

APPENDIX J

INSTALLATION NARRATIVE SUMMARIES



Appendix J contains narratives describing environmental restoration progress and funding at 206 Department of Defense (DoD) installations and former properties. These narratives summarize Defense Environmental Restoration Program (DERP) activities at (1) active DoD installations 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, 2004. 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) 2000 through FY2003. The next two sections, FY2004 IRP Progress and FY2004 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 are planned at the installation in the coming 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.

LAG status, federal facility agreement status, and five-year review status are also statutorily required elements of the installation narratives. Reviews of the remedial action no less than every five years after initiating the remedy may be required for specific sites, not necessarily for all sites at an installation. Information on all three of 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 FY2004 MMRP Progress section. Munitions response actions for non-BRAC sites that occurred prior to the creation of the MMRP in FY2001 are covered as part of 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 \$5 million and have more than two sites 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 text for the year in which the change occurred, 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 J-1 provides a summary of the status of NPL, proposed NPL, or BRAC installations organized by Component. Kaho'olawe Island is a Congressionally mandated cleanup that is not part of the DERP and is neither on nor proposed for the NPL. The Dahlgren Naval Surface Warfare Center changed its name in FY2004 to the Naval District Washington, West Area, Dahlgren, Virginia to reflect integration into the Naval District Washington Region. In addition, the U.S. Army Armament Research, Development and Engineering Center changed its name to Picatinny.

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 FY2004, these narratives note a "last narrative" status in the IRP and MMRP Plan of Action sections. Table J-2 lists installations that previously had

**Table J-1
Status of Installations in Appendix J by Component**

| Component | Total Narratives | NPL | Proposed NPL | BRAC |
|------------------|-------------------------|------------|---------------------|-------------|
| Army | 54 | 35 | 1 | 30 |
| Navy | 71 | 49 | 1 | 28 |
| Air Force | 59 | 40 | 5 | 29 |
| DLA | 5 | 4 | 0 | 2 |
| FUDS | 17 | 17 | 0 | 0 |
| Total* | 206 | 145 | 7 | 89 |

* This report includes 206 installation narratives in Appendix J. The totals in the table above are higher, as some installations are both NPL and BRAC.

narratives in this appendix, the reason for each installation's removal from the appendix, and the year of the last DERP Annual Report to Congress in which a full-text narrative for the installation appears. There are five narratives that appeared in the FY2003 DERP Annual Report to Congress and are not listed in this year's report—Defense Distribution Depot Ogden, Fitzsimons Army Medical Center, Hingham Annex, Sudbury Training Annex, and the Glenville Naval Air Station and Libertyville Training Site.

Table J-3 provides an index to the Appendix J 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 W 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 K, the Installation Restoration Program Status Tables, and Appendix L, the Military Munitions Response Program Status Tables. More detailed information on environmental restoration activities at an installation prior to FY2000 can be found in the installation narratives from earlier editions of the DERP Annual Report to Congress, which can be accessed through the Cleanup section of the Web site for the FY2004 DoD Environmental Programs Annual Report to Congress at http://derparc.egovservices.net/Derparc_FY04.

**Table J-2
Appendix J Installations No Longer Requiring Narratives**

| Installation | FFID | State | NPL/BRAC | Reason Narrative Archived | Last ARC Full Narrative Appeared | IRP Status Table Reference |
|---|-----------------------------------|--------------|-------------------|---|---|-----------------------------------|
| Army | | | | | | |
| Army Research Laboratory-Woodbridge | VA321832098100 | VA | BRAC 1991 | All remedies are in place at this installation and all property has been transferred. | FY2001 | K-3-35 |
| Cameron Station | VA321022013900 | VA | BRAC 1988 | All remedies are in place at this installation and all property has been transferred. | FY2000 | K-2-20 |
| Defense Distribution Depot Ogden | UT82100209220 | UT | NPL/ BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2003 | K-1-82 |
| 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 | K-3-18 |
| Fitzsimons Army Medical Center | CO821162033300 | CO | BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2003 | K-3-6 |
| 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 | K-3-11 |
| Fort Greely | AK021452215500 | AK | BRAC 1995 | The installation became part of the Strategic Missile Defense Command and is no longer a BRAC installation. | FY2002 | K-2-1 |
| Hingham Annex | MA121402280500 | MA | BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2003 | K-3-16 |
| Military Ocean Terminal, Bayonne | NJ221352275200 | NJ | BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2002 | K-3-22 |
| 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 | K-3-4 |
| Schofield Barracks | HI921452223900 | HI | NPL | The installation has reached the construction complete milestone and has been delisted from the NPL | FY2000 | K-3-10 |
| Sudbury Training Annex | MA121402300900 | MA | NPL/ BRAC 1995 | All remedies are in place at this installation and all property has been transferred. | FY2003 | K-3-16 |
| 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. | FY03 | K-3-11 |

Table J-2
Appendix J Installations No Longer Requiring Narratives

| Installation | FFID | State | NPL/BRAC | Reason Narrative Archived | Last ARC Full Narrative Appeared | IRP Status Table Reference |
|--|----------------|--------------|-----------------|---|---|-----------------------------------|
| Navy | | | | | | |
| 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. | FY99 | K-3-4 |
| 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. | FY99 | K-3-30 |
| Air Force | | | | | | |
| Luke Air Force Base | AZ957152413300 | AZ | NPL | The installation was delisted from the NPL and no further action is required for any sites. | FY02 | K-2-2 |
| 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. | FY99 | K-3-19 |
| 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. | FY97 | K-3-24 |
| FUDS | | | | | | |
| Avco Lycoming Superfund Site | PA39799F145100 | PA | NPL | A FUDS closeout report was submitted September 13, 1996, 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. | FY96 | K-3-30 |
| Kingsbury (Fisher-Calo) | IN59799F35700 | IN | NPL | No further action is required by DoD, the EPA and the private potentially responsible parties (PRPs) are managing the site remediation. | FY99 | K-1-41 |
| Malta Rocket Fuel Area | NY29799F128100 | NY | NPL | DoD has no remaining liability at this property. | FY99 | K-2-20 |
| Marathon Battery Corporation | NY29799F114200 | NY | NPL | A settlement agreement was signed among the PRPs in FY96. No further action was required of DoD. This installation was delisted from the NPL in October 1996. | FY96 | K-3-24 |
| 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. | FY96 | K-3-30 |
| San Fernando Valley (Area 1) | CA99799F530400 | CA | NPL | DoD has no remaining liability at this property. | FY01 | K-3-5 |
| Strother Army Airfield | KS79799F031800 | KS | NPL | DoD has no remaining liability at this property. | FY01 | K-3-13 |

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| Installation Name | State | Status | Page | Installation Name | State | Status | Page |
|--|-------|----------|------|--|-------|----------|-------|
| ARMY | | | | ARMY | | | |
| Aberdeen Proving Ground Edgewood Area and Michaelsville Landfill | MD | NPL | J-14 | Fort Monmouth | NJ | BRAC | J-81 |
| Alabama Army Ammunition Plant | AL | NPL/BRAC | J-21 | Fort Ord (Presidio of Monterey) | CA | NPL/BRAC | J-82 |
| Anniston Army Depot Southeast Industrial Area | AL | NPL | J-27 | Fort Pickett | VA | BRAC | J-83 |
| Army Research Laboratory--Watertown | MA | NPL/BRAC | J-28 | Fort Richardson | AK | NPL | J-84 |
| Camp Bonneville | WA | BRAC | J-38 | Fort Riley | KS | NPL | J-85 |
| Cornhusker Army Ammunition Plant | NE | NPL | J-49 | Fort Ritchie | MD | BRAC | J-86 |
| Fort Chaffee | AR | BRAC | J-72 | Fort Sheridan | IL | BRAC | J-87 |
| Fort Devens | MA | NPL/BRAC | J-74 | Fort Totten | NY | BRAC | J-88 |
| Fort Dix | NJ | NPL | J-75 | Fort Wainwright | AK | NPL | J-89 |
| Fort Dix BRAC | NJ | BRAC | J-76 | Fort Wingate | NM | BRAC | J-90 |
| Fort Eustis | VA | NPL | J-77 | Hamilton Army Airfield | CA | BRAC | J-97 |
| Fort George G. Meade | MD | NPL/BRAC | J-78 | Iowa Army Ammunition Plant | IA | NPL | J-105 |
| Fort Lewis Logistics Center | WA | NPL | J-79 | Jefferson Proving Ground | IN | BRAC | J-107 |
| Fort McClellan | AL | BRAC | J-80 | Joliet Army Ammunition Plant LAP Area and Manufacturing Area | IL | NPL | J-109 |

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| Installation Name | State | Status | Page | Installation Name | State | Status | Page |
|---|-------|----------|-------|---|-------|--------------|-------|
| ARMY | | | | ARMY | | | |
| Lake City Army Ammunition Plant Northwest Lagoon | MO | NPL | J-114 | Savanna Army Depot | IL | NPL/BRAC | J-185 |
| Letterkenny Army Depot | PA | NPL/BRAC | J-117 | Seneca Army Depot | NY | NPL/BRAC | J-186 |
| Lexington Facility, Lexington-Blue Grass Army Depot | KY | BRAC | J-118 | Sierra Army Depot | CA | BRAC | J-187 |
| Lone Star Army Ammunition Plant | TX | NPL | J-119 | Stratford Army Engine Plant | CT | BRAC | J-190 |
| Longhorn Army Ammunition Plant | TX | NPL | J-121 | Sunflower Army Ammunition Plant | KS | Proposed NPL | J-191 |
| Louisiana Army Ammunition Plant | LA | NPL | J-123 | Tobyhanna Army Depot | PA | NPL | J-193 |
| Milan Army Ammunition Plant | TN | NPL | J-136 | Tooele Army Depot | UT | NPL/BRAC | J-194 |
| Oakland Army Base | CA | BRAC | J-158 | Twin Cities Army Ammunition Plant | MN | NPL | J-200 |
| Pueblo Chemical Depot | CO | BRAC | J-171 | U.S. Army Armament Research, Development and Engineering Center | NJ | NPL | J-202 |
| Red River Army Depot | TX | BRAC | J-173 | U.S. Army Soldiers Systems Center | MA | NPL | J-203 |
| Redstone Arsenal | AL | NPL | J-174 | Umatilla Chemical Depot | OR | NPL/BRAC | J-204 |
| Riverbank Army Ammunition Plant | CA | NPL | J-178 | Vint Hill Farms Station | VA | BRAC | J-205 |
| Rocky Mountain Arsenal | CO | NPL | J-180 | | | | |
| Sacramento Army Depot | CA | NPL/BRAC | J-181 | | | | |

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| Installation Name | State | Status | Page | Installation Name | State | Status | Page |
|--|--------------|---------------|-------------|--|--------------|---------------|-------------|
| NAVY | | | | NAVY | | | |
| Adak Naval Air Facility | AK | NPL/BRAC | J-15 | Cherry Point Marine Corps Air Station | NC | NPL | J-46 |
| Agana Naval Air Station | GU | BRAC | J-16 | Concord Naval Weapons Station | CA | NPL | J-48 |
| Alameda Naval Air Station | CA | NPL/BRAC | J-22 | Dallas Naval Air Station | TX | BRAC | J-50 |
| Albany Marine Corps Logistics Base | GA | NPL | J-23 | Davisville Naval Construction Battalion Center | RI | NPL/BRAC | J-51 |
| Allegany Ballistics Laboratory | WV | NPL | J-24 | Driver Naval Radio Transmitting Facility | VA | BRAC | J-58 |
| Bangor Naval Submarine Base | WA | NPL | J-31 | Earle Naval Weapons Station | NJ | NPL | J-60 |
| Barbers Point Naval Air Station | HI | BRAC | J-32 | El Toro Marine Corps Air Station | CA | NPL/BRAC | J-63 |
| Barstow Marine Corps Logistics Base | CA | NPL | J-33 | Fridley Naval Industrial Reserve Ordnance Plant | MN | NPL | J-91 |
| Bedford Naval Weapons Industrial Reserve Plant | MA | NPL | J-34 | Guam Apra Harbor Complex | GU | BRAC | J-96 |
| Brunswick Naval Air Station | ME | NPL | J-37 | Hunter's Point Annex-Treasure Island Naval Station | CA | NPL/BRAC | J-102 |
| Camp Lejeune Marine Corps Base | NC | NPL | J-39 | Indian Head Naval Surface Warfare Center | MD | NPL | J-103 |
| Camp Pendleton Marine Corps Base | CA | NPL | J-40 | Indianapolis Naval Air Warfare Center | IN | BRAC | J-104 |
| Cecil Field Naval Air Station | FL | NPL/BRAC | J-43 | Jacksonville Naval Air Station | FL | NPL | J-106 |
| Charleston Naval Shipyard and Naval Station | SC | BRAC | J-45 | Kaho'olawe Island | HI | | J-111 |

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| Installation Name | State | Status | Page | Installation Name | State | Status | Page |
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| NAVY | | | | NAVY | | | |
| Keyport Naval Undersea Warfare Center | WA | NPL | J-113 | Naval Fuel Depot, Point Molate | CA | BRAC | J-147 |
| Lakehurst Naval Air Engineering Station | NJ | NPL | J-115 | Naval Magazine Indian Island | WA | NPL | J-148 |
| Long Beach Naval Complex | CA | BRAC | J-120 | Naval Station Newport | RI | NPL | J-149 |
| Louisville Naval Surface Warfare Center | KY | BRAC | J-124 | New London Naval Submarine Base | CT | NPL | J-153 |
| Mare Island Naval Shipyard | CA | BRAC | J-127 | Norfolk Naval Base Sewells Point Naval Complex | VA | NPL | J-155 |
| Marine Corps Base Quantico | VA | NPL | J-128 | Norfolk Naval Shipyard | VA | NPL | J-156 |
| Mechanicsburg Naval Inventory Control Point | PA | NPL | J-134 | Orlando Naval Training Center | FL | BRAC | J-161 |
| Midway Naval Air Facility | MQ | BRAC | J-135 | Parris Island Marine Corps Recruit Depot | SC | NPL | J-163 |
| Moffett Field Naval Air Station | CA | NPL/BRAC | J-137 | Patuxent River Naval Air Station | MD | NPL | J-164 |
| Naval Amphibious Base Little Creek | VA | NPL | J-142 | Pearl Harbor Naval Complex | HI | NPL | J-165 |
| Naval Auxiliary Landing Field Crows Landing | CA | BRAC | J-143 | Pensacola Naval Air Station | FL | NPL | J-167 |
| Naval Computer and Telecommunications Area Master | HI | NPL | J-144 | Philadelphia Naval Complex | PA | BRAC | J-168 |
| Naval District Washington, West Area | VA | NPL | J-145 | Portsmouth Naval Shipyard | ME | NPL | J-170 |
| Naval Facilities on Vieques | PR | Proposed NPL | J-146 | Puget Sound Naval Shipyard | WA | NPL | J-172 |

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| NAVY | | | | NAVY | | | |
| San Diego Naval Training Center | CA | BRAC | J-183 | Yuma Marine Corps Air Station | AZ | NPL | J-219 |
| South Weymouth Naval Air Station | MA | NPL/BRAC | J-188 | AIR FORCE | | | |
| St. Juliens Creek Annex | VA | NPL | J-189 | Air Force Plant No. 4 | TX | NPL | J-17 |
| Treasure Island Naval Station | CA | BRAC | J-196 | Air Force Plant No. 44 | AZ | NPL | J-18 |
| Trenton Naval Air Warfare Center Aircraft Division | NJ | BRAC | J-197 | Air Force Plant No. 85 | OH | Proposed NPL | J-19 |
| Tustin Marine Corps Air Station | CA | BRAC | J-199 | Air Force Plant PJKS | CO | NPL | J-20 |
| Warminster Naval Air Warfare Center Aircraft Division | PA | NPL/BRAC | J-206 | Andersen Air Force Base | GU | NPL | J-25 |
| Washington Navy Yard | DC | NPL | J-207 | Andrews Air Force Base | MD | NPL | J-26 |
| Whidbey Island Naval Station Ault Field and Seaplane Base | WA | NPL | J-209 | Arnold Engineering Development Center | TN | Proposed NPL | J-29 |
| White Oak Naval Surface Warfare Center | MD | BRAC | J-210 | Atlantic City Air National Guard Base Atlantic City International Airport | NJ | NPL | J-30 |
| Whiting Field Naval Air Station | FL | NPL | J-211 | Bergstrom Air Force Base | TX | BRAC | J-35 |
| Williamsburg FISC, Cheatham Annex | VA | NPL | J-213 | Brandywine Defense Reutilization and Marketing Office | MD | NPL | J-36 |
| Willow Grove Naval Air Station Joint Reserve Base | PA | NPL | J-215 | Carswell Air Force Base (Fort Worth JRB NAS) | TX | BRAC | J-41 |
| Yorktown Naval Weapons Station | VA | NPL | J-218 | Castle Air Force Base | CA | NPL/BRAC | J-42 |

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| Installation Name | State | Status | Page | Installation Name | State | Status | Page |
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| AIR FORCE | | | | AIR FORCE | | | |
| Chanute Air Force Base | IL | Proposed NPL/BRAC | J-44 | Grissom Air Force Base | IN | BRAC | J-95 |
| Chicago O'Hare IAP Air Reserve Station | IL | BRAC | J-47 | Hanscom Air Force Base | MA | NPL | J-98 |
| Dover Air Force Base | DE | NPL | J-57 | Hill Air Force Base | UT | NPL | J-100 |
| Eaker Air Force Base | AR | BRAC | J-59 | Homestead Air Force Base | FL | NPL/BRAC | J-101 |
| Edwards Air Force Base | CA | NPL | J-61 | K.I. Sawyer Air Force Base | MI | BRAC | J-110 |
| Eielson Air Force Base | AK | NPL | J-62 | Kelly Air Force Base | TX | BRAC | J-112 |
| Ellsworth Air Force Base | SD | NPL | J-64 | Langley Air Force Base; including NASA Langley Research Center | VA | NPL | J-116 |
| Elmendorf Air Force Base | AK | NPL | J-65 | Loring Air Force Base | ME | NPL/BRAC | J-122 |
| England Air Force Base | LA | BRAC | J-66 | Lowry Air Force Base | CO | BRAC | J-125 |
| F.E. Warren Air Force Base | WY | NPL | J-67 | March Air Force Base | CA | NPL/BRAC | J-126 |
| Fairchild Air Force Base | WA | NPL | J-68 | Massachusetts Military Reservation Otis Air National Guard Base and Camp | MA | NPL | J-129 |
| Gentile Air Force Station Defense Electronics Supply Center, Dayton | OH | BRAC | J-92 | Mather Air Force Base | CA | NPL/BRAC | J-130 |
| George Air Force Base | CA | NPL/BRAC | J-93 | McChord Air Force Base Washrack/ Treatment Area and American Lake | WA | NPL | J-131 |
| Griffiss Air Force Base | NY | NPL/BRAC | J-94 | McClellan Air Force Base | CA | NPL/BRAC | J-132 |

