joint Reserve Base served as a reserve NAS for aviation training activities. Site types include landfills, underground storage tanks, and a fire training area. The installation formed a technical review committee in FY90. In FY91, it established an administrative record and an information repository. The installation was placed on the NPL in September 1995. The Navy completed a federal facilities agreement (FFA) for Site 2 in FY05. In FY95, the installation established a Restoration Advisory Board (RAB), which meets regularly. A community relations plan was developed in FY97.

Studies at this installation have identified 11 CERCLA sites and two RCRA sites. The cleanup progress at Willow Grove NAS for FY01 through FY03 is detailed below.

In FY01, the installation continued operation of the light non-aqueous phase liquids recovery system at Site 10.

In FY02, the installation finalized the feasibility study report for Site 5 and submitted it to regulators and the RAB. The remedial investigation (RI) report for Site 1 was finalized and submitted to the regulators and the RAB. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed fieldwork at Installation Restoration (IR) Site 10, the Navy Fuel Farm. In addition, the installation completed the removal of drums discovered adjacent to IR Site 2 and the soil analysis of the drum area and EPA environmental photographic interpretation center anomalies.

FY05 IRP Progress

The installation submitted a No Further Action Record of Decision (ROD) for Site 1 soil. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Regulatory and technical issues delayed the remedial action plan and ROD for Site 5. Regulatory issues delayed the Site 2 RI.

Willow Grove NAS completed the FFA.

FY05 MMRP Progress

The Navy has identified no MMRP sites at this installation.

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 the Site 5 RI in FY06.
- Complete the Site 1 soil ROD and the groundwater monitoring in FY06.
- Complete the Site 2 RI report in FY06.
- Complete the Site 3 RI work plan and fieldwork in FY06.

MMRP

There are no MMRP actions scheduled for FY06 or FY07.

| | | | |
|------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | OH557172431200 | Funding to Date: | \$ 188.0 million |
| Size: | 8,511 acres | Estimated Cost to Completion (Completion Year): | \$ 33.8 million(FY 2028) |
| Mission: | Serve as host to many organizations, including headquarters Air Force Materiel Command | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2003 |
| HRS Score: | 57.85; placed on NPL in October 1989 | Five-Year Review Status: | Underway |
| IAG Status: | IAG signed in March 1991 | | |
| Contaminants: | Waste oil and fuels, acids, plating wastes, VOCs, SVOCs, and solvents | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Past activities at Wright-Patterson Air Force Base (WPAFB) created spill sites and unlined waste disposal areas, including landfills, fire training areas, underground storage tanks, earth fill disposal areas, and coal storage areas. Soil and groundwater have been contaminated with volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs); and benzene, toluene, ethyl benzene, and xylene compounds. Fire training exercises conducted in unlined pits contaminated soil and groundwater with fuel and its combustion by-products. EPA placed the installation on the NPL in October 1989 and the Air Force signed an interagency agreement in March 1991. In FY97, two new sites, Contaminated Groundwater Area A/C and Contaminated Groundwater Area B, were added to address commingled groundwater plumes and to expedite source area site closure. In FY00, the installation completed a 5-year review.

Investigations have identified 68 sites and 5 areas of concern (AOCs). To date, two AOCs have been remediated. Records of Decision (RODs) have been signed for Landfills 8 (LF 8) and LF 10, groundwater remediation, and another 40 Installation Restoration Program (IRP) sites. A No Further Action ROD was signed for 21 sites. The cleanup progress at WPAFB for FY01 through FY04 is detailed below.

In FY01, the installation continued system operations and maintenance (O&M) and long-term management (LTM) activities. Phase II well abandonment resulted in 80 wells being abandoned. Restoration oversight of the demolition of Building 20059 was accomplished, removing approximately 300 tons of trichloroethylene (TCE)-contaminated soil. The site inspection at Building 20079 was initiated. Preliminary data was sent to the regulators and the building was demolished. The installation and stakeholders formed a partnership to accomplish the successful site investigation, cleanup, and demolition of Building 20059.

In FY02, the installation continued system O&M and LTM activities. State and federal agencies accepted a final report detailing restoration activities at Facility 20059. The installation completed site fieldwork at Facility 20079 and submitted a draft report to the state confirming shallow TCE contamination in groundwater.

In FY03, the installation completed the preliminary assessment at an AOC, Building 20055. The removal action of contaminated soils at an AOC, Building 20025, was completed. Supplemental floating-product recovery through the use of a bioslurper was initiated. O&M and LTM continued throughout the year.