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| AIR FORCE | | | | AIR FORCE | | | |
| McGuire Air Force Base | NJ | NPL | J-133 | Tyndall Air Force Base | FL | NPL | J-201 |
| Mountain Home Air Force Base | ID | NPL | J-139 | Williams Air Force Base | AZ | NPL/BRAC | J-212 |
| Myrtle Beach Air Force Base | SC | BRAC | J-140 | Willow Grove Air Reserve Station | PA | NPL | J-214 |
| Newark Air Force Base | OH | BRAC | J-154 | Wright-Patterson Air Force Base | OH | NPL | J-216 |
| Norton Air Force Base | CA | NPL/BRAC | J-157 | Wurtsmith Air Force Base | MI | Proposed NPL/BRAC | J-217 |
| Pease Air Force Base | NH | NPL/BRAC | J-166 | DLA | | | |
| Plattsburgh Air Force Base | NY | NPL/BRAC | J-169 | Defense Distribution Depot Memphis | TN | NPL/BRAC | J-52 |
| Reese Air Force Base | TX | BRAC | J-175 | Defense Distribution Depot San Joaquin, Sharpe Facility | CA | NPL | J-53 |
| Richards-Gebaur Air Reserve Station | MO | BRAC | J-176 | Defense Distribution Depot San Joaquin, | CA | NPL | J-54 |
| Rickenbacker Air National Guard Base | OH | Proposed NPL/BRAC | J-177 | Defense Supply Center Philadelphia | PA | BRAC | J-55 |
| Robins Air Force Base | GA | NPL | J-179 | Defense Supply Center Richmond | VA | NPL | J-56 |
| Tinker Air Force Base | OK | NPL | J-192 | FUDS | | | |
| Travis Air Force Base | CA | NPL | J-195 | Fike-Artel Chemical | WV | NPL | J-69 |
| Tucson International Airport | AZ | NPL | J-198 | Former Nansemond Ordnance Depot | VA | NPL | J-70 |

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| Installation Name | State | Status | Page | Installation Name | State | Status | Page |
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| FUDS | | | | FUDS | | | |
| Former Weldon Spring Ordnance Works | MO | NPL | J-71 | West Virginia Ordnance Works | WV | NPL | J-208 |
| Fort Crowder | MO | NPL | J-73 | | | | |
| Hastings Groundwater Contamination Site | NE | NPL | J-99 | | | | |
| Jet Propulsion Laboratory | CA | NPL | J-108 | | | | |
| Moses Lake Wellfield Contamination Site | WA | NPL | J-138 | | | | |
| National Presto Industries | WI | NPL | J-141 | | | | |
| Naval Station Todd-Tacoma | WA | NPL | J-150 | | | | |
| Nebraska Ordnance Plant | NE | NPL | J-151 | | | | |
| New Hanover County Airport | NC | NPL | J-152 | | | | |
| Old Navy Dump/Manchester Annex | WA | NPL | J-159 | | | | |
| Ordnance Works Disposal Areas | WV | NPL | J-160 | | | | |
| Pantex Plant | TX | NPL | J-162 | | | | |
| San Bernardino Engineering Depot | CA | NPL | J-182 | | | | |
| Sangamo Electric Dump/Crab Orchard National Wildlife Refuge | IL | NPL | J-184 | | | | |

| | | | |
|----------------------|---|--|--|
| FFID: | MD321382135500 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 72,516 acres | Funding to Date: | \$ 509.2 million |
| Mission: | Develop and test equipment and provide troop training | Estimated Cost to Completion (Completion Year): | \$ 416.0 million(FY 2037) |
| 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 FY1999 and FY2004 |
| 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 (USTs); 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 1989, and one in 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 five-year reviews in FY99 and FY03.

The Army has signed eighteen Records of Decision (RODs) to date. The cleanup progress at Aberdeen Proving Ground for FY00 through FY03 is detailed below.

In FY00, the installation began the Lauderick Creek UXO/chemical weapons and munitions (CWM) interim removal action and completed the Canal Creek (CC) Study Area UST removal action. The Army completed interim remedial actions (RAs) for mercury-contaminated soil in the Bush River Area and an abandoned sewage system at Carroll Island. The Army completed a draft focused feasibility study (FS) for the Cluster 5 blast slab dumpsites, RAs at the Carroll Island disposal pits [Operable Unit (OU) A], and a soil cover at the Old Bush River Road landfill. The Army completed removal of CWM-related items at the J-Field Study Area, and the RI for Cluster 13 and other Lauderick Creek clusters. The Army and regulators signed RODs for CC East Branch Groundwater and Western Boundary Study Area (WBSA), OU 1.

In FY01, the Army completed the WBSA OU 1 treatment facility design and initiated a military construction project for the CC treatment facility. Groundwater contamination sampling was conducted at Graces Quarters. The installation signed decision documents 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 OU1 groundwater treatment facilities. The installation completed the CWM Lauderick Creek removal action and delineated a perchlorate groundwater plume located in the WBSA. The installation signed two decision documents: 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 review reports. 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.

FY04 IRP Progress

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

FY04 MMRP Progress

The Army Range Inventory Report/Preliminary Assessment was completed.

Plan of Action

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

IRP

- Award 3 performance-based contracts in FY05-FY06.
- Complete RODs for Cluster 3 Lead Contaminated Soil and Other Aberdeen Areas Groundwater Sites in FY05-FY06.
- Complete construction of Graces Quarters Shoreline Stabilization in FY05-FY06.
- Complete FSs for Bush River Groundwater and Land Disposal Units and four RIs for Other Edgewood Areas in FY05-FY06.
- Complete Final ERA for Aberdeen Area, HHRA for Other Aberdeen Areas and Western Boundary, and final Phase II RI for Other Aberdeen Areas in FY05-FY06.
- Complete Final Rad Risk Assessment and RI/FS for Westwood in FY05-FY06.

MMRP

- Initiate site inspection in FY06.

| | | | |
|------------------------|---|--|--|
| FFID: | AK017002432300 | Funding to Date: | \$ 239.3 million |
| Size: | 76,800 acres | Estimated Cost to Completion (Completion Year): | \$ 53.2 million(FY 2021) |
| Mission: | Provided services and materials to support aviation activities and operating forces of the Navy | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2008 |
| HRS Score: | 51.37; placed on NPL in May 1994 | Five-Year Review Status: | Completed FY2001 - remedy remains protective |
| 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

In September 1995, the BRAC Commission recommended closure of Adak Naval Air Facility (NAF). Operational Naval forces departed the island on April 1, 1997, and command functions were assumed by the engineering Field Activity Northwest. 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 was placed on the NPL in May 1994. 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 OU A and OU B-1, and two no further actions (NFAs) 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 to the Aleut Corporation for private reuse in March of FY04. The installation completed the environmental cleanup on an additional 24,300 acres that was transferred to the Department of Interior (DOI) in FY04 as part of the Alaska Maritime Wildlife refuge. The cleanup progress at Adak NAF for FY00 through FY03 is detailed below.

In FY00, regulatory agencies signed the Operable Unit (OU) A ROD. Work began on the focused feasibility study (FFS) for petroleum sites in the OU. UXO investigations were initiated for the remaining OU B sites. Several sites originally included in OU B were recommended for NFA. The Navy discontinued disposal operations at the landfill as it terminated caretaker operations on the island in FY00. Petroleum cleanups were completed at nine sites.

In FY01, the draft institutional control management plan was Navy

completed. Selection of a final remedy for petroleum contamination continued, including an 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 opened to accommodate disposal of the cabin demolition debris. The Navy completed the final remedial investigation/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, which documents the completion of environmental cleanup necessary to support transfer of approximately 32,000 acres of property. 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. RAs for all OU B-1 munitions and explosive of concern (MEC) contaminated sites in OU B-1 to be transferred to private ownership (Parcels 1A and 1B) and DOI (Parcels 2 and 3) were completed.

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 of 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 institutional controls 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.

FY04 IRP Progress

The installation transferred approximately 47,000 acres of property to The Aleut Corporation. In addition, it relinquished approximately 24,300 previously withdrawn acres back to DOI for management as part of the Alaska Maritime National Wildlife Refuge. 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 cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Regulatory issues delayed the finalization of decision documents (DDs). While free-product recovery at petroleum sites resumed, funding issues prevented other petroleum remediation. Regulatory issues delayed the partial delisting for media other than groundwater at OU-A.

FY04 MMRP Progress

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.

Plan of Action

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

IRP

- Submit closure documents for 19 petroleum release sites in FY05.
- Complete the DD for ten petroleum sites in FY05.
- Conduct 5-year review for completion in FY05-FY06.
- Complete FFS, proposed plan (PP) and DD on four remaining petroleum sites in FY05-FY06.
- Complete partial delisting for media other than groundwater OU-A in FY05-FY06.

MMRP

- Amend the OU-B2 ROD to reflect a different remedial approach at Parcel 4 in FY05.
- Complete the OU-B2, RI/FS, PP and ROD for ordnance-contaminated sites at Parcel 4 in FY05-FY06.
- Develop remedial design work plans for execution of at OU B-1 and OU B-2 sites in FY06 .

| | | | |
|------------------------|---|--|---|
| FFID: | GU917002755700 | Funding to Date: | \$ 61.9 million |
| Size: | 1,809 acres | Estimated Cost to Completion (Completion Year): | \$ 2.7 million(FY 2004) |
| Mission: | Provided services and material support for transition of aircraft and tenant commands | IRP/MMRP Sites Final RIP/RC: | FY 2004/None |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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 has 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, five 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 FY00 through FY03 is detailed below.

In FY00, all five parcels of the former NAS, totaling 1,779 acres, were transferred to GovGuam and GIAA. As part of the transfer agreement, an environmental services cooperative agreement was agreed to by the Navy and GovGuam, transferring groundwater remediation and closeout responsibilities to GovGuam. A non-time critical removal action (NTCRA), engineering evaluation and cost analysis, and performance design were implemented.

In FY01, the installation initiated an NTCRA for Site 1. It also 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.

FY04 IRP Progress

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 .

FY04 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 dye trace study for long-term monitoring effectiveness and removal action documentation at Site 1 in FY05.
- Complete the decision documents for all OU 2 sites with restricted reuse in FY05.
- Complete fish sampling and risk evaluation to determine continuance of fishing advisory at Site 35 in FY05.
- Complete Site 37 monitoring well installation and two rounds of sampling analysis in FY05.
- Complete site investigation fieldwork sampling and analysis to determine further response actions required at Building 15-46A for Site EBS BASEWD in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|--|--|---|
| 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: | \$ 62.7 million |
| HRS Score: | 39.92; placed on NPL in August 1990 | Estimated Cost to Completion (Completion Year): | \$ 12.8 million(FY 2013) |
| IAG Status: | IAG signed in 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| | | Five-Year Review Status: | Completed FY2003/Planned FY2008 |



Progress To Date

Air Force Plant No. 4 (AFP 4) has been a primary manufacturer of military aircraft and related equipment since 1942. In 1990, EPA placed the installation on the NPL and the Air Force signed an interagency agreement. 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 FY00 through FY03 is detailed below.

In FY00, fish tissue sampling in nearby Lake Worth indicated a potential health hazard due to polychlorinated biphenyls (PCBs), and the Texas Department of Health issued a consumption advisory. The Carswell Air Force Base (AFB) groundwater treatment system near Landfill 4/5 (LF4/5) was reactivated because the plume had migrated near the federal property line. Additional drums were discovered in the Carswell Waste Pile 7 area. Phase II of the west side dense nonaqueous phase liquid (DNAPL) investigation was completed. The installation worked with Carswell AFB and the Air Force Center for Environmental Excellence (AFCEE) on a focused feasibility study for the potential transfer of the Carswell golf course because of issues related to commingled plumes.

In FY01, the installation completed Lake Worth sediment sampling, finding elevated PCB 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 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 LF3 treatment system was conducted. An off-site well adjacent to Carswell AFB was monitored, and contaminant levels were just above the maximum acceptable limits.

In FY02, the construction of a three-phase heating array for the soil and groundwater below Building 181 was completed, and the heating continued for over 20 weeks. The Air Force drafted and reviewed the 5-year review ROD 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, AFCEE, and BRAC personnel, to include partial funding for the permeable reactive barrier wall, which shut down the LF4/5 treatment system. The RAB met quarterly. No Military Munitions Response Program (MMRP) sites were identified at this installation.

In FY03, the 5-year ROD review was submitted 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. The Air Force updated its MMRP inventory. Cost assessments and Risk Assessment Code scores were updated for each MMRP site.

FY04 IRP Progress

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

The AFRPA was unable to complete negotiations with regulators on cleanup goals for the Carswell golf course because continued planning and discussion with the developer caused delays. In addition, field work activities were delayed since Phase II Lake Worth sediment sampling results were not received until February 2004. The installation coordinated work with contractors for the follow-up fieldwork, including addressing PCBs in the sediment (fish).

The installation hosted a RAB tour of the facility in addition to three other RAB meetings.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

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 FY05.
- Complete Phase III fieldwork on DNAPL/PCB near creek, landfills, and Lake Worth in FY05.
- Continue partnering with the North Central Texas Council of Governments for Lake Worth restoration in FY05.
- Prepare Preliminary Closeout Report and ROD modifications, pursuant on available funds, in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|--------------------------|
| FFID: | AZ957172462900 | Funding to Date: | \$ 72.7 million |
| Size: | 1,374 acres | Estimated Cost to Completion (Completion Year): | \$ 40.6 million(FY 2030) |
| Mission: | Research, design, and manufacture missiles | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| HRS Score: | 57.86 placed on NPL in 1983 | Five-Year Review Status: | Completed FY2004 |
| IAG Status: | Negotiations underway | | |
| Contaminants: | Solvents, machine coolants and lubricants, paint sludges and thinners, heavy metals | | |
| Media Affected: | Soil and groundwater | | |



Progress To Date

Air Force Plant 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 Area, 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 FY00 through FY03 is detailed below.

In FY00, all 12 Installation Restoration Program (IRP) sites had remediation systems in place or required NFA. EPA approved an explanation of significant differences for the Site 1, 2, and 3 ROD. Additional volatile organic compounds (VOCs) were detected at Site 1, and the SVE system was restarted for three months. Confirmation samples verified that Site 1 met ROD standards, and the Site 1 closeout report received EPA concurrence. Six of 12 sites received EPA concurrence for site closeout.

In FY01, site closeout for Site 6, historic drainage channels and trenches, was completed. 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 ROD was completed and the installation awaited stakeholder comments on the document before finalizing. 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

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 ROD review, which was under revision. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

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 one 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 Site 2 in situ pilot continued, 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 ROD review for six soil sites.

The installation updated and finalized the AFP 44 CRP.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

Plan of Action

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

IRP

- Conduct an expanded in situ pilot project at Site 3 in FY05.
- Monitor soil gas for one year at Sites 3 and 5 in FY05.
- Continue O&M of groundwater reclamation system and DPE systems in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|-------------------------|---|-------------------------------------|-------------------------|
| FFID: | OH557172887000 | Estimated Cost to Completion | \$ 0.0 million(FY 2000) |
| Size: | 420 acres | (Completion Year): | |
| Mission: | Produced aircraft and aircraft missile components | IRP/MMRP Sites Final RIP/RC: | FY 2000/None |
| HRS Score: | 50.00; proposed for NPL in January 1994 | Five-Year Review Status: | Planned FY2005 |
| 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.

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, and in FY96, the AOC was closed. The cleanup progress at AFP 85 for FY00 through FY03 is detailed below.

In FY00, the installation completed feasibility study and remedial action (RA) activities at the fire training area. It also received concurrence from Ohio EPA on closure of the coal pile site and the acid spill site. Sales proceeds are expected to fund future cleanup.

In FY01, the installation obtained Ohio EPA concurrence on the 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

In FY03, long-term monitoring remained ongoing under the Installation Restoration Program (IRP). The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

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.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

Plan of Action

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

IRP

- Complete investigation of Building 271 Storm Sewer, which allows spread of contamination, in FY05.
- Remove Building 271 Storm Sewer and associated soil considered to be source of VOC contamination in FY05.
- Remove contaminated sediment at IRP Site 10 south in FY06.
- Demonstrate clean closure of IRP Site 10 south in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|---|--|--------------------------|
| FFID: | CO857172553700 | Funding to Date: | \$ 32.3 million |
| Size: | 464 acres | Estimated Cost to Completion (Completion Year): | \$ 38.7 million(FY 2018) |
| Mission: | Research, develop, and assemble missiles and missile components; test engines | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2012 |
| 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. The cleanup progress at AFP PJKS from FY00 through FY03 is detailed below.

In FY00, closures were completed at two sites. A work plan for the groundwater monitoring program was developed and implemented. The installation obtained regulatory concurrence on an engineering evaluation and cost analysis for soil contamination at two sites.

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. A removal action to address contaminated soil at two sites was completed.

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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. MMRP sites were identified at this installation.

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 that will be conducted as part of the corrective measure study process. 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. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site.

FY04 IRP Progress

The installation conducted bedrock pilot studies in three locations to evaluate bioremediation techniques to treat TCE. The treatment successfully worked in one location, however the other two locations required further observation. 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 installation 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 for regulator comments. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Continue groundwater monitoring in FY05.
- Conduct alluvial bench scale study in FY05.
- Convert bedrock pilot study to an interim remedial action in FY05.
- Prepare combined soils additional investigation report in FY05.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | AL421382000800 | Funding to Date: | \$ 61.9 million |
| Size: | 2,235 acres | Estimated Cost to Completion (Completion Year): | \$ 4.1 million(FY 2005) |
| Mission: | Manufactured explosives | IRP/MMRP Sites Final RIP/RC: | FY 2005/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 (AAP) 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 (OUs) in Area A and Area B. The groundwater, surface water, sediment, and soil are contaminated with nitroaromatic compounds, heavy metals, and explosives waste. 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 two final 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 FY00 through FY03 is detailed below.

In FY00, the Army completed a land use control plan and an implementation plan as required to support property transfer. The installation prepared a technical memorandum to document satisfactory soil remediation in Area B and the property's availability for transfer for industrial reuse. The technical review committee held quarterly meetings to address regulatory issues.

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.

FY04 IRP Progress

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 soils FS.

Funding and regulatory issues delayed the soils ROD. Technical issues delayed the groundwater RI/FS.