In FY04, WPAFB began conducting 5-year reviews and continued system O&M and LTM activities.

FY05 IRP Progress

WPAFB continued O&M and LTM activities. The installation initiated the 5-year review and the time-critical removal of contaminated soils at Facility 20055. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed the 5-year review. Multiple technical issues related to the facility delayed the time-critical removal action (TCRA) of contaminated soils at Facility 20055.

FY05 MMRP Progress

The Air Force began the preliminary assessments for all identified sites.

Plan of Action

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

IRP

- Complete 5-year review in FY06.
- Complete O&M and LTM optimization in FY06.
- Conduct a TCRA of contaminated soils at Facility 20055 in FY06.
- Finalize quality assurance project plan in FY06.

MMRP

- Complete site investigations at all identified sites between FY06-FY10.

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|-------------------------|-------------------------------------------------------|-------------------------------------|--------------------------|
| FFID: | MI557002427800 | Estimated Cost to Completion | \$ 16.9 million(FY 2032) |
| Size: | 4,627 acres | (Completion Year): | |
| Mission: | Conducted tactical fighter and bomber training | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2006 |
| HRS Score: | 50.00; proposed for NPL in January 1994 | Five-Year Review Status: | Completed and planned |
| IAG Status: | None | | |
| Contaminants: | Jet fuel and waste oil, spent solvents, VOCs, and UXO | | |
| Media Affected: | Groundwater, wetlands, surface water | | |
| Funding to Date: | \$ 53.6 million | | |



Progress To Date

The mission of Wurtsmith Air Force Base (AFB) was to conduct tactical fighter and bomber training. In July 1991, the BRAC Commission recommended closure of Wurtsmith AFB. The installation closed in June 1993, and EPA proposed it for the NPL in January 1994. 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, 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. To address cleanup efforts, a BRAC cleanup plan was developed. In FY04, the installation completed a 5-year review.

The cleanup progress at Wurtsmith AFB for FY01 through FY04 is detailed below.

In FY01, the installation completed construction of the OT024 remedial action (RA) system. The installation also completed construction of RA systems at Sites FT002, Landfill (LF) 030, and LF031. The contract for the remedial design (RD) for Site SS057 was awarded, and the design was partially completed. The installation also completed an optimization study for the RA systems. The RA system at Site SS008 was shut down, as RA goals had been met.

In FY02, the installation completed a basewide RA plan (RAP) and submitted it for regulatory review. Fieldwork for the supplemental remedial investigation (SRI) was completed and the draft SRI report was planned. Initial results from the field indicated no changes to the RAPs for Sites WP004 and LF023 were necessary. The results for POI 20 led to the characterization of a small, chlorinated groundwater plume and the designation of Installation Restoration Program (IRP) Site SS071. The RD was completed for Site SS057 and the RA construction contract was awarded. Sampling and analysis costs for the operation and maintenance of the benzene treatment system were reduced by 75 percent due to the reduced frequency of National Pollutant Discharge Elimination System-required monitoring from weekly to monthly. Additional savings were captured through the sale and recycling of free product (JP-4), which was removed from the groundwater at

Site SS006.

In FY03, the installation completed SRIs at several sites to verify the adequacy of implemented remedies. The investigations concluded that plume contaminants were being successfully captured, and indicated the need for additional monitoring wells to monitor a surface water body. The Air Force completed an addendum to the basewide RAP for five sites. The Air Force also completed construction of the RA system at Site SS057. A draft operating properly and successfully document for Site SS005 received concurrence contingent upon incorporating EPA comments.

In FY04, the installation completed the first 5-year review and carried out a screening for residual mercury vapors and radioactive materials. The installation conducted a remedial process optimization (RPO) study for three pump and treat systems and implemented a short-term RPO recommendation for a rebound study at the soil vapor extraction system at Site FT002. The installation removed a previously unknown 300-gallon UST. The installation created a project to fill data gaps at Sites LF030 and LF031 and issued a request for proposal. Site ST069 attained the state's cleanup action levels. The Restoration Advisory Board met and was presented with the findings of the 5-year review and a description of the cleanup status at various sites. The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

FY05 IRP Progress

The installation completed field work for the remedial investigation (RI) at Site SS072 and issued a draft report.

Funding issues delayed the project to fill data gaps at Sites LF030 and LF031, and the site assessment project for a leaking UST at Building 5002. Administrative issues delayed the resolution of the RCRA cap issue and completion of the RI report, the feasibility study (FS), and the decision document (DD) for Site SS072.