FY04 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 soils ROD in FY05.
- Complete the groundwater RI/FS in FY05.
- Complete the groundwater ROD, the first technical impracticability ROD in Alabama, in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|--|--|---|
| FFID: | CA917002323600 | Contaminants: | BTEX, chlorinated solvents, radium, heavy metals, herbicides, pesticides, petroleum hydrocarbons, PAHs, PCBs, VOCs, SVOCs |
| Size: | 2,675 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Maintained and operated facilities and provided services and material support for naval aviation activities and operating forces | Funding to Date: | \$ 193.4 million |
| HRS Score: | 50.0; placed on NPL July 22, 1999 | Estimated Cost to Completion (Completion Year): | \$ 173.1 million(FY 2014) |
| IAG Status: | Federal facility agreement signed | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



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. A BRAC cleanup plan was completed in FY94. The installation formed a technical review committee in FY90 and converted it to a Restoration Advisory Board (RAB) in FY93. In addition, a community land reuse plan was approved in FY96. The installation closed in April 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. The Navy awarded the installation a subsequent TAPP grant in FY03. The installation was placed on the NPL on July 22, 1999. The installation signed a federal facilities agreement (FFA) in 2001. 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. The cleanup progress at Alameda NAS for FY00 through FY03 is detailed below.

In FY00, the installation completed the removal action and transferred East Housing (73 acres) to the City of Alameda. The installation completed treatability studies at Sites 4, 5, and 13 and cleanup and removal of the fuel line at the RCRA-permitted facility at Area 37. Negotiations with EPA and the State of California on the FFA neared completion. The installation prepared a ROD for Marsh Crust. The installation nearly completed the basewide Environmental Baseline Survey and reached a preliminary agreement with the regulatory agencies on the environmental condition of property re-categorization of parcels. The majority of radium paint contamination at Sites 5 and 10 was removed.

In FY01, the installation completed the majority of the basewide sampling. The petroleum corrective action plans were completed and cleanup began. The installation completed the first Site 25 removal action and initiated documentation for removals at the other sites. Closure of three RCRA-permitted

sites was completed. Regulatory concurrence was received on one site. The RI and the feasibility study (FS) for OU 3 were separated so that data gap sampling, cumulative risk assessment, and geotechnical/ordnance and explosives waste investigation could be 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 (GW), 9, 11, 16 and 21, and the 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 in 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 grant for the groundwater RI and FS for OU 5. The Navy produced a comprehensive newsletter updating all site activities for all interested parties.

FY04 IRP Progress

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 iNavy 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 is not needed for this no further action site. 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 proposed plan (PP) and ROD for Sites 14 and 15. Natural resource trustee issues delayed the completion of the FS, PP, and ROD for OU 3 and 5 (GW). Due to technical reasons, the installation cancelled the removal actions at Sites 11 and 21. Funding issues delayed the removal actions at Site 4 and one area at Site 5. The removal action at Site 9 was delayed due to a previously unknown site condition. The RIs for OU 4B (Site 24) and OU 4C (Site 20) were postponed in order to account for a gap in the data sampling.

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.

FY04 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 the PPs and RODs for Sites 14 and 15 in FY05.
- Complete RI, FS and PP for OU 1 (Sites 6, 7, 8, and 16) in FY05.
- Complete removal action at Site 16 and one area at Site 5 in FY05.
- Complete FS for OU 4B (Site 17) and OU 6 (Site 28) in FY05 and the PP for OU 6 in FY06.
- Complete RIs for Site 24 of OU 4B and Site 20 of OU 4C in FY06 following data-gap sampling effort in FY05

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|---|--|-----------------------------|
| FFID: | GA417302369400 | Media Affected: | Groundwater, soil, sediment |
| Size: | 3,579 acres | Funding to Date: | \$ 32.9 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): | \$ 11.1 million(FY 2013) |
| 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 FY2001 |
| 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. The installation was placed on the NPL in December 1989. A technical review committee was formed in FY89. In July 1991, the installation signed a federal facility agreement. In FY92, a community relations plan was completed. 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 and final RODs for four sites at OU 1, two sites at OU 3, two sites at OU 4, OU 5, and OU 6 were completed. In addition, the installation has signed an interim ROD at Solid Waste Management Unit (SWMU) 3. The cleanup progress at Albany MCLB for FY00 through FY03 is detailed below.

In FY00, Albany received clean closure notification for the carpenter shop wood-preservation area that was contaminated with pentachlorophenol and completed remediation at SWMU 30, the former PCBs transformer site. The Georgia Environmental Protection Division (EPD) began receiving Defense and State Memorandum of Agreement funding.

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

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 remedial design (RD) for source control began. 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 completed the ET cap pilot study and initiated the RD for groundwater.

FY04 IRP Progress

The installation began delineation sampling and investigation of the SWMUs. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Remediation of two SWMUs was delayed pending the completion of ongoing work at these sites. Regulatory agencies required an optimization review, delaying the completion of an RD for groundwater and source areas, and the initiation of construction.

FY04 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Implement groundwater remedy in FY05.
- Complete remediation of the two SWMUs in FY05.
- Complete an explanation of significant differences to the OU 6 ROD in FY05.
- Complete RD for source areas in FY05 and construct caps in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--|
| FFID: | WV317002369100 | Funding to Date: | \$ 26.6 million |
| Size: | 1,628 acres | Estimated Cost to Completion (Completion Year): | \$ 43.8 million(FY 2043) |
| Mission: | Research, develop, and produce solid propellant rocket motors for DoD and NASA | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Completed FY2003 - remedy remains protective |
| 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), cyclotrimethylenetrinitramine (RDX), cycloctetramethylenetetranitramine (HMX), perchlorate, and silver. The installation was placed on the NPL in May 1994. A technical review committee was established in FY89 and converted to a Restoration Advisory Board in FY95. In FY99, the installation issued a draft community relations plan. In FY94, an administrative record and two information repositories were established. The installation also signed a federal facility agreement in FY98. 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 for FY00 through FY03 is detailed below.

In FY00, the installation completed a remedial investigation (RI) for groundwater and soil at Site 10, and identified plume boundaries. The installation completed a draft long-term management (LTM) plan and a draft sewer line hydrologic investigation for Site 10, and a draft final work plan addendum for Sites 4B and 10. It also completed a natural attenuation (NA) study for groundwater, a draft NA assessment project plan, and an LTM report for Site 5. The installation completed the SWMU/AOC preliminary investigation, resulting in a need for further RI/feasibility study (RI/FS) at three SWMUs' AOCs. In addition, a final decision document for NFA was signed for 14 SWMUs. The installation completed a draft environmental engineering and cost analysis (EE/CA) for soil at Site 1.

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 EE/CA and RA to expedite closure. 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 for comment to regulators. Additionally, the installation selected a final remedy for Site 10 and issued a proposed remedial action plan. It also performed a 5-year review for the Site 5 ROD. 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, SWMU 27A and 37V. The installation issued a draft risk assessment for Sites 1, 2, 3, and 10.

FY04 IRP Progress

Alleghency Ballistics Laboratory initiated work to fill in data gaps for Site 1 soils and both the human health and ecological risk assessments for Site 1. The installation completed the review of the RI/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). Technical issues delayed the completion of RI/FS for Sites 2 and 5. Data gaps delayed the RIs for SWMUs 27A and 37V.

FY04 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 further sampling of Site 1 soils and begin work on the revised human health and ecological risk assessments in FY05.
- Complete RI/FS for Sites 2 and 5 in FY05.
- Document NFA for Sites 3 and 12 in FY05.
- Complete the ROD for Site 10 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|--|--|--------------------------|
| FFID: | GU957309951900 | Estimated Cost to Completion (Completion Year): | \$ 60.1 million(FY 2017) |
| Size: | 15,000 acres | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2013 |
| Mission: | Provide troops, equipment, and facilities in the Pacific | Five-Year Review Status: | Completed FY2004 |
| HRS Score: | 50.00; placed on NPL in October 1992 | | |
| IAG Status: | Federal facility agreement signed in March 1993 | | |
| Contaminants: | VOCs, metals, asphalt, dioxins, PCBs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 81.6 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 six operable units (OUs). To date, Guam EPA and EPA Region 9 have signed Records of Decision (RODs) for the MARBO OU and the Harmon OU. The cleanup progress at Andersen AFB for FY00 through FY03 is detailed below.

In FY00, engineering evaluation and cost analysis (EE/CA) reports for four sites and no further remedial action planned (NFRAP) documents for ten sites were completed. Groundwater investigation at the Main Base OU, partnerships with Guam EPA and EPA Region 9 remedial project managers, and long-term monitoring of MARBO OU groundwater continued.

In FY01, the MARBO ROD amendment was signed. Remediation was completed at Landfill-29 (LF-29). EE/CAs for LF-10, LF-13, LFs 17-19, and the Ritidian Dump were under regulatory review. NFRAP documents for LF-6, LF-22, WP-4, CSA-1, and FTA-1 were awaiting signature by Guam EPA. The remedial investigation and feasibility study (FS) and the proposed plan for the Harmon OU were finalized, and the ROD was in regulatory review. The Urunao Dump, which was in the FS phase, was added as a new OU and Installation Restoration Program (IRP) site. Interim remedial action (IRA) projects for LF-29 and LF-7 were completed. During the remediation of WP-6, additional soil requiring remediation was identified, requiring a follow-on project. IRAs for CSA-4, LF-14, LF-21, and the polychlorinated biphenyls (PCBs) storage area were initiated.

In FY02, the installation completed EE/CA reports for FTA-2 and LF-8 and submitted them for regulatory review. Groundwater monitoring continued at the installation. The Harmon OU ROD was approved and signed by EPA Region 9, and was awaiting signature by the Guam EPA. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. MMRP sites were identified at this installation.

In FY03, the installation continued long-term operations for LF-2 and 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 three EE/CA reports for LF-8, LF-17, and FTA-2, the NFRAP for CSA-1, remediation verification reports for 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 5-year review. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site. RAB activities continued and the installation maintained good communication with regulators.

FY04 IRP Progress

Anderson AFB initiated the dual-phased design of the Urunao dump site remediation. The installation also completed the RA for WP-6 and obtained regulatory inspection and approval. The IRA for LF-10, a fencing project for land use control, was completed. The installation finalized the WP-6 and LF-10 Remediation Verification Reports (RVRs). Groundwater sampling was conducted as scheduled for MARBO and the Main Base. The installation finalized the 5-year review for final coordination and signatures. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed the signing of the Urunao ROD and the initiation of the Ritidian site IRA. Intense rainfall during the summer months caused a delay of the PA and site investigation (SI) field work at the 23 AOCs.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Initiate the IRAs at LF-13, 14, 19, 20 and complete the IRA for the Ritidian dump site in FY05.
- Initiate and complete EE/CA investigation for former AOC sites DA-52, -53, and -54 in FY05.
- Finalize PA/SI for 23 AOCs in FY05.
- Obtain all Urunao ROD signatures and complete Urunao dump site cleanup design in FY05.
- Continue Main Base and MARBO groundwater monitoring in FY05-FY06.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|-------------------------|---|-------------------------------------|--------------------------|
| FFID: | MD357182400000 | Estimated Cost to Completion | \$ 40.3 million(FY 2020) |
| Size: | 4,300 acres | (Completion Year): | |
| Mission: | Provide Presidential airlift support | IRP/MMRP Sites Final RIP/RC: | FY 2018/FY 2016 |
| HRS Score: | 50.00; placed on NPL in June 1999 | Five-Year Review Status: | Planned FY2012 |
| IAG Status: | None | | |
| Contaminants: | Metals, SVOCs, VOCs, PAHs, PCBs, pesticides | | |
| Media Affected: | Surface water | | |
| Funding to Date: | \$ 50.6 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 (FT-02) and Source 2 (FT-03) are former fire training areas where fuel and waste oil were burned. Source 3 (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.

Twenty-two Installation Restoration Program (IRP) sites and 11 additional areas of concern (AOCs) have been identified. Four sites have been closed under the RCRA petroleum program. The cleanup progress at Andrews AFB for FY00 through FY03 is detailed below.

In FY00, final basewide master plans were submitted to regulators to streamline future document review. An administrative record and an information repository were created on CD-ROM. The former skeet range was demolished.

In FY01, the installation completed the remedial investigation (RI) work plans for Source 4. Over-excavation was implemented as an interim remedial action at SS-22 (Hangar 13). A building demolition project at 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 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 SS-12 and SS-13. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges listed on the NPL in FY02. An MMRP site was identified at this installation.

In FY03, the installation submitted the draft basewide background study and awaits regulatory comments. Fieldwork commenced for the basewide ERA and RIs at FT-04, LF-06/07, and ST-10. Andrews AFB was awarded a performance-based contract (PBC) for closure of ST-17 Army and Air Force Exchange Service gas station plume. The installation also received regulatory closure for ST-18 and ST-20 petroleum sites. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site.

FY04 IRP Progress

The installation submitted draft RIs at LF-05, ST-14, ST-10, and FT-04 to the partnering group which consisted of representatives from EPA, MDE, and Prince George's County Health Department. The installation prepared RI draft reports for LF-06 and LF-07. In addition, the installation initiated feasibility studies (FSs) at both LF-05 and ST-14. The installation also completed RI work plans and began field work for Source 1, Source 2, Source 3, and SS-22. The installation conducted interim actions at the SS-11 fuel spill site and a removal action, which included the removal of seven underground storage tanks at the AOC 24 former gas station. In addition, the installation conducted a groundwater treatability study (TS) at FT-04 and a soil removal and groundwater treatment at ST-17 using a PBC mechanism. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the initiation of the FSs for LF-05 and ST-14.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

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, FT-04, ST-10, SS-22, and Sources 1 and 2 in FY05.
- Initiate FS at Sources 1 and 2, LF-05/06/07, and ST-14 in FY05.
- Complete Records of Decision at SS-12/13, ST-20 and FT-04 in FY05.
- Complete soil removal at FT-04 and monitor outcome of the TS in FY05.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|------------------------|--|--|----------------------------------|
| FFID: | AL421382002700 | Funding to Date: | \$ 58.8 million |
| Size: | 600 acres | Estimated Cost to Completion (Completion Year): | \$ 30.2 million(FY 2032) |
| Mission: | Maintain combat vehicles | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2017 |
| HRS Score: | 51.91; placed on NPL in March 1989 | Five-Year Review Status: | Completed FY1999/Underway FY2004 |
| 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 1989, and the Army and EPA signed an interagency agreement in 1990. Prior to FY99, 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, and installing groundwater interception and treatment systems to remove VOCs and phenols. The Army also addressed community concerns by sampling residential groundwater wells. The installation completed a 5-year review in FY99 and FY04. During FY98, the installation formed a Restoration Advisory Board (RAB) and updated the community relations plan.

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 FY00 through FY03 is detailed below.

In FY00, the Army converted the chromium treatment plant to an SIA-centralized groundwater treatment system. The Army also completed hydrogen peroxide injection for groundwater treatment at Solid Waste Management Unit (SWMU) 12, inventory and sampling of off-post private wells and springs surrounding the installation, and the fieldwork for the Phase I off-post remedial investigation (RI). The SIA Soil Operable Unit (OU) proposed plan (PP) was completed.

In FY01, the Army completed the Phase I RI and began the Phase II off-post RI. Remedial design for sediment and surface water at 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 and feasibility study, PP, 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 installed 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.

FY04 IRP Progress

The installation submitted the draft final SIA Soil 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. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The installation initiated the remedial design outlined in the ASA OU and SIA Soil OU RODs, however, technical issues delayed completion.

FY04 MMRP Progress

The installation completed the site inspection (SI) for the two sites identified in the MMRP inventory.

Plan of Action

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

IRP

- Sign the interim ROD Amendment for the shallow groundwater OU in FY05.
- Sign the SIA Soil OU ROD and the ASA OU ROD in FY05.
- Complete the comprehensive groundwater RI in FY06.

MMRP

- Prepare SI Report in FY05.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | MA121382093900 | Funding to Date: | \$ 100.8 million |
| Size: | 48 acres | Estimated Cost to Completion (Completion Year): | \$ 0.7 million(FY 2006) |
| Mission: | Conduct materials research and development | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| HRS Score: | 48.60; placed on NPL in May 1994 | Five-Year Review Status: | Complete FY2002/Planned |
| IAG Status: | Signed July 25, 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. EPA published in the Federal Register a notice of partial deletion from the NPL of the 37-acre parcel transferred to Watertown in FY99 and deleted the parcel from the NPL in FY00. The installation divided its remedial investigation and feasibility study (FS) 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. The Army completed a 5-year review in FY02.

To date, the installation has completed one Record of Decision (ROD) and the Army has transferred a 37-acre parcel to Watertown. The cleanup progress at ARL Watertown for FY00 through FY03 is detailed below.

In FY00, EPA deleted the 37-acre parcel from the NPL. The Watertown Yacht Club completed the initial subsurface injection of an oxygen release compound to oxidize petroleum residue below two feet for the remaining operable unit (OU), the Charles River. The installation completed and distributed the Charles River draft FS. With regulator participation, the installation began to scope the Charles River OU for possible cleanup alternatives

In FY01, work continued on the Charles River 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 the 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.

FY04 IRP Progress

The installation completed the baseline ERA and is awaiting 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 remain successfully in place. The cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

FY04 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 Charles River OU baseline ERA in FY05.
- Complete Charles River ROD in FY06.
- Begin second 5-year review in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | TN457172404400 | Funding to Date: | \$ 80.9 million |
| Size: | 40,000 acres | Estimated Cost to Completion (Completion Year): | \$ 55.5 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: | The installation has not completed a 5-year review. |
| 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. In FY99, the RAB was converted to a Community Advisory Board (CAB).

The cleanup progress at AEDC for FY00 through FY03 is detailed below.

In FY00, the Estill Springs water line was extended and residents of 20 homes downgradient of the Site WP-6 plume were connected. The Site WP-6 RCRA facility investigation (RFI) was approved and a corrective measure study (CMS) work plan was submitted. The draft RFI report for Site SS-22 was completed. The installation began constructing a series of interior methane gas extraction trenches at Site LF-3. The installation used color-enhanced aerial thermography to identify springs into which groundwater from the base may be discharging.

In FY01, the draft RFI Number 3 report was completed, and preparation of the CMS work plan began. The CMS report for Site WP-6 was initiated. Construction of the interior methane gas collection trenches at Site 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. A comprehensive range inventory was initiated. This inventory was designed to be an annual, iterative effort. To supply data for the inventory, a detailed questionnaire was completed that collected data on the types of munitions used, the range's environmental status, and the type and level of external stakeholder interest.

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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. MMRP sites were identified at this installation.

In FY03, the installation completed the CMS for Site 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 SS-19 was initiated. Site WP-20 achieved RIP and response complete (RC). Risk at 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 SS-25 and SS-26 began. The IM for SS-22 was deleted with regulatory acceptance. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site. As of FY03, AEDC had two remaining high risk MMRP sites. 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.