FY05 MMRP Progress

The Air Force began evaluating requirements at MMRP sites at this installation.

Plan of Action

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

IRP

- Complete the project to fill data gaps at Sites LF030 and LF031 in FY06.
- Resolve RCRA cap issue with regulators in FY06.
- Complete the RI/FS, DD, and RD/RA for Site SS072 in FY06.
- Complete the site assessment for the leaking UST at Building 5002 in FY06.

MMRP

- Continue to evaluate requirements at MMRP sites in FY06.

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| FFID: | VA317002417000 | Contaminants: | Acids, asbestos, explosives, cadmium, zinc, lead, mercury, nickel, PAHs, VOCs, paint thinners, solvents, PCBs, varnishes, waste oil |
| Size: | 10,624 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Provide ordnance technical support and related services; provide maintenance, modifications, production, loading, off-loading, and storage for the Atlantic Fleet | Funding to Date: | \$ 44.1 million |
| HRS Score: | 50.00; placed on NPL in October 1992 | Estimated Cost to Completion (Completion Year): | \$ 23.0 million(FY 2013) |
| IAG Status: | Federal Facility Agreement signed in September 1994 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2009 |
| | | Five-Year Review Status: | Completed and planned |



Progress To Date

Yorktown Naval Weapons Station (NWS) provides ordnance technical support and related services to the Atlantic Fleet. EPA placed the installation on the NPL in October 1992 primarily because of six sites that are hydrologically connected to the Chesapeake Bay. Contaminants include explosive nitramine compounds and volatile organic compounds (VOCs) that affect groundwater, surface water, and sediment. A technical review committee, formed in FY91, was converted to a Restoration Advisory Board in FY95. In FY02, the installation updated the community relations plan and completed a 5-year review.

To date, 49 sites have been identified at this installation. Yorktown NWS has completed 15 Records of Decision (RODs). The cleanup progress at Yorktown NWS for FY01 through FY04 is detailed below.

In FY01, the installation continued remedial action (RA) efforts for Site 6, as planned. Groundwater monitoring was conducted at six sites. The remedial investigation (RI) and feasibility study for three sites continued.

In FY02, the installation continued RA efforts at Site 6 with Phase IV. The installation completed the first 5-year review. The RI for groundwater Operable Unit (OU) 1 began. Groundwater monitoring at all applicable sites continued. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

In FY03, the installation continued RA efforts at Site 6 with Phase V. The installation completed an RA at Site 4 and a removal action at Site 23. Groundwater monitoring at all applicable sites continued. The RI for groundwater OU 1 continued. The installation signed the final RODs for two sites. A preliminary assessment (PA) was initiated for Unexploded Ordnance 000001 (NWS Small Arms Range).

In FY04, the installation continued the Site 6 RA and finalized a site screening area (SSA) report for 10 SSAs. In addition the installation completed a draft RI for Sites 27, 28, 29, and 30. Yorktown NWS also initiated an update of master project plans. The installation completed final Round II RIs for Sites 2, 8, 18,

and SSA 14.

FY05 IRP Progress

Yorktown NWS finalized a no further action ROD for soil at Site 4 and a no action ROD for Site 18. Site 18 is complete for all media. The installation finalized work plans for OU 1 and initiated a Round I RI. 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 finalized the RI for Sites 27-30. Site 6 RA continued. The installation finalized master project plans.

Regulatory issues delayed the workplans for groundwater at OUs 3 and 4. Administrative issues delayed the long-term monitoring report for Site 12. Funding issues delayed the release of the environmental geographic information system. Ecological issues continued to delay the signing of RODs at one site and one SSA.

FY05 MMRP Progress

The final PA for Morale, Welfare, and Recreation (MWR) Skeet Range was delayed pending decision on inclusion of other MMRP sites.

Plan of Action

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

IRP

- Complete no action ROD for Site 27 in FY06.
- Complete long-term monitoring for Sites 1, 3, and 7 in FY06.
- Finalize the Round 1 RI for groundwater OU 1 in FY06.
- Initiate baseline ecological risk assessment for the wetlands down gradient of Site 12 in FY06.

MMRP

- Complete PA and and initiate the site investigation for MWR Skeet Range in FY06.