FY04 IRP Progress

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

The RFI for Site SS-26 was delayed in order to consolidate the action with similar actions for adjacent sites.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

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 FY05.
- Achieve RIP and RC for sites WP-02, WP-11, and FT-10 in FY05.
- Initiate and complete in situ reductive dechlorination IM for WP-12 using zero-valent iron in FY05.
- Complete RFI for SS-26 in FY05 and SS-25 in FY06.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|------------------------|--|--|---|
| FFID: | NJ257282844900 | Funding to Date: | \$ 2.1 million |
| Size: | 280 acres | Estimated Cost to Completion (Completion Year): | \$ 3.0 million(FY 2011) |
| Mission: | Provide Air National Guard training | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| HRS Score: | 39.65; placed on NPL in August 1991 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | Federal facility agreement signed in July 1993 signed in July 2002 | | |
| Contaminants: | VOCs, SVOCs, lead, copper, pesticides | | |
| Media Affected: | Groundwater and soil | | |



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.

Four sites have been identified at the installation. The cleanup progress at the ANG Base for FY01 through FY03 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

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. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

The installation initiated a remedial investigation (RI). The cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

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 FY05.
- Initiate feasibility study in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|--|--|--------------------------|
| FFID: | WA017002729100 | Media Affected: | Groundwater and soil |
| Size: | 7,201 acres | Funding to Date: | \$ 81.8 million |
| Mission: | Provide support base for Trident submarines | Estimated Cost to Completion (Completion Year): | \$ 42.5 million(FY 2031) |
| 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 2011 |
| IAG Status: | Federal facility agreement signed in January 1990 | Five-Year Review Status: | Completed FY2000 |
| 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 Bangor Ordnance Disposal area was placed on the NPL in July 1987 and the Bangor Naval Submarine Base was added in August 1990. The Navy conducted an initial assessment study in FY83 to identify sites requiring further investigation because of suspected soil and groundwater contamination. In FY90, the Navy, EPA, and the State of Washington signed a federal facility agreement for the installation. In FY00, the installation completed the first basewide 5-year review.

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 (RODs) 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 at Bangor Naval Submarine Base for FY00 through FY03 is detailed below.

In FY00, the installation finalized the remedial investigation and feasibility study and signed the ROD for OU 8. This ROD includes institutional control (IC) language for OU 8 and all other OUs requiring ICs as part of the remedy. Amendment of the OU 1 ROD was completed via explanation of significant difference 3. The first basewide 5-year review was completed. The installation completed a remedial action at Underground Storage Tank 4. It also conducted sampling at OU 7 (Site 26) and at Floral Point.

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

In FY02, for OU 1 and OU 2, the installation submitted a proposal for partial delisting from the NPL for all media with the exception of groundwater. Ordnance MNA and downgradient aquifer conditions were evaluated at OU 1. Long-term operations and management (LTO&M) at OUs 1, 2, and 8 continued. LUCs were implemented and maintained. 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. LTO&M at OUs 1, 2, and 8 continued. LUCs and ICs were implemented and maintained. MNA was demonstrated as a viable alternative remedy at OU 1.

FY04 IRP Progress

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

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete the partial delisting for all media, with the exception of groundwater, at OU 1 and OU 2 in FY05.
- Present an alternative remedy and system shutdown and conduct a study to implement the new remedy at OU 1/Site 200 in FY05-FY06.
- Complete the second basewide 5-year review in FY05.

- Conduct sampling for perchlorate at site 200 and 204 in FY05.
- Continue LTO&M at five sites in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|--|--|---|
| FFID: | HI917002432600 | Media Affected: | Groundwater and soil |
| Size: | 3,816 acres | Funding to Date: | \$ 58.4 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): | \$ 8.8 million(FY 2014) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2014/None |
| IAG Status: | None | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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 FY00 through FY03 is detailed below.

In FY00, an interim remedial action (IRA) was completed at Site 18, an engineering evaluation and cost analysis (EE/CA) was prepared for Site 22, and above ground storage tank 4 was closed out. The remedial design for Site 1 was completed, and IRAs started at Sites 1 and 18. The installation conducted the remedy implementation at Underground Storage Tank 3.

In FY01, a remedial investigation (RI) was completed for Site 14. IRAs were completed for Sites 15, 22, and 23, and the sites closed out. Annual long-term management (LTM) continued at Site 19. The installation completed a site investigation of Navy retained property, recommending further action at Sites 6, 7, 17, 27, 29, and 31. The site investigation also recommended no further action at Sites 26, 28, and 30. IRAs at Sites 6, 7, 17, 27, 29, and 31 were initiated, and the draft EE/CA was completed.

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 removal actions on Site 18 firing ranges continued. 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) was negotiated with the U.S. Fish and Wildlife Service (USFWS) to ensure the protection of the endangered Ewa Plains akoko plant.

FY04 IRP Progress

The State Department of Health and USFWS identified an additional larger wetland area at Ordy Pond (Site 2). This area will require additional sampling to determine if further action is required. The results will be 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.

The completion of the ERA for non-BRAC Sites 6, 7, 17, and 26-31 was delayed because the evaluation required additional background. Unresolved ERA recommendations delayed the removal action for non-BRAC Sites 6, 7, and 29.

FY04 MMRP Progress

There are no MMRP actions scheduled at this installation in FY04.

Plan of Action

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

IRP

- Complete the ERA for non-BRAC Sites 6, 7, 17, and 26 through 31 in FY05.
- Begin the removal action for non-BRAC Sites 6, 7, and 29 in FY05.
- Perform additional sampling of Ordy Pond and complete the ERA in FY05.
- Complete the cap for the consolidation unit in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|--|
| FFID: | CA917302426100 | Funding to Date: | \$ 101.4 million |
| Size: | 5,688 acres | Estimated Cost to Completion (Completion Year): | \$ 30.3 million(FY 2029) |
| Mission: | Maintain, repair, rebuild, store, and distribute supplies and equipment; formerly conducted industrial operations | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| HRS Score: | 37.93; placed on NPL in November 1989 | Five-Year Review Status: | Completed FY2003 - remedy remains protective |
| 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. Operations that contributed to contamination were vehicle maintenance, repair and maintenance of weapons and missile systems, and storage of petroleum and chemical products. The site types include sludge disposal areas, plating waste disposal areas, low-level radioactive waste storage areas, spill sites, underground storage tank sites, and evaporation ponds. The installation was placed on the NPL in 1989 after high concentrations of trichloroethylene (TCE) were detected in groundwater monitoring wells. The installation also signed a federal facility agreement in October 1990. In FY91, the installation formed a technical review committee, prepared a community relations plan (CRP), which was updated in FY02, and established an information repository and an administrative record. Public meetings are held annually, however, there is no interest in forming a Restoration Advisory Board. In FY03, the installation completed a 5-year review.

To date, 42 sites have been identified at this installation, of which 38 are CERCLA sites. The installation has completed Records of Decision (RODs) for Operable Units (OUs) 1, 2, 3, 4, 5, and 6. The cleanup progress at Barstow MCLB for FY00 through FY03 is detailed below.

In FY00, the installation closed OUs 3 and 4. The CERCLA Area of Concern (CAOC) 7 remedial action (RA) was completed, and the CAOC 35 RAs began. An extended RCRA facility assessment (ERFA) field investigation for 15 solid waste management units was completed, and the draft report was under negotiation. An air-sparging and soil vapor extraction (AS/SVE) system at CAOC 26 was shut off.

In FY01, the installation replaced dry monitoring wells at OU 1 and closed out six tanks. RA was completed at CAOC 35, OU 5. The remedial investigation and feasibility study (RI/FS) for CAOC 39, OU7, and the treatability study (TS) for CAOC 38, OU2 Nebo North were awarded. The construction of an AS/SVE system for the Phase II pilot study at CAOC 38, Nebo South, was completed.

In FY02, the installation completed closeout of OUs 5 and 6. The ERFA 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. The closeout of 26 tanks is pending response from the California Regional Water Quality Control Board (RWQCB).

FY04 IRP Progress

The installation completed the OU 2 Nebo North AS/SVE report. Remedial action operations (RA-O) and long-term maintenance (LTM) continued at CAOCs 37, 38, and landfill caps. The installation worked with RWQCB and the private entity to manage the MTBE plume. The installation requested compensation from the private entity. The draft OU 7 RI report was submitted. Technical memorandums in support of an ESD for OUs 1 and 2 were completed. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

FY04 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 ecological risk assessment, finalize the RI, and complete FS and ROD for OU 7 in FY05.
- Prepare OUs 1 and 2 ESD and complete the optimization study in FY05.
- Repair CAOC 7 in FY05.
- Conduct design sampling and prepare remedial

design/RA work plan for AS/SVE Nebo North (OU 2) in FY05.

- Continue CAOCs 37 and 38 RA-O and landfill cap LTM in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | MA117002357000 | Funding to Date: | \$ 19.0 million |
| Size: | 46 acres | Estimated Cost to Completion (Completion Year): | \$ 29.9 million(FY 2028) |
| Mission: | Design, fabricate, and test prototype weapons and equipment | IRP/MMRP Sites Final RIP/RC: | FY 2012/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

This 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). The installation was placed on the NPL in May 1994. The facility was declared excess and closed as a non-BRAC closure on December 31, 2000. The installation established a technical review committee in FY89 and converted it to a Restoration Advisory Board in FY95. A community relations plan was developed in FY89 and updated in FY92. An information repository is maintained. The installation signed a federal facility agreement in September 1999.

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 (NFA) Record of Decision (ROD) for Site 1 and Site 2. In addition, the installation has initiated an interim ROD for Site 3. The cleanup progress at Bedford Naval Weapons Industrial Reserve Plant for FY00 through FY03 is detailed below.

In FY00, the installation completed the remedial investigation (RI) Phase II supplemental reports for Sites 3 and 4. Remedial action (RA) planning was implemented for Site 4. The RI report, including the human health and ecological risk assessments, for Sites 1, 2, 3, and 4 was completed. Monthly monitoring of the Site 3 groundwater treatment facility and quarterly monitoring of the extraction and monitoring wells continued. NFA RODs were completed for Sites 1 and 2.

In FY01, the installation completed the annual site management plan (SMP) update. Additionally, the installation successfully implemented the Site 4 accelerated 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 feasibility studies for Sites 3 and 4 and continued 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 Site 4 removal action continued and the Site 3 pilot study field implementation began. An innovative technology called 'thermal treatment' was evaluated for groundwater remediation at Sites 3 and 4. The Site 3 pilot study commenced with technology at Site 4 being applied as a continuation of the CERCLA removal action.

FY04 IRP Progress

The installation completed the heating portion of the CERCLA removal action. The innovative technology thermal treatment at Sites 3 and 4 was completed; but cool-down was only completed 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.

The ROD for Site 3 was delayed, pending the results of the pilot study.

FY04 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 the ROD for Site 4 and initiate the ROD for Site 3 in FY05-FY06.
- Initiate the monitored natural attenuation long-term monitoring at Site 4 in FY05-FY06.
- Complete the innovative technology pilot study at Site 3 in FY05-FY06.
- Continue monthly monitoring of the Site 3 groundwater treatment facility and semiannual monitoring of the extraction and monitoring wells in FY05-FY06.

MMRP

- There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|--|--|-------------------------|
| FFID: | TX657002418800 | Media Affected: | Groundwater and soil |
| Size: | 3,197 acres | Funding to Date: | \$ 47.9 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): | \$ 7.9 million(FY 2005) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 1999/FY 2005 |
| IAG Status: | None | Five-Year Review Status: | Planned FY2005 |
| 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 reuse authority 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 (RAB) 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.

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 1,661 acres have been transferred. The cleanup progress at Bergstrom AFB for FY00 through FY03 is detailed below.

In FY00, the installation completed the remaining remedial actions (RAs). The remediation system for a trichloroethylene (TCE) plume that had migrated off base began operation. Long-term management (LTM) of TCE plumes and landfills continued. The installation obtained concurrence from regulators on the closure of 32 sites, raising the number of sites and AOCs designated for NFA to 471.

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 local reuse authority through the finding of suitability to transfer (FOST) process.

In FY02, the installation submitted a deed certification for Solid Waste Management Unit 216 to regulatory agencies for approval. The installation also submitted a FOST and supplemental EBS (SEBS) for five sites and incorporated comments. The pump and treat, air sparging, and soil vapor extraction (SVE) systems for the 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 five combined Landfills 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 in April 2002 to determine a cleanup strategy based upon the TCE plume remediation systems results. The installation conducted an explosive ordnance disposal (EOD) RA project 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 installation began processing the FOST/SEBS for Area 2. Operation of the existing pump and treat, air sparging, and SVE remediation systems continued for Area 1 of the TCE plume. Operating properly and successfully (OP&S) was achieved for this area. The installation continued LTM for the combined Landfills 3 through 7 and developed documentation to achieve OP&S for the five sites. The installation submitted the EOD area (56 Acres) Residential Clearance Certification to the Air Force Safety Center for processing and the DoD Explosive Safety Board (DDESB) for their review and approval. The DDESB safety clearance was approved, allowing transfer of the EOD area.

FY04 IRP Progress

The installation transferred 161 acres. The installation addressed and produced a SEBS, and a FOST and deed were also produced for the EOD area of 56 acres and the TCE plume area of 59 acres. Both properties were transferred to the City of Austin. The installation also prepared a FOST and submitted OP&S documents. Bergstrom AFB initiated a 5-year review and conducted operation and maintenance (O&M) and LTM for combined Southeast Landfills 3 through 7 and TCE plume Area 1. The cost of completing environmental restoration at this installation has changed significantly due to technical and

estimating criteria issues.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Transfer remaining two parcels in FY05.
- Obtain OP&S and FOST approvals in FY05.
- Pursue guaranteed fixed price remediation contract for O&M and LTM for combined Southeast Landfills and TCE Plume Area 1 in FY05.
- Complete 5-year review in FY05.
- Abandon groundwater wells as needed in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|-------------------------|-----------------------------------|--|---|
| FFID: | MD357182400000 | Estimated Cost to Completion (Completion Year): | \$ 10.3 million(FY 2019) |
| Size: | 8 acres | IRP/MMRP Sites Final RIP/RC: | FY 2008/None |
| Mission: | None (inactive) | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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: | \$ 3.5 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 three 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 FY00 through FY03 is detailed below.

In FY00, the installation submitted a draft remedial investigation and feasibility study (RI/FS) work plan, which was jointly scoped with regulators.

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

In FY02, Andrews AFB completed Phase I of the 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

In FY03, the treatment system continued to operate as permissible during lulls in RI field efforts. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

The installation initiated the 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.

Regulatory issues delayed completion of the RI/FS report, the proposed plan (PP), and the Record of Decision (ROD). Regulatory and technical issues delayed the potential interim actions.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

Plan of Action

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

IRP

- Finalize RI/FS in FY05.
- Submit PP and draft ROD in FY05.
- Initiate interim actions, if needed, to mitigate risk in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|--|--|---|
| FFID: | ME117002201800 | Funding to Date: | \$ 60.4 million |
| Size: | 7,259 acres | Estimated Cost to Completion (Completion Year): | \$ 13.6 million(FY 2031) |
| Mission: | Provide facilities, services, materials, and aircraft for submarine warfare | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2010 |
| HRS Score: | 43.38; placed on NPL in July 1987 | Five-Year Review Status: | Completed FY2001 and FY2004 or Planned FY2005 |
| 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. On-site landfills were used to dispose of wastewater treatment sludge, paints, solvents, medical supplies, pesticides, petroleum products, and photographic and industrial chemicals. The installation was placed on the NPL in July 1987 because some sites were used to store or dispose of hazardous waste. 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 signed a federal facility agreement in 1989, which was revised in 1990 to include the State of Maine. The installation conducted 5-year reviews in FY01 and FY04.

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, 11, and 13; a ROD for Site 9; 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 FY00 through FY03 is detailed below.

In FY00, the installation began its 5-year review. NFA documentation was initiated for Site 12, and fieldwork began for Site 7. Remedial action (RA) continued for Sites 1 through 4, 9, 11, and 13. The process of deleting the installation from the NPL was initiated. Final remediation began at the fuel farm.

In FY01, the installation completed an 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. NFA documentation was completed for Sites 14, 15, 16, and 18. The decommissioning and closeout of monitoring wells, recommended by the EPA and the Maine

Department of Environmental Protection, was completed. The 5-year review was completed.

In FY02, the installation worked with regulators to develop and implement an exit strategy for Building 95. For Site 12, the Navy and the regulators agreed that a consensus statement would be used to document the exit strategy. Initial diffusion sampling results were evaluated. 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. Additional investigation into possible perchlorate contamination at Site 12 resulted in the Navy preparing 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.

FY04 IRP Progress

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 (NA) 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. Additionally, the installation expanded the investigation of Site 2. The Navy prepared and distributed the draft 5-year review. The cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

The demolition for the Site 9 barracks was delayed due to setbacks in moving residents into new housing.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Finalize the 5-year review in FY05.
- Continue to monitor sampling results at all sites to move towards exit strategy via closing wells, reduced sampling, and monitored NA in FY05.
- Demolish barracks at Site 9, conduct engineering evaluation/cost analysis to address underlying contaminated soil in FY05.
- Install new extraction wells to improve system effectiveness of the Eastern Plume in FY05.

MMRP

- Complete preliminary assessments in FY05.

| | | | |
|-------------------------|--|--|---|
| FFID: | WA021402011200 | Estimated Cost to Completion (Completion Year): | \$ 37.0 million(FY 2010) |
| Size: | 3,020 acres | IRP/MMRP Sites Final RIP/RC: | FY 2002/FY 2010 |
| 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: | POs, 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, three landfills, a burn site, a drum burial site, a paint and solvent burial site, two 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 FY00 through FY03 is detailed below.

In FY00, the installation completed a cultural resources survey and fieldwork on 11 of 13 hazardous and toxic waste sites. The Army initiated investigations to identify explosives-contamination in soil and groundwater. It also updated the BRAC cleanup plan. The installation and regulators jointly developed a site-specific UXO characterization system and continued to develop an engineering evaluation and cost analysis (EE/CA) for UXO. The installation began using geographic information systems to evaluate and categorize the UXO hazard for areas within the installation. Characterization of Demo Area 1 [an open burning and open detonation (OB/OD) area] was ongoing. Field sampling to characterize UXO hazards in this area progressed.

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 Restoration Advisory Board (RAB) held monthly meetings and planned an open house. 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 EE/CA for Camp Bonneville. The installation continued characterization work at three OB/OD sites. The Army initiated an inventory of closed, transferred, and transferring ranges and sites with UXO, discarded military munitions, or munitions constituents.

In FY03, the installation installed and sampled 17 additional wells as part of the sitewide 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. The RAB met regularly. The installation continued to work with Washington Department of Ecology and EPA.

FY04 IRP Progress

The installation completed public review and regulatory closeout for 20 hazardous and toxic waste (HTW) sites. Quarterly monitoring of all 21 wells on Camp Bonneville continued. The installation installed two additional wells as century wells for Landfill 4. The interim action for Landfill 4 underwent public review and comment. The cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

FY04 MMRP Progress

The installation completed the remedial investigation/feasibility study (RI/FS) for small-arms ranges. The installation also completed the HTW investigation of Demolition Areas 2 and 3; neither pose a threat to human health or the environment.

Plan of Action

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

IRP

- Continue groundwater monitoring in FY05-FY06.
- Complete interim action at Landfill 4 in FY05-FY06.
- Complete RI/FS for the groundwater plume at Landfill 4 in FY05-FY06.

MMRP

- Complete soil oil sampling at the central impact target areas and artillery firing points in FY05-FY06.
- Complete pending funding remedial action on the small arms ranges in FY05-FY06.
- Complete next draft RI/FS for RAU 3 in FY05-FY06.

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|--------------------|---|--|--|
| FFID: | NC417302258000 | Contaminants: | Battery acid, fuels and used oils, paints and thinners, PCBs, pesticides, solvents, metals |
| 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: | \$ 126.8 million |
| HRS Score: | 36.84; placed on NPL in October 1989 | Estimated Cost to Completion (Completion Year): | \$ 151.4 million(FY 2057) |
| IAG Status: | Federal facility agreement signed in February 1991 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2014 |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



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 1991, a federal facility agreement (FFA) was signed. In FY99, the installation completed a 5-year review. The installation was placed on the NPL in October 1999. The installation placed its administrative record on the Web in FY00.

Investigations at Camp Lejeune identified 176 sites, including 86 leaking underground storage tank (UST) 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 31 Records of Decisions (RODs). In addition, Camp Lejeune has completed an interim final ROD for Site 69. The installation has requested closure with no further action (NFA) at 26 sites. The cleanup progress at Camp Lejeune for FY00 through FY03 is detailed below.

In FY00, the installation implemented recommendations from the 5-year review. The final interim ROD for Site 69 was signed. The remedial investigation and feasibility study (RI/FS) continued at Sites 84, 88, 89, 90, 92, and 93. Sampling in a creek upstream from the base housing detected tetrachloroethene (PCE). This discovery led to a time-critical removal action (TCRA) for contaminated soil at Site 89. Removal actions were conducted at Sites 3 and 85. Three UST sites achieved NFA status.

In FY01, the installation completed the 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 an 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.

FY04 IRP Progress

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 is awaiting final regulatory approval. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

The installation did not complete the OU 4 final closeout report as scheduled due to a priority shift by the partnering team.

FY04 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

- Complete pilot scale TSs at Sites 35, 73, 78, and 86 in FY05.
- Complete OU 4 final closeout report and the OU 6 ROD in FY05.
- Complete Sites 89 and 94 RI reports in FY06.
- Initiate and complete the non-TCRA for source area treatment at Site 88 in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|---|--|-----------------------------|
| FFID: | CA917302353300 | Funding to Date: | \$ 148.5 million |
| Size: | 125,000 acres | Estimated Cost to Completion (Completion Year): | \$ 114.8 million(FY 2016) |
| 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 FY2002 and FY2004 |
| 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 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 1 (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 FY00 through FY03 is detailed below.

In FY00, the installation completed operation and maintenance (O&M) and long-term management for 13 UST sites in Area 12, 10 UST sites in Area 13, 20 UST sites in Area 22 and UST sites at gas stations in Area 43. Remedial actions (RAs) were completed at OU 3. The installation applied for closure of four UST sites in Area 24, two UST sites in Area 26, one UST site in Area 27, one UST site in Area 53, and 40 UST sites in Area 62. Closure was achieved for seven UST sites in Areas 13, 15, and 16. The installation received approval for corrective action plans (CAPs) for eight UST sites. The installation began a 5-year review of the OU 1 ROD.

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 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. 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 for 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 RA 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.

FY04 IRP Progress

The installation successfully completed the OU 4 draft final FS for Sites 1D, 1E-1, 1H, and 30 and obtained agency concurrence. The installation successfully completed the OU 5 draft final RI for Sites 1A-1, 6A, 21, 1111, and 12 Area (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 Area 11 and Area 21. Closure was achieved for 17 UST sites from RWQCB. The installation closed out Site 7 and finalized the cap closure report.

The installation did not complete closure for Site 1A or the proposed plan for OU 4 due to an optimization study conducted by the Navy Tiger Team.

FY04 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 FS for OU 5 sites and RI fieldwork for Site 33 and Area 13 (FSSG Lot) in FY05.
- Complete the technical memorandum for Area 22/23 groundwater providing evaluation of 1,2,3-TCP in Base groundwater in FY05.
- Continue O&M at UST sites in Area 11, 13, 21, 22, 24, 26, 43, 53 and 62 in FY07.
- Perform removal actions for Sites 1A, 1A-1, 1D, 30 and 1111 in FY07.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | TX657002404200 | Funding to Date: | \$ 45.4 million |
| Size: | 2,631 acres | Estimated Cost to Completion (Completion Year): | \$ 19.4 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 2006/FY 2005 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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 reopened in FY94 after the BRAC Commission recommended its realignment as a Joint Reserve base. All restoration activity is a shared responsibility between the Air Force Real Property Agency (AFRPA) and the Air Force Center for Environmental Excellence. 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 and a Restoration Advisory Board 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. The cleanup progress at Carswell AFB for FY00 through FY03 is detailed below.

In FY00, the installation completed interim remedial actions (RAs) and submitted the draft RCRA facility investigation and closure report for Landfills 4, 5, and 8, and Waste Pile 7. Phase II investigations of the base sanitary sewer system were initiated. Housing areas were transferred to the local redevelopment authority (LRA). The installation partially funded a focused feasibility study (FFS) with Air Force Plant No. 4 to address the groundwater contamination in the golf course area.

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 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 weapons storage area's (WSA's) explosive ordnance disposal (EOD) area from an agricultural clearance certification to a residential clearance certification.

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

FY04 IRP Progress

AFRPA reviewed current remedies installed to address Air Force Plant No. 4 TCE plume and found those remedies sufficient and meeting goals. The installation began RA on the sanitary sewer system. A geophysical clearance survey of the WSA EOD range identified areas that may potentially contain ordnance items; ordnance items were visually identified along a creek bed adjacent to the EOD range area. Additionally, the preliminary assessment/site investigation indicated elevated radiation levels in Bunker 8531. A contract to address these elevated levels was awarded. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Per regulatory agreement, a ROD amendment is not necessary; however, the focused feasibility study must be completed and submitted to regulatory agencies, as well as an explanation of significant differences.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. One MMRP site was identified at this installation.

Plan of Action

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

IRP

- Conduct removal action for EOD and UXO in WSA, and removal of radiation in Bunker 8531 in FY05.
- Issue estoppel to LRA for additional acreage to further redevelopment plans in FY05.
- Discuss property transfer with AFMC and prepare documentation to transfer to the Navy in FY05.
- Complete RA of sanitary sewer system in FY05.
- Transfer a portion of golf course to LRA in FY05.

MMRP

- Begin work on the MMRP site in FY05.

| | | | |
|------------------------|--|--|-----------------------------|
| FFID: | CA957002455100 | Funding to Date: | \$ 154.8 million |
| Size: | 2,777 acres | Estimated Cost to Completion (Completion Year): | \$ 73.9 million(FY 2038) |
| Mission: | Trained tanker crews and serviced KC-135 stratotanker | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2005 |
| HRS Score: | 27.93; placed on NPL in July 1987 | Five-Year Review Status: | Completed FY1999 and FY2004 |
| IAG Status: | IAG signed in 1989 | | |
| 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) and in September 1995, the installation was closed. Castle AFB formerly supported tanker operations and EPA placed the installation on the NPL in July 1987. Landfills (LFs), underground storage tanks (USTs), discharge areas, chemical disposal pits, fire training areas, fuel spill areas, and polychlorinated biphenyl (PCB) spill areas were identified 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 interagency agreement was signed in 1989 and 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 FY98 and a second in FY04.

Sites found at the installation were grouped into three operable units (OUs): OU 1, OU 2, and the source control OU (SCOU). To date, the Air Force has completed a Record of Decision (ROD) for OU 2; an interim ROD for OU 1; ROD 1 and ROD 2 for SCOU sites; and a Part 1 ROD for OU 1, OU 2, and Castle Vista. The cleanup progress at Castle AFB for FY00 through FY03 is detailed below.

In FY00, construction of Phase III of the groundwater treatment system was completed. Repairs to the sanitary sewer and excavation systems at eight SCOU Installation Restoration Program (IRP) sites were completed. The installation also received approval on closure reports for six SCOU sites.

In FY01, the SCOU proposed plan was completed, and the SCOU ROD 2 was undergoing regulatory review. Regulatory review also began for the comprehensive basewide (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 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 proposed plan for the remaining SCOU sites. The draft 5-year review was submitted.

FY04 IRP Progress

The installation received operating properly and successfully concurrence from EPA and completed the CB 2 ROD and the SCOU 3 site ROD, which includes LF sites. The installation also completed the 5-year review and obtained EPA and State approval. Additionally, the installation shutdown the Castle Vista groundwater treatment system. One remaining well exceeding 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 cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY04 MMRP Progress

The Air Force conducted a site inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Complete SCOU ROD III in FY05.
- Complete 100 percent property transfer in FY05.
- Close remaining SVE site (PFFA) in FY05.

MMRP

- Begin work on MMRP sites in FY05.

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|------------------------|--|--|--|
| FFID: | FL417002247400 | Funding to Date: | \$ 53.8 million |
| Size: | 30,895 acres | Estimated Cost to Completion (Completion Year): | \$ 20.8 million(FY 2017) |
| Mission: | Provide facilities, services, and material support for maintenance of Naval weapons and aircraft | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2009 |
| HRS Score: | 31.99; placed on NPL in November 1989 | Five-Year Review Status: | Completed FY2000 - remedy remains protective |
| 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 Cecil Field Naval Air Station (NAS) 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 31 CERCLA sites; 10 major underground storage tank (UST) sites; 235 USTs; 250 BRAC grey sites and one RCRA site. The installation was placed 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. A BRAC cleanup team was formed in FY94. In FY00, the installation completed its first 5-year review.

The installation has identified 40 sites, 24 of which have been grouped into 12 operable units. The installation has signed 25 Records of Decision (RODs) and 10 findings of suitability to transfer (FOSTs), equaling 16,707 acres, and delisted approximately 16,584 acres from the NPL. To date, the installation has transferred 224 acres. The cleanup progress at Cecil Field NAS for FY00 through FY03 is detailed below.

In FY00, the installation completed three FOSTs, covering a total of 10,322 acres. Remedial actions (RAs) were conducted for Sites 10 and 11, North Fuel Farm soil, DT1, A Avenue, 31 grey sites, and 28 tanks. Asbestos-containing material was removed from 10 buildings. The installation completed the remedial investigation and feasibility study (RI/FS) the proposed plan for Site 36/37 were completed. The installation also completed the ROD amendment for Site 5. Site 6 and 42 grey sites were determined to require no further action (NFA). The first 5-year review was completed for Site 5.

In FY01, the installation completed RODs for Sites 36 and 37. RAs were implemented at Buildings 9 and 46, and 11 grey sites. A FOST covering 29 acres was completed. An RI/FS was completed at Site 45 and an RI was initiated at Sites 57 and 58.

In FY02, the installation implemented an 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. NFA was achieved for Potential Source of Contamination (PSC) 39, Sites 42 and 44, Tanks 428, 367 and 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, Cecil Field NAS 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 (JETC) and Tank 271. The installation completed two FOSTs for 18.2 acres. The installation achieved the groundwater cleanup criteria at Sites 7 and 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.

FY04 IRP Progress

The installation signed RODs for Sites 25, 32 and 45 and completed land use control (LUC) remedial designs (RDs) for Site 45. Cecil Field NAS 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. It installed and began operating air sparging systems at Building 271 and JETC. Cecil Field NAS 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. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

Ecological issues delayed the ROD and LUC RD at Site 15. Regulatory issues delayed the ROD, LUC RD and OP&S for Site 21. Weather issues delayed the NFA ROD at Site 49. LUC issues delayed the RODs, LUC RDs and OP&S at Sites 5, 25, 36, 37, 57 and 58. LUC issues also delayed the OP&S at Site 45, LUC RD at Site 32, and the planned transfer of additional 334 acres.

FY04 MMRP Progress

Ecological concerns delayed the RA at Site 15.

Plan of Action

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

IRP

- Issue second 5-year review in FY05.
- Sign RODs for Sites 21, 49, 57, and 58, and complete OP&S at Sites 5, 21, 25, 57 and 58 in FY05.
- Complete LUC RDs at Sites 1, 2, 3, 5, 8, 16, 17, 21, 25, 32, 57 and 58 in FY05.
- Sign RODs for Sites 15 and 59 in FY06.
- Transfer 337 acres in FY05 and remaining 182 acres in FY06

MMRP

- Begin the RA at Site 15 in FY06.

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|-------------------------|--|
| FFID: | IL557002475700 |
| Size: | 2,174 acres |
| Mission: | Served as technical training center |
| HRS Score: | Pending |
| IAG Status: | None |
| Contaminants: | POLs, chlorinated solvents, metals and UXO |
| Media Affected: | Groundwater, soil, sediment |
| Funding to Date: | \$ 99.9 million |

| | |
|--|--------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 31.5 million(FY 2037) |
| IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2005 |
| Five-Year Review Status: | Completed FY1998/Planned |



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 an interagency agreement in 1990 and closure occurred in September 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, 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 in FY94.

Currently, the installation is addressing a total of 77 sites and 12 areas of concern (AOCs). AOCs were identified at Operable Unit (OU) 1 in FY98. To date, a Record of Decision (ROD) has been signed for reuse of the base and an interim ROD has been signed for the construction of landfill caps. The cleanup progress at Chanute AFB for FY00 through FY03 is detailed below.

In FY00, the majority of field activities for the landfills and Heritage Lake remedial investigation (RI) were completed. The field screening investigation was completed at OU 2. Preparation for cap construction at Landfills 1, 2, and 3 began. Soil remediation was completed in the Veterans Parkway area, allowing for the construction of a new roadway into the village. The non-time-critical removal actions for Building 932 and Fire Training Area 2 were initiated, and approximately 50,000 cubic yards of contaminated soil were removed.

In FY01, an interim ROD for the construction of the landfill caps was signed. Installation of RCRA-equivalent caps was 50 percent complete at Landfills 2 and 3, and 60 percent complete at Landfill 1. Preparation for the OU 2 RI began. Geophysical studies and cone penetrometer testing were completed at OU 1. Unused aboveground storage tanks (ASTs) throughout the facility and underground fuel piping at Building 950 were

removed. A work plan for the closeout of 84 AST, UST, and oil-water separator sites was completed, and field activities were initiated. A groundwater assessment was initiated at 15 UST and petroleum/oil/lubricants (POLs) 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 caps at Landfills 1 and 3 was completed. 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 landfills and Heritage Lake 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 RI planning documents for OU 1 and OU 2, including the basewide sampling and analysis plan, quality assurance project plan, and investigation work plans. Initial RI fieldwork was initiated for OU 1 and OU 2. Cap construction at Landfill 2 was restarted. The Illinois EPA (IEPA) approved closure of 111 former fuel storage tank sites. The base conducted background studies for soils and groundwater, as well as similar studies for surface water and sediments. The installation conducted an operational history. An outfalls investigation was initiated to determine the source of contamination entering Salt Fork Creek and a hydrogeologic conceptual site model supporting the groundwater investigation was developed. Military munitions inventories and site summaries for seven sites were completed.

FY04 IRP Progress

The installation completed the initial investigation of Salt Fork Creek and the initial RI field activities at OU 1 and OU 2. The investigations discovered contamination at 43 new sites. Cap construction at Landfill 2 was completed. Operation and management for Landfills 1, 2, and 3 began. A treatability study at Landfills 1, 2 and 3 was initiated. RI reports were initiated for multiple sites within OU 1 and OU 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 cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Additional sampling and paperwork requirements delayed the completion of non-CERCLA actions at multiple sites.

FY04 MMRP Progress

The Air Force conducted a site inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified 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 and reports for OU 1 and OU 2 in FY05.
- Initiate feasibility study, proposed plan, and ROD preparation for OU 1 and OU 2 in FY05.
- Continue non-CERCLA investigation and closure actions at multiple fuel storage tank sites in FY05.

MMRP

- Evaluate requirements at potential MMRP sites in FY05.

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|----------------------|---|--|---|
| FFID: | SC417002434300, SC417002757100, SC417002267000, SC417002425800, SC417002256000 | Media Affected: | Groundwater, sediment, soil |
| Size: | 2,922 acres | Funding to Date: | \$ 55.0 million |
| Mission: | Repaired, maintained, and overhauled Navy ships | Estimated Cost to Completion (Completion Year): | \$ 2.3 million(FY 2006) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2014 |
| IAG Status: | None | Five-Year Review Status: | The installation has not completed a 5-year review. |
| Contaminants: | Asbestos, cyanide, decontaminating agents, heavy metals, paints, PCBs, pesticides, POLs, solvents, petroleum hydrocarbons | | |



Progress To Date

The Charleston Naval Complex 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 BRAC Commission recommended closure of the property and the majority of the commands. Operational closure of the complex occurred on April 1, 1996. During FY94, the installation converted its technical review committee to a Restoration Advisory Board and formed a BRAC cleanup team and local redevelopment agency. A community relations plan was completed and updated during FY01. The primary sites of concern at the installation are areas that were used as landfills or disposal pits.

Charleston Naval Complex has identified 117 RCRA solid waste management units (SWMUs), areas of concern (AOCs) and 65 underground storage tanks (USTs) and aboveground storage tanks that require some remedial action (RA). The installation has completed 70 no further action (NFA) determinations and 29 interim measures or source removals that will likely lead to NFA determinations. In addition, the installation achieved response complete at seven sites. Charleston Naval Complex has transferred the Chicora Tank Farm, as well as 207 acres using an economic development conveyance (EDC), 16 acres using a public benefit conveyance, and 281 acres using a second EDC. The cleanup progress at Charleston Naval Complex for FY00 through FY03 is detailed below.

In FY00, the installation completed the finding of suitability to transfer (FOST) and the environmental baseline survey for transfer (EBST) for the marina and transferred the parcel to the Parks and Recreation Department. Interim measures, UST site assessments, and lead-based paint and asbestos abatement were completed for sites associated with EDC Phase I. Approximately 207 acres were transferred as part of EDC Phase I, and 16 acres containing the marina were transferred under a public benefit conveyance.

In FY01, lead-based paint abatement was completed in all target housing. The installation implemented remedies for groundwater contamination at five of the eight major sites.