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|------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| FFID: | AZ917302449300 | Funding to Date: | \$ 50.0 million |
| Size: | 4,741 acres | Estimated Cost to Completion (Completion Year): | \$ 14.2 million(FY 2021) |
| Mission: | Support tactical aircrew combat training for Pacific and Atlantic Fleet Marine Corps Forces | IRP/MMRP Sites Final RIP/RC: | FY 2001/FY 2014 |
| HRS Score: | 32.24; placed on NPL in February 1990 | Five-Year Review Status: | Completed |
| IAG Status: | Federal facility agreement signed in January 1992 | | |
| Contaminants: | JP-5, petroleum hydrocarbons, SVOCs, trihalomethanes, VOCs | | |
| Media Affected: | 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 installation was placed on the NPL in February 1990 and signed a federal facility agreement (FFA) in January 1992. The installation completed a 5-year review for Operable Unit (OU) 2 in FY03 and updated it in FY04. Also in FY04, the installation completed a 5-year review for OU 1.

To date, 25 Installation Restoration Program (IRP) sites and 6 Military Munitions Response Program (MMRP) sites have been identified at this installation. The installation signed Records of Decision (RODs) for all IRP sites in the late 1990s. Fifteen of the 18 soil IRP sites have received clean closure and the remaining 3 soil sites have their remedies in place. All five UST IRP sites have received clean closure. One groundwater site (OU 1) is made up of four chlorinated solvent plumes (Areas 1, 2, 3, and 6) and two fuel plumes (4, and 5, + 5A). OU 1 Plumes 4, 5, 5A, and 6 have been clean closed. The cleanup progress for Yuma MCAS for FY01 through FY04 is detailed below.

In FY01, the installation completed air-sparging/soil vapor extraction for the plumes in Areas 2, 3, and 6 of OU 1. Yuma MCAS completed the remedial action (RA) for site closures under the FFA assessment program. The OU 1 ROD for Areas 1, 2, 3, and 6 was signed. Long-term management (LTM) and institutional controls are in place for the remaining three plume areas. All 18 OU 2 soil sites proceeded through the remedial investigation phase and ROD. Sites 4, 7, and 9 underwent remedial design and RA and received closure concurrence.

In FY02, the installation finalized the land use control implementation plan (LUCIP) and an LTM plan. It also finalized Yuma Station Order 5090, which formally directs tenants and contractors to incorporate the LUCs provided in the LUCIP into the existing land use planning and management systems. The installation master plan was updated. Yuma MCAS implemented the institutional and land use restrictions to meet the intent of the OU 2 ROD. The installation initiated the first 5-year review for OU 2. RA operations (RA-O) and operation

and monitoring of the groundwater remedial systems for OU 1 continued. Monitoring areas 2, 3, and 6 of OU 1 continued under monitoring and natural attenuation and the applicable LUCs and institutional controls. The Navy completed an inventory of all MMRP sites. MMRP sites were identified at this installation.

In FY03, Yuma MCAS completed and finalized the first 5-year review for OU 2. The installation completed optimization of one of the existing RA-O systems at Plume Area 1. The installation met remediation goals for the other RA-O system at the leading edge of Plume Area (LEPA) 1. In addition, the installation continued operating and monitoring one groundwater remedial system at OU 1. The installation also continued LTM at Areas 2, 3, and 6 of OU 1 under monitored natural attenuation and the applicable LUCs and institutional controls.

In FY04, Yuma MCAS completed and finalized the first 5-year review for OU 1 and updated the OU 2 5-year review. The installation received Plume Areas 6 and 5A site closure. The installation completed and finalized the groundwater flow and transport model. In addition, the installation continued operating and monitoring one groundwater remedial system at OU 1. The installation also continued LTM of Areas 1, 2, and 3 of OU 1. One RA-O system located in the LEPA was in temporary shutdown status.

FY05 IRP Progress

The installation abandoned monitoring wells at Plume Areas 6 and 5A. The Navy requested permanent shutdown of RA-O system located at the LEPA and site closure at Area 2. The EPA denied site closure at Area 2 due to one well exceeding MCLs on several occasions. The installation continued operating and monitoring one groundwater remedial system at OU 1, and continued LTM at Areas 1, 2, and 3. The installation requested permanent shutdown of the RA-O system located at the LEPA, but has yet to receive concurrence. The installation investigated and found no significant contamination at Plume Area 3. The cost of completing environmental restoration at this installation has changed significantly due to regulatory issues.

FY05 MMRP Progress

No work was performed on MMRP sites at this installation.

Plan of Action

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

IRP

- Continue LTM at Area 1 in FY06.
- Request site closure at Plume Area 3 in FY06.
- Reduce frequency of LTM from quarterly to semi-annually in FY06.
- Reduce the number of monitoring wells by 50 percent in FY06.

MMRP

- Begin site investigation at MMRP Site 1 in FY06.