Asbestos surveys were completed at EDC Phase II buildings, and initiated abatement at Phase III buildings. The FOST and EBST for EDC Phase II, which encompassed 285 acres, were completed. The installation closed nine additional Installation Restoration Program (IRP) sites with NFA required. Of the remaining 78 UST sites listed for corrective action, 61 have been approved for NFA.

In FY02, the FOST, EBST, and asbestos surveys for Phase III were completed. RA was implemented at SWMU 166. A significant number of the asbestos surveys for Phase IV were completed. The corrective measures study (CMS) report for SWMU 9 was submitted. The Navy has identified and conducted military munitions response work at the installation. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. AOC 501 and 503 will become MMRP sites. These sites have unaccounted ordnance that have been investigated using geophysical techniques, however nothing resembling the weapons or remnant of ordnance were found. Land use controls (LUCs) are being considered to address the potential presence of the MMRP for future users.

In FY03, the installation completed the Phase IV EBST. A Phase IV finding of suitability for early transfer was signed out by the Assistant Secretary of the Navy to the Governor of South Carolina. The installation submitted reports to the South Carolina Department of Health and Environmental Control for SWMUs 9 and 25/70. A CMS was initiated for AOC 607.

FY04 IRP Progress

The installation completed the transfer of Chicora Tank Farm by land sale. It also submitted an interim measure work plan for interim LUCs for all parcels associated with Phase IV. The installation also implemented corrective actions for SWMU 196 and AOC 607.

The Phase IV transfer parcels was delayed due to regulatory issues.

FY04 MMRP Progress

No work was performed on the MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Implement groundwater polishing techniques for SWMUs 25, 70, 163, 166, 196 and AOC 607 in FY05.
- Select remedy for SWMU 9 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|---|--|--|
| FFID: | NC417302726100 | Funding to Date: | \$ 69.3 million |
| Size: | 29,139 acres | Estimated Cost to Completion (Completion Year): | \$ 62.2 million(FY 2032) |
| Mission: | Maintain and operate support facilities; provide services and materials for marine aircraft | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2014 |
| HRS Score: | 70.71; placed on NPL in December 1994 | Five-Year Review Status: | Completed FY2003 - remedy remains protective |
| IAG Status: | Federal facility agreement under negotiation | | |
| 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. The installation was listed on the NPL in December 1994. The installation established a Restoration Advisory Board and completed a community relations plan in FY95. Negotiation on a federal facility agreement is currently underway. In FY03, the installation finalized the 5-year review.

Cherry Point MCAS has identified 100 sites, including 22 underground storage tanks (USTs). The installation has completed four Records of Decision (RODs) to date. The cleanup progress at Cherry Point MCAS for FY00 through FY03 is detailed below.

In FY00, the installation completed remedial investigations (RIs) for Operable Units (OUs) 2, 4, 6, and 13. A draft remedial design (RD) and remedial action (RA) report for OU 3 was completed, as was an RA system for OU 3 Site 7. A draft screening-level ecological risk assessment (ERA) for the creek adjacent to OUs 1, 2, and 3 was completed. A draft treatability study (TS) work plan for OU 1 was also completed. A total of nine UST sites achieved regulatory closure.

In FY01, the final site screening assessment work plan was approved for Site 85. The TS was initiated at OU 1. The OU 2 and OU 3 RD, and RAs for groundwater were approved and signed by the state. The OU 5 and OU 14 RIs were initiated and their draft work plans were submitted for review. The 5-year review also began.

In FY02, the OU 1 RI report was submitted. An 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 FS for OU 4 and OU 13 recommending no further action (NFA) were submitted. 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 and OU 2, 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 the 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). OU 2 and OU 3 long-term monitoring of groundwater commenced.

FY04 IRP Progress

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 OU 4 and OU 13, and initiated the FS for OU 5. Cherry Point MCAS completed the Phase II RI investigation at OU 14, Site 90 and will follow up with a Phase III investigation. An update to the Community Involvement Plan (CIP) has been drafted and is currently undergoing review. The installation initiated a comprehensive voluntary ground water monitoring program at OU 1, OU 4, OU 5, and OU 13.

Regulatory issues delayed the FS and the final RI for OU 5. Technical issues delayed the RI for OU 6.

FY04 MMRP Progress

No work was performed at the MMRP sites 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

- Finalize the CIP in FY05.
- Finalize the OU 5 and OU 6 RI and initiate an FS in FY05.
- Finalize the OU 14 Phase III RI and initiate an FS in FY05.
- Finalize the OU 4 and OU 13 RODs in FY05 .
- Finalize the OU 1 ERA in FY05 and the FS in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|-------------------------|
| FFID: | IL557122427200 | Funding to Date: | \$ 9.7 million |
| Size: | 274 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2005) |
| 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 2005 |
| HRS Score: | N/A | Five-Year Review Status: | Planned FY2007 |
| 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 is paying for replacement facilities at Scott Air Force Base 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 semivolatle 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) has been signed. The cleanup progress at Chicago O'Hare ARS for FY00 through FY03 is detailed below.

In FY00, soil removal for ST-002 and OT-016 was completed. Site inspections were completed. EPA approved four remedial investigations (RIs). Illinois EPA approved three RIs. An RA was completed for trichloroethylene (TCE)-contaminated soil at the sanitary sewer/former trailer park (SS-019). Supplemental RIs were completed for three sites (ST-012, SA-017, and IN-018). The BCT met monthly.

In FY01, the review and approval process was successfully implemented for all pending documents. The sanitary sewer investigation and the time critical RA for the SS-019 were completed. Soil removals were completed for SA-017, IN-018, and ST-015. A feasibility study (FS) was developed to support

closure of all sites.

In FY02, the basewide ROD was submitted 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) subsequent deed for 99 percent of the installation. The BCT developed a risk assessment for LF 1 and the installation implemented an ICMP.

FY04 IRP Progress

The installation completed a human health risk assessment and drafted an FS and proposed plan for the final site in preparation for the final ROD. The installation completed an EBS for the final properties. The installation selected a remedy for LF 1. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed the completion of the FOST for the remaining small parcel.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified 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

- Complete final ROD in FY05.
- Complete FOST and transfer remaining four acres in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

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|----------------------|---|--|--|
| FFID: | CA917002452800 | Media Affected: | Groundwater, surface water, sediment |
| Size: | 13,023 acres | Funding to Date: | \$ 57.6 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): | \$ 79.1 million(FY 2014) |
| 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 FY2003 - remedy remains protective |
| Contaminants: | Heavy metals and petroleum hydrocarbons | | |



Progress To Date

Concord Naval Weapons Station (NWS) 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. The installation was placed on the NPL in 1994, primarily because of surface water and sediment contamination at tidal and litigation-area sites. 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 installation updated its community relations plan (CRP) in FY96 and again in FY03. A federal facility agreement (FFA) was signed in June 2001 by the Navy and EPA. In FY03, the installation finalized the 5-year review for the seven litigation area sites.

Concord NWS has identified 57 sites. 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 Concord NWS for FY00 through FY03 is detailed below.

In FY00, the installation prepared RODs for two inland sites and the tidal area landfill. The 5-year review of long-term management for seven litigation-area sites was completed. The site investigation for four solid waste management units (SWMUs) and Inland Site 29 were completed. The remedial investigation (RI) for four SWMUs, the feasibility study (FS) for Site 29, and the proposed plan (PP) and ROD for three tidal area sites were initiated. The required site screening was completed for documentation of a proposed removal action at area of concern (AOC) 1, Site 31. Planning began for the RI/FS for one tidal area site and the PP and ROD for Site 29. Work began on the site management plan (SMP).

In FY01, the installation completed the 5-year review and assessment report for seven litigation-area sites and submitted it for agency review and comment. An FFA was signed with EPA Region 9. An FFA was signed with EPA Region 9, and the

public comment period began. The ecological risk assessment component of the tidal area RI was updated to current technical standards, and the RI update was initiated.

In FY02, the installation updated the SMP, completed the AOC 1 removal action design and initiated the removal action. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. Eight MMRP sites were 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 FS. A revised draft final RI report was issued for the three tidal area sites, but comments received by the agencies are not in agreement with the NFA and required additional characterization. The Navy has agreed to the additional work. The Site 31 (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. The CRP was updated and finalized, with significant input from the RAB and agencies. An award was made under the Navy's technical assistance for public participation program and work initiated. RAB meetings included training on various technical topics. Additionally, eight MMRP sites were identified for preliminary assessments (PAs) at Concord NWS.

FY04 IRP Progress

The installation resolved the dispute with the Site 1 ROD, which was signed by the Navy, EPA, and the State. Concord NWS initiated the sampling plan for investigating groundwater at Site 1, as well as the remedial design (RD). The cost of completing environmental restoration at this installation changed significantly due to technical issues.

Regulatory issues delayed the RI for Tidal Area Sites 2, 9, and 11 to pursue additional characterization of specific areas at the sites. Agency comments delayed the completion of the supplemental FS for three litigation-area sites.

RAB membership increased to nine and the monthly meetings continued to be an excellent forum for information exchange and input from the community.

FY04 MMRP Progress

Funding limitations and competing MMRP priorities postponed the PA for the eight Concord MMRP sites.

Plan of Action

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

IRP

- Complete the work plan and perform TS for the supplemental FS of the litigation-area sites in FY05.
- Complete the Site 1 cap RD and RA work plan, and initiate the RA in FY05.
- Perform data gap sampling at Tidal Area Sites 2, 9, and 11 in FY05.
- Prepare non-TCRA memo for Taylor Boulevard Bridge disposal site in FY05.

MMRP

- Initiate PAs for the eight MMRP sites in FY05.

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|-------------------------|--|--|--------------------------|
| FFID: | NE721382023400 | Estimated Cost to Completion (Completion Year): | \$ 33.7 million(FY 2028) |
| Size: | 4,020 acres | IRP/MMRP Sites Final RIP/RC: | FY 2004/FY 2015 |
| Mission: | Manufactured ammunition | Five-Year Review Status: | Completed FY2002 |
| 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: | \$ 51.5 million | | |



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. 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 FY86 and 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 conducted a 5-year review in FY02.

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 FY00 through FY03 is detailed below.

In FY00, the installation signed RODs for Operable Units (OUs) 3 and 4. The installation added one extraction well to contain the plume within the installation boundary. The Army initiated monitoring for monitored natural attenuation (MNA) of a slightly elevated solvent [trichloroacetic acid (TCA)]-contaminated groundwater plume in the shop area. The installation began operational periodic monitoring (pre-remediation) at the OU 5 open burning grounds due to the unexploded ordnance (UXO) removal of micro-mines and explosives.

In FY01, the Army signed an amendment to the 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 monitoring 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 long-term monitoring 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 UXO, discarded military munitions, or munitions constituents that identified Military Munitions Response Program (MMRP) sites at Cornhusker. Explosive safety actions continued to restore Load Lines 1 through 5, including flashing Load Line 2. The Army discovered explosives contamination in buildings on tracts pending real estate transfer/sale; therefore, it reprioritized the explosives safety removal schedule to accelerate disposal.

FY04 IRP Progress

The installation completed RA for the AST site in the shop area and continued LTO and long-term monitoring of the contaminated groundwater plume (OU 1). The installation submitted the final CERCLA review. The cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

FY04 MMRP Progress

The Army discovered additional MMRP sites during the clean certification process. The Army transferred the former Burning Grounds and six additional fuse destruction, ammonium nitrate and burning grounds to the MMRP.

Plan of Action

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

IRP

- Negotiate a performance-based LTO/long-term monitoring contract in FY05-FY06.

MMRP

- Initiate site inspection in FY05.

| | |
|-------------------------|--|
| FFID: | TX617002278600 |
| Size: | 832 acres |
| Mission: | Served as a pilot training center |
| HRS Score: | N/A |
| IAG Status: | N/A |
| Contaminants: | POs, solvents, heavy metals, asbestos |
| Media Affected: | sediment, soil, Groundwater, surface water |
| Funding to Date: | \$ 77.0 million |

| | |
|--|---|
| Estimated Cost to Completion (Completion Year): | \$ 3.9 million(FY 2017) |
| IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2010 |
| 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 the Dallas Naval Air Station (NAS), which served as a pilot training center. 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 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 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. The installation closed September 30, 1998. After the base was closed, operations were transferred to Fort Worth NAS.

To date, 47 sites have been identified at this installation requiring further action. Two MMRP sites were identified at this installation. One site was determined to require no further action through the RFI process. The cleanup progress at Dallas NAS for FY00 through FY03 is detailed below.

In FY00, the installation completed the final RCRA facility investigation (RFI) reports for Categories A, B, and D. Interim corrective soil removal actions were completed at five sites. Remediation of chlordane-impacted soil was completed at the Duncanville Housing site. Findings of suitability for transfer (FOST) for all parcels of the Clear Zone and transfer of a 14-acre parcel at the southern tip of Runway 17-35 were completed. Interim corrective groundwater actions using in situ chemical oxidation and enhanced bioremediation were completed at two sites impacted by chlorinated solvents. A FOST for the last parcel was submitted to regulators.

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, long-term management (LTM), and long-term operations (LTO) 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 through the RFI 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 BCT conducted team meetings and various site visits of ongoing remediation. The second MMRP site was remediated in conjunction with the excavation and disposal activity at the Rubble Landfill.

FY04 IRP Progress

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.

FY04 MMRP Progress

The installation is awaiting final regulatory approval for no further action for one site.

Plan of Action

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

IRP

- Complete site restoration in FY05.
- Submit final response action plans in FY05.
- Continue LTM/LTO in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--------------------------|
| FFID: | RI117002203600 | Funding to Date: | \$ 53.1 million |
| Size: | 1,285 acres | Estimated Cost to Completion (Completion Year): | \$ 12.8 million(FY 2010) |
| Mission: | Provided mobilization support to Naval Construction Forces | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | 34.52; placed on NPL in November 1989 | Five-Year Review Status: | Completed FY2003 |
| 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. The installation was placed 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 installation 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.

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 FY00 through FY03 is detailed below.

In FY00, a draft remedial investigation (RI) and feasibility study amendment was issued for Sites 2 and 3 (Parcel 7). A finding of suitability to transfer (FOST) was completed. Remedial action operations continued at Site 9 (Parcel 10), and a draft FOST was issued. The installation completed, to the extent practical, all environmental baseline survey (EBS) items.

In FY01, the installation implemented long-term management (LTM) for Sites 3, 7, and 9 and EBS Site 21. The draft Phase I 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. The installation also 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 EBS Site 21. The installation completed the 5-year review.

FY04 IRP Progress

The installation issued a FOST for Site 21 (Parcel 3). It also initiated pilot study fieldwork and Phase II RI fieldwork at Site 16. The installation completed screening level ecological risk assessments for Site 16. It also continued LTM at Sites 3, 7, 9, and EBS Site 21.

Site access issues delayed the completion of the pilot study fieldwork and Phase II RI fieldwork at Site 16.

FY04 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 FY05.
- Continue Phase II RI fieldwork at Site 16 in FY05-FY06.
- Continue pilot study fieldwork at Site 16 in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|---|--|--------------------------|
| FFID: | TN497152057000 | Funding to Date: | \$ 41.5 million |
| Size: | 642 acres | Estimated Cost to Completion (Completion Year): | \$ 18.0 million(FY 2009) |
| Mission: | Store and distribute clothing, food, medical supplies, electronic equipment, petroleum products, and industrial chemicals | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| HRS Score: | 58.06; placed on NPL in October 1992 | Five-Year Review Status: | Completed FY2003 |
| 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, a PCP UST, and contaminated soil. An interim remedial action (RA) Record of Decision (ROD) was signed in FY96. Two additional RODs were signed in FY01 and FY04. The cleanup progress at DDD Memphis for FY00 through FY03 is detailed below.

In FY00, DDD Memphis completed the MI remedial investigation (RI) and submitted the report to four information repositories for public review. The groundwater and soil feasibility studies (FSs) and proposed plans (PPs) were completed and submitted for public comment. DDD Memphis conducted additional DF RI groundwater sampling to determine the extent of increasing contaminant concentrations down gradient from DF, and conducted the DF soil vapor extraction (SVE) treatability study (TS). The depot also updated the BCP.

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 RI and SVE TS. The depot 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 two deeds for Parcel 1. The RAB's TAPP contract was completed.

In FY03, DDD Memphis finalized the DF RI, PP, and two FSs. The depot 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 technologies was completed. 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 CERCLA 5-year review. The installation conducted a public meeting for the preferred alternative at Dunn Field. DLA approved an ordnance and explosives statement of clearance for the Military Munitions Response Program (MMRP).

FY04 IRP Progress

DLA, EPA, and TDEC signed the DF ROD. DDD Memphis completed the MI RD and the DF Disposal Sites RD. DLA signed FOST 3 for approximately 357 acres of the MI. DDD Memphis 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 DDD Memphis 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 delayed the DF PRB RD until completion of the ZVI early implementation project.

The BCT and project team conducted a partnering session to

assist the transition from the RD contractor to the RA contractor.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete the DF source area (SVE and ZVI) and PRB RDs and the disposal sites RAs in FY05.
- Submit FOST 4 for public comment in FY05.
- Complete the MI RA work plan in FY05.
- Initiate the MI groundwater enhanced bioremediation treatment RA in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|---|--|--------------------------|
| FFID: | CA997152083200 | Funding to Date: | \$ 62.8 million |
| Size: | 724 acres | Estimated Cost to Completion (Completion Year): | \$ 87.0 million(FY 2015) |
| Mission: | Receive, store, and distribute supplies, materials, and equipment | IRP/MMRP Sites Final RIP/RC: | FY 2003/None |
| HRS Score: | 42.24; placed on NPL in July 1987 | Five-Year Review Status: | Completed FY2004 |
| 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. The installation was placed on the NPL in July 1987 and an interagency agreement was signed in March 1989 with U.S. 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, 57 have been closed. Two Records of Decision have been signed to date: the Operable Unit 1 (OU 1) groundwater remedy in FY93 and the OU 2 basewide remedy in FY96. The cleanup progress at DDD San Joaquin, Sharpe Facility for FY00 through FY03 is detailed below.

In FY00, remedial action (RA) reports were completed for OU 2 metals Sites S-3 and S-26. Three-dimensional groundwater modeling was performed as Phase I of remedial process optimization (RPO).

In FY01, RA reports for three metals and ten trichloroethylene (TCE)/volatile organic compound (VOC), no further action (NFA) sites were completed. Operation of the three groundwater treatment systems continued. Implementation of 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 community relations plan. The former UST sites preferred alternatives report was finalized. The report recommended NFA at 14 sites and monitored NA at three sites. The installation continued OU 1 groundwater remedial operation and process optimization. The installation submitted a draft final 5-year review report.

FY04 IRP Progress

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. The cost of completing environmental restoration at this installation changed significantly due to technical, regulatory, and estimating criteria issues.

FY04 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

- Complete draft Response Completion and Resources Management Plan to submit to EPA and California regulatory agencies for finalization in FY05.
- Continue operations and maintenance, monitoring, and optimization of groundwater treatment systems in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--------------------------|
| FFID: | CA997150682700 | Funding to Date: | \$ 91.5 million |
| Size: | 908 acres | Estimated Cost to Completion (Completion Year): | \$ 80.3 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 2004/None |
| HRS Score: | 37.16; placed on NPL in August 1990 | Five-Year Review Status: | Planned FY2005 |
| 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 was placed on the NPL in August 1990. 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. A federal facility agreement was signed in 1991.

Studies have identified 73 sites at this installation. To date, 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 FY00 through FY03 is detailed below.

In FY00, the design of the soil vapor extraction (SVE) systems for sites designated in the Operable Unit 2 (OU 2) ROD were completed. The ecological risk assessment was prepared for OU 2 Site 4. Institutional controls were implemented at sites designated in the OU 2 ROD, and the design work related to other OU 2 remedial action (RA) was completed.

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

FY04 IRP Progress

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. The cost of completing environmental restoration at this installation changed significantly due to technical, regulatory, and estimating criteria issues.

Technical and regulatory issues delayed the sitewide preliminary closeout report (PCOR) and RA reports for SVE sites.

FY04 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

- Complete 5-year review, and sitewide PCOR in FY05.
- Complete TCE/perchloroethylene (PCE) SVE and total petroleum hydrocarbons bioventing sites RA report in FY05.
- Complete draft response completion and resources management plan (exit strategy) in FY05.

- Continue O&M, monitoring, and optimization of groundwater treatment systems in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|--|--|---|
| FFID: | PA397154266500 | Media Affected: | Groundwater and soil |
| Size: | 87 acres | Funding to Date: | \$ 26.3 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): | \$ 2.6 million(FY 2010) |
| 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 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 off site 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. 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.

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 FY00 through FY03 is detailed below.

In FY00, the Pennsylvania Department of Environmental Protection (PADEP) issued an administrative order requiring DLA to assume all responsibility for plume remediation and investigation, odor control, and the human health risk assessment (HHRA). Unrelated to the order, four IRP sites were added. Four World War I-era warehouses were demolished. Lead-contaminated soil discovered under Building 20 was excavated and disposed. The installation completed

asbestos abatement.

In FY01, the 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, the HHRA was finalized. 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 completed three meetings.

FY04 IRP Progress

Construction began on the vacuum enhanced remediation system at DSCP, and 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.

Real estate negotiations and delays in obtaining equipment and licenses contributed to the delay of the completion of the vacuum enhanced remediation system. Regulatory issues delayed the completion of the fate and transport analysis, and also delayed negotiations with the PADEP to establish cleanup levels for the light non aqueous phase liquid plume remediation.

FY04 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 file coding and develop administrative record for site in FY05.
- Complete construction of the vacuum enhanced remediation system in FY06.
- Complete Pennsylvania Act 2 remediation requirements, such as a remedial investigation (including fate and transport analysis), cleanup plan, and final report in FY06.
- Continue discussions with the Department of Army about transfer of environmental responsibility in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--|
| FFID: | VA397152075100 | Funding to Date: | \$ 48.3 million |
| Size: | 565 acres | Estimated Cost to Completion (Completion Year): | \$ 22.0 million(FY 2017) |
| Mission: | Provide logistics support (aviation weapon system and environmental) for DoD | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| HRS Score: | 33.85; placed on NPL in July 1987 | Five-Year Review Status: | Completed FY1997, FY1999, and FY2002/Planned |
| 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 include soil vapor extraction, air stripping, dual-phase extraction, and density driven convection. The installation formed a Restoration Advisory Board (RAB) and implemented a community relations plan (CRP) in FY02. Five-year reviews were performed in FY97, in FY99 for operable unit 1 (OU 1), and in FY02 for OUs 1, 3, and 9.

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 FY00 through FY03 is detailed below.

In FY00, the OU 1 draft risk assessment was submitted and the draft proposed plan (PP) and ROD for OU 2 were issued. National attenuation studies began at OU 6 and OU 7. A draft pilot test report and draft feasibility study (FS) were issued for OU 6. The final FS and the draft PP and ROD were completed for OUs 10, 11, and 12.

In FY01, a risk assessment for OU 1 was submitted to eliminate land use controls 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 FS for OU 13 underwent review. A partnering exercise with regulators was completed. The draft CRP was issued and was under review. The community was canvassed for interest in forming a RAB.

In FY02, RPO studies were conducted for OU 8 and OU 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 base wide 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.

FY04 IRP Progress

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 will support a time-critical removal of persistent sources to groundwater contamination at OU 4, DSCR's former fire training pits area. The installation completed a second revised focused FS (FFS) 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. The cost of completing environmental restoration at this installation changed significantly due to technical, regulatory, and estimating criteria issues.

State and Federal regulatory agencies permitted DSCR to update risk assessment tables in corresponding FFSs, precluding the need for separate submittals, thus risk assessments for groundwater OUs were not submitted. The basewide supplemental FS demonstrated that an interim removal action prevented further deterioration of down-gradient groundwater, therefore the installation did not conduct pilot demonstrations for groundwater at the Former Fire Training Pits. Draft PPs for groundwater OUs were delayed because the

installation conducted a time critical removal action to prevent further contamination of downgradient groundwater.

FY04 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

- Sign a ROD, initiate a remedial action, and complete a remedial design for OU 12 in FY05.
- Complete a time-critical principal threat source material removal action at the former fire training area (OU 4) in FY05.
- Initiate PPs and RODs for OUs 10 and 11 in FY05.
- Complete the DSCR CSM in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---------------------------------|
| FFID: | DE357182401000 | Funding to Date: | \$ 65.0 million |
| Size: | 3,730 acres | Estimated Cost to Completion (Completion Year): | \$ 39.4 million(FY 2032) |
| Mission: | Provide airlift support for troops, cargo, and equipment | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| HRS Score: | 35.89; placed on NPL in March 1989 | Five-Year Review Status: | Completed FY2003/Planned FY2007 |
| 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: 12 under the State RCRA petroleum program and 47 under CERCLA. Of the 12 petroleum sites, four have been closed by the State, four more are pending State closure, and the remaining four petroleum sites have remedies in place. As for the 47 CERCLA sites, all required soil cleanup actions have been completed, 10 sites have groundwater remedies in place, and 16 are pending Records of Decision (RODs) for groundwater cleanup. The remaining 21 sites are pending RODs for implementation of land use controls (LUCs). The cleanup progress at Dover AFB for FY00 through FY03 is detailed below.

In FY00, the installation completed draft feasibility studies (FSs) for 16 remaining sites that require groundwater cleanup. Long-term operations were implemented at the second of the three free product recovery systems. A corrective action plan for the third free product recovery system was approved, and a remedial design for a trench collection system was completed. A site inspection and an engineering evaluation and cost analysis were completed for a pesticide-contaminated soil source.

In FY01, the installation achieved cleanup standards for two of the petroleum sites and the State deemed the sites response complete. 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, the installation completed a focused FS for LUC implementation in lieu of a LUC memorandum of agreement and implementation plans. Five-year reviews for five remedies were completed. Operations continued at three free product recovery systems and an accelerated anaerobic bioremediation system. Total fuel recovered topped 28,000 gallons. Monitoring continued 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. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during inventory development and update. There was no community interest in Restoration Advisory Board (RAB) 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.

FY04 IRP Progress

Regulatory reviews and final changes to the FSs for all remaining sites were completed, State concurrence was received, and EPA concurrence on final FSs is pending. Four proposed remedial action (RA) plans were drafted and are pending release to the public. Operation of three free product recovery systems and an accelerated anaerobic bioremediation system continued. Monitoring of groundwater plumes continued. 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, but policy language issues delayed completion of the ROD. The community expressed no interest in forming a RAB; however, 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.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

Plan of Action

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

IRP

- Begin RA work plans for the South Management Unit and the Area 6 plume in FY05.
- Complete final RODs for all remaining actions in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|-------------------------|
| 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 FY2004 |
| 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 FY00 through FY03 is detailed below.

In FY00, the installation continued long-term management (LTM) at Sites 1, 5, 7, and 10. A draft of the Long-Term Monitoring Program Annual Report for Year Five was completed. An evaluation of groundwater issues at Site 1 was initiated.

In FY01, the installation continued 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.

FY04 IRP Progress

The installation finalized the 5-year review and the updated long-term monitoring project plans. It also continued LTM for groundwater and biota at Site 1.

FY04 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 FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | AR657002447300 | Funding to Date: | \$ 30.8 million |
| Size: | 3,401 acres | Estimated Cost to Completion (Completion Year): | \$ 1.0 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 2005 |
| HRS Score: | N/A | Five-Year Review Status: | Planned FY2005 |
| 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. Prominent 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, 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 and a Restoration Advisory Board in FY94 and completed a community relations plan in FY95. The BRAC cleanup plan was updated in FY97. The installation also completed an environmental baseline survey (EBS) and several supplemental EBSs (SEBSs). The last remedy-in-place was completed for all Installation Restoration Program (IRP) sites in FY99.

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 nine 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 FY00 through FY03 is detailed below.

In FY00, the installation completed lead removal at the small-arms firing range. Remedial action (RA) systems were completed, and sites were monitored as necessary. The deeds for the 110-acre golf course and the 160-acre commercial tract were completed. The installation received regulatory concurrence on findings of suitability to transfer (FOSTs) and SEBSs for all farmland and archaeological sites.

In FY01, the installation operated the RA systems and began monitoring sites. FOSTs and SEBSs for all remaining property were submitted to regulatory agencies for comment. The corrective measures implementation (CMI) design was approved, and the CMI report was submitted to the regulatory agencies for approval.

In FY02, the installation continued monitoring and operation of existing systems. The CMI action report received regulatory approval. The FOST and SEBS for the airfield property and the remaining commercial property were submitted and comments were received and incorporated. The deeds for all remaining property were signed by the Air Force Real Property Agency. A 5-year results-based contract was awarded to operate and close out nine of the 11 remaining sites.

In FY03, the installation implemented the 5-year results-based cleanup contract for basewide RA operation activities, long-term management (LTM), and long-term monitoring completion activities.

FY04 IRP Progress

The installation continued the 5-year results-based cleanup contract for basewide RA operation activities, LTM, and long-term monitoring completion activities. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY04 MMRP Progress

The Air Force conducted an inventory of MMRP sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Complete the 5-year review in FY05.
- Continue the 5-year results-based cleanup contract for basewide RA activities, LTM, and long-term monitoring completion activities in FY05-FY06.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|------------------------|---|--|--------------------------|
| FFID: | NJ217002217200 | Funding to Date: | \$ 25.3 million |
| Size: | 11,134 acres | Estimated Cost to Completion (Completion Year): | \$ 11.0 million(FY 2030) |
| Mission: | Handle, store, renovate, and ship munitions | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2007 |
| HRS Score: | 37.21; placed on NPL in August 1990 | Five-Year Review Status: | Completed FY2003 |
| 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 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. The installation was placed on the NPL in August 1990. In addition, a federal facility agreement was signed in December 1999. In FY95, the TRC was converted to a Restoration Advisory Board. The CRP was updated in FY98. In FY03, the installation completed a 5-year review.

Preliminary assessments (PAs) identified 29 sites of concern at this installation, four 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 Decisions (RODs) at nine sites and has recommended no further action (NFA) at eight sites. The cleanup progress at Earle Naval Weapons Stations for FY00 through FY03 is detailed below. In FY00, full-scale air sparging at Site 26 was initiated, and then expanded to include a new source area. Removals at Sites 12 and 47 and bank stabilization at Sites 6 and 17 were completed. A PA/site investigation (SI) was initiated at Sites 47 and 48. Fuel recovery continued and an optimization study was completed at Site 16F.

In FY01, the installation completed PA/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. A PA/SI was completed for Sites 47 and 48. 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. Draft feasibility studies (FSS) for Sites 1 and 11 were 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 are under review. Sites 3 and 10 landfill caps were completed. The 5-year review plan was completed in FY03.

FY04 IRP Progress

The installation finalized the ROD for Site 13. The PP for Sites 1 and 11 was completed. The draft ROD for Sites 1 and 11 is currently under regulatory review. The FS for Sites 6, 12, 15, and 17 was completed. Regulatory reviews for the PP for Sites 6, 12, 15, 17 and Site 26 Secondary PCE plume have been completed. The installation finalized the ROD for Site 13 and initiated the RA. Optimization studies for Sites 16F and 26 were completed. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

FY04 MMRP Progress

The Conservation Club Range has been recommended for NFA.

Plan of Action

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

IRP

- Finalize design of landfill cap and begin construction of Site 13 in FY05.
- Finalize the ROD for Sites 1 and 11 in FY05.
- Begin RA for Site 1 in FY05.
- Finalize the proposed RA plan for Sites 6, 12, 15, and 17 and prepare draft and final RODs for Sites 6, 12, 15 and 17 in FY05.

- Begin draft FSs for Sites 7, 9, 41 and 46 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---------------------------|
| FFID: | CA957172450400 | Funding to Date: | \$ 263.6 million |
| Size: | 301,000 acres | Estimated Cost to Completion (Completion Year): | \$ 553.0 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 1990, EPA placed the installation on the NPL and the Air Force signed a federal facility agreement. Interim remedial actions (IRAs) have included installing 11 groundwater extraction and 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 seven soil vapor extraction treatment systems. The installation formed a Restoration Advisory Board (RAB) in 1995.

The Edwards Environmental Restoration Program consists of 461 sites and areas of concern (AOCs), divided into 10 geographical operable units (OUs). Fifty-eight sites are in the investigation phase; 28 sites are in the cleanup, operations, construction, Record of Decision (ROD), or decision document stages; four sites are in long-term monitoring; and 371 sites and AOCs require no further investigation (NFI). Over 1.9 million pounds of contaminants have been recycled or destroyed to date. The cleanup progress at Edwards AFB for FY00 through FY03 is detailed below.

In FY00, the installation performed long-term monitoring of groundwater contaminant plumes and other groundwater studies at all 10 OUs. The Air Force conducted screening and investigation of over 20 sites and AOCs, and installed new soil or groundwater treatment systems at Sites 14, 18, and 23. Soil stabilization was used to remediate metal-contaminated soil at Site 96. A mobile dual extraction system (DES) was used to remove soil and groundwater contamination at five sites. The engineering evaluation and cost analysis (EE/CA) for the Site 25 plume control IRA and the action memorandum were finalized. NFI letters were signed for 64 sites and AOCs.

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 DES was used to remove soil and groundwater contamination at five sites in OU 1. The EE/CA for Site 426 was completed and an

IRA work plan was prepared. Groundwater treatment systems for chlorinated solvent contamination were installed and began operation at Sites 25 and 133. A bioventing and air-sparging system was installed at Sites 71 and 74. NFI letters were signed for 104 sites and AOCs.

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 was encountered. A successful steam-injection TS was performed at Site 61. NFI letters were approved for 21 sites. A remedial process optimization program was initiated to review operation of all treatment systems. Construction of the Site 13 landfill cover was completed. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. MMRP sites were identified at this installation. 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 first proposed plan and ROD, for OU 3, were completed.

FY04 IRP Progress

Pilot tests and TSs at Site 285 and various OU 4 sites continued. The installation initiated a pilot test to treat perchlorate effluent discharge using tailored granular activated carbon in OU 4. The natural resource injury (NRI) assessment process resumed. The installation of wells for the nano-scale zerovalent 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 cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

Installation of extraction wells and an ex situ biologically activated carbon treatment system at Sites 225 and 298 in OU 8 was delayed because pump testing indicated groundwater extraction and treatment would not be effective.

The RAB met four times, provided advice on perchlorate and TI issues, and reviewed several innovative remediation methods proposed for feasibility studies. RAB training was conducted to update existing members and to introduce new members to emergent chemicals, technical impracticability (TI), human and ecological risk, NRI, and the proposed plans/RODs.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Install treatment cells and a six-phase heating groundwater treatment system at Sites 225 and 298 in OU 8 in FY05.
- Perform TS at the Sites 5/14 groundwater contaminant plume, continue operating IX TS for treating perchlorate in groundwater, and continue in situ biological or chemical treatment TSs at various sites in OU 5 and OU 9 in FY05.
- Continue to perform hydrogen release compound, Fenton's reagent, microbe injection pilot tests, TSs at various OU 4 sites in FY05-FY06.
- Conduct removal actions using innovative approaches at sites in OU 10 with limited soil contamination in FY05-FY06.

MMRP

- Conduct investigation between FY05 and FY09.

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|-------------------------|--|--|--|
| FFID: | AK057302864600 | Estimated Cost to Completion (Completion Year): | \$ 8.4 million(FY 2012) |
| Size: | 19,790 acres | IRP/MMRP Sites Final RIP/RC: | FY 2005/None |
| Mission: | Provide tactical air support to Pacific Air Forces | Five-Year Review Status: | Completed FY1998 and FY2003/Planned FY2008 |
| HRS Score: | 48.14; placed on NPL in November 1989 | | |
| IAG Status: | IAG signed in May 1991 | | |
| Contaminants: | Heavy metals, POLs, benzene, VOCs, PCBs, solvents | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 55.8 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 identified 64 sites. One additional site has been identified since then. Thirty-one of the sites were grouped into six operable units (OUs); 24 sites were investigated and determined to require no further action (NFA). To date, all Records of Decision (RODs) for the base's 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 FY00 through FY03 is detailed below.

In FY00, the installation completed characterization and delineation of the contaminant plume for Area of Concern-029 (AOC-029). Contaminant characterization was completed at Site OT-008.

In FY01, the Phase I remedial process optimization (RPO) was completed, as was 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 ROD 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No sites were identified at this installation.

In FY03, the installation completed the formal decommissioning 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 will be 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. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

Eielson AFB received funding for its 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 for the site. The emulsion seepage was remedied and NFA will be taken to remove remaining buried drums. 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.

Regulatory issues, specifically changing regulatory personnel, delayed the site validation for AOC-029.

The RAB held biannual meetings.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory

development and update.

Plan of Action

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

IRP

- Pursue RPO initiative for EDM for implementation in FY05.
- Seek RAB co-chair concurrence to reduce RAB meetings from biannual to annual beginning in FY05.
- Repair and upgrade OU 2 bioventing system at Sites ST-13/DP-26 in FY05.
- Determine if present remedy for Garrison Slough remains protective by evaluating FY04 PCBs sampling data in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|--|--|---|
| FFID: | CA917302320800 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 4,738 acres | Funding to Date: | \$ 118.3 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): | \$ 69.8 million(FY 2026) |
| 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: | The installation has not completed a 5-year review. |
| 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. The installation was placed on the NPL in February 1990 and a federal facility agreement was signed in October 1990. 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 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. In FY94, a BRAC cleanup team (BCT) was formed and a BRAC cleanup plan was developed. In FY96, 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 two 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 FY00 through FY03 is detailed below.

In FY00, the installation removed 19 inactive USTs and began closure-in-place for five. The final interim ROD for Sites 2 and 17 was completed. Remedial design (RD) was initiated for Sites 2 and 17. Remediation of the vadose zone trichloroethylene (TCE) release at Site 24 and confirmation vadose zone sampling were completed. Remedial investigations (RIs) were completed for Sites 7 and 14. The primary JP-5 fuel pipelines were cleaned and hydrostatically tested. Regulatory concurrence on NFA status was achieved for 36 UST sites, 12 APHO sites, 12 AST sites, and 23 oil-water separator sites.

Remediation using soil vapor extraction and bioventing began at UST Group 651, former UST Site 364A, and the tank farm.

In FY01, the installation's historical radiological assessment was completed and radiological surveys began. The final ROD for NFA 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. 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 nine ASTs, four USTs and seven 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 published/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 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 completed 30 percent of 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). The RCRA Hazardous Waste Facility Permit for El Toro MCAS expired 18 Aug 2003.

FY04 IRP Progress

The installation finalized the FOST and FOSL without regulatory agency exceptions or contingencies. To date, approximately 3,700 of the original 4,712 acres have been either transferred or found environmentally suitable for transfer. El Toro MCAS also completed the radiological release report

for sites 2, 8, 12, 17, and 25. The draft CRP update was submitted to the regulatory agencies. The Site 16 monitored natural attenuation ROD was signed, and the Site 11 remedial action (RA) and Sites 8 and 12 non-time critical removal actions were initiated. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed construction activities at landfill Sites 2 and 17.

The installation continued facilitating BCT and RAB meetings.

FY04 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 fieldwork for Site 11 RA and Sites 8 and 12 non-time critical removal actions in FY05.
- Complete CRP and continue facilitating the BCT and RAB meetings in FY05.
- Complete NFA ROD for Site 24 soils in FY05.
- Complete draft RI report for Site 1 Explosive Ordnance Disposal Range in FY05.
- Initiate RA field activities for Site 24 VOC Source Area in FY05.
- Initiate landfill cover construction for Sites 2 and 17 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|--|--|--|
| FFID: | SD857212464400 | Funding to Date: | \$ 69.5 million |
| Size: | 4,858 acres | Estimated Cost to Completion (Completion Year): | \$ 26.4 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 FY2000 - remedy remains protective |
| 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 concluding that all sites were protective of human health and the environment.

Environmental studies conducted from FY85 to FY87 identified 20 sites at Ellsworth AFB. Sites at the installation were grouped into 12 operable units (OUs). To date, Records of Decision (RODs) have been signed for OUs 1 through 10 and OU 12. The cleanup progress at Ellsworth AFB for FY00 through FY03 is detailed below.

In FY00, a remedial investigation (RI) was completed and monitoring began at Site ST-26. A 5-year review was completed for 13 ROD sites, with the regulatory agencies concurring that all sites were protective of human health and the environment, subject to landfill cap landslide repairs at Landfill-05 (LF-05). Remediation of basewide groundwater contamination (OU 11) continued.

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 RI for Site RW-27 began. Also in FY01, a comprehensive range inventory was initiated. This inventory was designed to be an annual, iterative effort. To supply data for the inventory, a detailed questionnaire was completed that collected data on the types of munitions used, the range's environmental status, and the type and level of external stakeholder interest.

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 LF-05. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. An MMRP site was identified at this installation.

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. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site.

FY04 IRP Progress

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

FY04 MMRP Progress

The Air Force updated its MMRP inventory.

The preliminary assessment scheduled for FY05 is no longer required, as the area previously identified by Air Force contractors as an MMRP area of concern was subsequently determined to be an Explosives Ordnance Disposal site closed under the Environmental Restoration Program in FY97.

Plan of Action

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

IRP

- Continue FS for Site RW-27 in FY05.
- Continue RA-O and LTM at selected sites in FY05-FY06.
- Finalize the expanded RI/FS report for Site RW-27 in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | |
|-------------------------|--|
| 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: | \$ 78.7 million |

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|--|-----------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 51.0 million(FY 2035) |
| IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2014 |
| Five-Year Review Status: | Completed FY1998 and FY2004 |



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-seven sites, which are grouped into six operable units (OUs), are covered by the FFA. An additional 39 sites are covered by an agreement with the State of Alaska. By 1997, Records of Decision (RODs) have been signed for OUs 1, 2, 3, 4, 5, and 6 and DP98. The cleanup progress at Elmendorf AFB for FY00 through FY03 is detailed below.

In FY00, a remedial action (RA) at ST74 was completed, resulting in the closure of one bioventing system. The installation's CRP was revised. The RA at SS80 was completed, and an engineering evaluation and cost analysis (EE/CA) was initiated at SS83 and DP98. The installation evaluated Landfill 04 (LF04) for a long-term solution to beach erosion, conducted additional site evaluation at WP14, and closed area of concern OT82. Elmendorf AFB received the General Thomas D. White Restoration Award for the fourth year in a row and also received the FY99 Secretary of Defense Environmental Security Award for environmental cleanup.

In FY01, the groundwater model for OU 2 was completed. RA operations (RA-O) of 21 bioventing systems, the engineered wetland system at OU 5, and the high-vacuum extraction (HVE) system at SD15 continued. The annual beach sweep at LF04 was conducted. The site characterization investigation reports were completed for SS83 and DP98, determining that further site characterization was necessary for DP98. An expedited removal action was completed at SA100. 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 SD15. The annual beach sweep at LF04 was conducted. A remedial process optimization 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 DP98. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. MMRP sites were identified at this installation.

In FY03, the Air Force began the EE/CA at SA99, 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 SD15 continued. The installation also conducted the annual beach sweep. Elmendorf AFB received PACAF's General Thomas D. White Installation award. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site.

FY04 IRP Progress

Elmendorf AFB completed the second 5-year review. The installation also completed and signed the ROD for DP98 and the site closure report for LF05, LF07, LF13, and OT56. In addition, the installation initiated the RA for DP98 and system optimization of the OU 5 engineered wetland remediation system, as well as the removal action at SS83. The cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Conduct DP98 RA (soil disposal) in FY05.
- Prepare an explanation of significant difference for SD15 and a site closure report for SA99 in FY05.
- Complete and sign site closure report for ST71 in FY05.
- Complete performance-based contract for PL81 in FY06.

MMRP

- Conduct investigation between FY05 and FY09.

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|------------------------|---|--|-------------------------|
| FFID: | LA657002445200 | Funding to Date: | \$ 34.2 million |
| Size: | 2,284 acres | Estimated Cost to Completion (Completion Year): | \$ 9.7 million(FY 2006) |
| Mission: | Used as a tactical fighter wing | IRP/MMRP Sites Final RIP/RC: | FY 2001/FY 2005 |
| HRS Score: | N/A | Five-Year Review Status: | Completed FY2004 |
| 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 in FY93 and a Restoration Advisory Board in FY94. In FY95, the installation updated its BRAC cleanup plan.

Environmental studies have identified 46 sites at the installation. A RCRA facility assessment conducted in FY92 identified 59 solid waste management units (SWMUs) and five 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. One 5-year review was conducted in FY04. The cleanup progress at England AFB for FY00 through FY03 is detailed below.

In FY00, characterization and a corrective measure study of the trichloroethylene (TCE) plume were completed. The installation completed delineation of contamination at two oil-water separators and the 50-acre wastewater lagoon and completed a removal action at the golf course area site (ST-06).

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, draft post closure plans were completed for Spill Site-45 (SS-45) (TCE plume), SWMU 41 Landfill-15 (LF-15), and SS-21. Quarterly LTM was conducted for SS-45, SS-21, and LF-15. 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 discovered that eleven sites required

some explosive ordnance disposal (EOD) 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. This investigation will determine if MNA should be rejuvenated or replaced. Additional sentry monitoring wells were installed to further define the eastern TCE plume boundary. TCE microbes that break down TCE and daughter products were found working on half of the TCE plume by EPA's fieldwork. 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.

FY04 IRP Progress

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 also conducted the 5-year review and continued LTM for LF-15 and the POLs tank area to comply with post-closure plans. The installation is revising the corrective action permit application as requested by the State. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the closure of 38 sites.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Completion of clearance requirements at these sites was delayed due to funding issues.

Plan of Action

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

IRP

- Continue LTM at SS-45, the TCE plume, LF-15,

SS-21 and the POL tank area in FY05.

- Renew corrective action permit or develop alternative strategy for site closure with the Louisiana Department of Environmental Quality in FY05.
- Submit operating properly and successfully for SS-45 in FY05.
- Continue property transfer in FY05.

MMRP

- Complete survey and clearance of ordnance sites in FY05, pending funding availability.

| | | | |
|------------------------|---|--|--------------------------|
| FFID: | WY857212417900 | Funding to Date: | \$ 106.0 million |
| Size: | 5,866 acres | Estimated Cost to Completion (Completion Year): | \$ 64.0 million(FY 2030) |
| 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 FY1999 |
| 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 Air Force Base (AFB) in FY84. Between 1984 and 1989, trichloroethylene (TCE)-contaminated soil was removed from Spill Sites (SSs) -1, -4, -7, and the acid dry well site. The base was placed on the NPL in FY90 and a federal facility agreement (FFA) was signed in 1991 that included 19 sites, which were grouped into seven 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.

A remedial investigation (RI) identified five plumes of TCE-contaminated groundwater and 20 contained sites which were grouped into 13 OUs. To date, the installation has signed Records of Decision (RODs) for 15 sites, including 10 further action (NFA) RODs, three interim remedial action (RA) RODs, and two final RODs.

The cleanup progress at F.E. Warren AFB for FY00 through FY03 is detailed below.

In FY00, the removal actions and on-base consolidation of Landfills (LFs) 2A, 2B, 3, and 5B, as well as the RIs for Zones A, B, and C were completed. Feasibility studies (FSs) were initiated for Zones A, B, and C. Long-term monitoring of the acid dry well sites was completed, with NFA required.

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 LF-2A and LF-2B site reclamation was completed. Long-term monitoring of LF-5A, the waste consolidation area, LF-6, and SS-7 continued. A supplemental preliminary assessment (PA) and site inspection 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 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. MMRP sites were identified at this installation. F. E. Warren ranges remain in the Installation Restoration Program (IRP), since they are included as a site in the signed FFA.

In FY03, the Air Force completed construction of the Zone B final RA and installed a pump and treat system. The revised FS for Zone C was completed and the ROD amendment continued on schedule. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site.

FY04 IRP Progress

The Air Force completed and signed the LF-4, LF-7, and Fire Protection Training Area 1 RODs and RAs. The Zone C ROD Amendment was completed and submitted to the U.S. Air Force Space Command for signature.

The Zone E ROD and the Zone D groundwater and sources ROD were delayed to incorporate additional RI data.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

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 Zone E ROD in FY05.
- Complete the Phase I Range RI in FY05.
- Complete and sign the ROD and begin RA design and construction for Zone D groundwater and

- sources in FY05.
- Sign the Zone C ROD amendment in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|----------------------------------|
| FFID: | WA057212464700 | Funding to Date: | \$ 45.8 million |
| Size: | 4,300 acres | Estimated Cost to Completion (Completion Year): | \$ 37.6 million(FY 2026) |
| Mission: | Provide aerial refueling and airlift services | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2013 |
| HRS Score: | 31.98; placed on NPL in March 1989 | Five-Year Review Status: | Completed FY2000/Underway FY2004 |
| IAG Status: | IAG signed in 1990 | | |
| 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 1990. 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. 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 FY00 through FY03 is detailed below.

In FY00, fieldwork began for a remedial investigation and feasibility study (RI/FS) study of the basewide oil-water separator site. A partial site delisting effort was initiated with the Washington State Department of Ecology (WA DOE) and EPA. The base prepared 22 sites for removal from the NPL.

In FY01, the first 5-year review was completed. Fieldwork began for an RI/FS study 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. The Air Force completed an inventory of Military Munitions Response program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. MMRP sites were identified at this installation.

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 is no longer being considered. The installation initiated preliminary discussion with the WA DOE regarding terminating remedial operations at Site WP-03.

FY04 IRP Progress

The installation performed significant remedial process optimization initiatives at five of the nine RA operation 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 cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

The installation continued discussion with the WA DOE regarding terminating remedial operations at Site WP-03; however, increased groundwater contamination levels prevented further action. Technical issues delayed the Priority 3 ROD, as its scope was optimized in order to achieve the Command Programming Goals.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Finalize decision regarding terminating remedial operations and closing out Site WP-03 in FY05.
- Complete the Priority 3 ROD and second 5-year review in FY05.
- Initiate Site SS-39 ROD in FY05; initiate remedial design (RD) and RA construction (RA-C) in FY06.
- Initiate RD and RA-C at Site SD-37 in FY05 and FY06, respectively.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|------------------------|---|--|---|
| FFID: | WV39799F789200 | Funding to Date: | \$ 0.8 million |
| Size: | 12 acres | Estimated Cost to Completion (Completion Year): | \$ 0.1 million(FY 2010) |
| Mission: | Manufactured smokeless powder (private party operated a batch chemical plant) | IRP/MMRP Sites Final RIP/RC: | FY 2010/FY 2004 |
| HRS Score: | 36.3; placed on NPL in September 1983 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Dioxin, nic and inorganic chemicals, metals | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

Fike-Artel Chemical is a 16,000 acre former government plant 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). The 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 FY00 through FY03 is detailed below.

In FY00, the PRPs implemented the approved Phase II RI/FS work plan. The potentially responsible parties (PRPs) prepared the RI for soil and groundwater for regulatory agency review. The stormwater treatment system was operating in compliance with permit requirements.

In FY01, the PRPs completed an additional groundwater study and the FS and risk assessment. The parties 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 remedy and the ROD groundwater remedy. 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 West Virginia Department of Environmental Protection conducted the 5-year review inspection. A draft archive search

report was completed for the entire 16,000 acre former government plant.

In FY03, the United States Army Corps of Engineers (USACE) completed the soils remedy at the Cooperative Sewage Treatment (CST) Plant, which was leased by the local redevelopment authority (LRA) as a truck terminal. The OU 4 soils remedy is 99 percent complete and the LRA has leased the north half as a truck terminal. EPA approved the groundwater pre-RD investigation work plan and sampling and analysis plan.

FY04 IRP Progress

Work began for the complex groundwater RD. EPA approved a schedule change that moved the remedy start date into FY06. This new approved date is later than the ROD date. USACE 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 archive search report (ASR) after it received no additional comments.

FY04 MMRP Progress

No MMRP work was performed at this property in FY04.

Plan of Action

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

IRP

- Continue soils component operation and maintenance for OU 4 and CST in FY05.
- Continue groundwater component RD in FY05.
- Complete 66-inch World War I sewer line and 12-inch sewer line investigation in FY05.
- Initiate remedial action work plan for groundwater in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | VA39799F156700 | Funding to Date: | \$ 29.8 million |
| Size: | 975 acres | Estimated Cost to Completion (Completion Year): | \$ 109.7 million(FY 2033) |
| Mission: | Served as ordnance depot | IRP/MMRP Sites Final RIP/RC: | FY 2033/FY 2010 |
| HRS Score: | 70.0; placed on NPL in July 1999 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | IAG under negotiation | | |
| Contaminants: | TNT, solvents, fuels, pesticides, heavy metals, ordnance and explosives | | |
| Media Affected: | Soil, groundwater, sediment | | |



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, 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 ordnance and explosives (OE). In FY97, FNOD held its first Restoration Advisory Board (RAB) meeting. EPA placed the property on the NPL in 1999. EPA delisted the impregnite kit area from the NPL in FY03.

To date, the U.S. Army Corps of Engineers (USACE) has signed one no further action (NFA) proposed Record of Decision (ROD). The cleanup progress at FNOD for FY00 through FY03 is detailed below.

In FY00, USACE completed the main burning ground and the horseshoe-shaped pond Phase I remedial investigations (RIs). USACE also performed a baseline ecological assessment across the property and developed a geographic information system to facilitate communication with the regulatory agencies. Munitions removal continued at the main burning ground.

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 munitions and explosives of concern (MEC) investigations, including investigations of suspected unexploded ordnance near the Monitor Merrimac Bridge Tunnel, and continued MEC removal actions on GE and TCC property. The Army established a web site for FNOD and added bimonthly partnering meetings with the state and federal regulators.

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

In FY03, EPA delisted the impregnite kit area 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 level of community support. USACE found that the Track K dump had unanticipated contamination, and is no longer proposed for NFA. The FNOD project delivery team and statewide FUDS Management Action Plan team met approximately every month. In addition, an EPA Region III FUDS Partnering team met 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. USACE completed the time critical removal action (TCRA) at the TNT area, which is the last FNOD MEC interagency agreement (IAG) site. USACE 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 due to the lack of complete site documentation. The sampling yielded negative results. USACE removed 2,302 explosive items, 8,874 pounds of TNT, and over 3 million pounds of scrap and contaminated soil.

FY04 IRP Progress

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, & I explosive magazine lines. Negotiations continued with landowners on the LUC implementation plan memoranda of agreement. USACE continued with the engineering evaluation and cost analysis (EE/CA) for the Pesticide Drum Area, and completed the site screening process for the GE Pond area of concern (AOC). The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Technical issues delayed the start of the risk assessment for the Track K Dump, as well as the closing of the GE Pond AOC. The FNOD project delivery team met on a bi-monthly basis with regulators and the RAB.

FY04 MMRP Progress

USACE closed out the OE TCRA IAG and removed 133 discarded military munitions items, 772 pounds of munitions debris, and over 140,000 pounds of scrap.

Plan of Action

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

IRP

- Complete the near shore site investigation in FY05.
- Complete the Track K risk assessment in FY05.
- Complete the EE/CA for the Pesticide Drum Area in FY05.
- Initiate the site investigation phase for the Track J explosive magazine lines in FY05.

MMRP

- Complete OE TCRA report in FY05.

| | | | |
|-------------------------|--|--|-------------------------|
| FFID: | MO79799F037400 | Estimated Cost to Completion (Completion Year): | \$ 0.1 million(FY 2005) |
| Size: | 17,232 acres | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2003 |
| Mission: | Manufactured TNT and DNT during World War II | Five-Year Review Status: | Underway FY2004 |
| HRS Score: | 30.26; placed on NPL in February 1990 | | |
| IAG Status: | | | |
| Contaminants: | TNT, DNT, lead, asbestos, PCBs, PAHs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 254.1 million | | |



Progress To Date

From 1941 to 1944, the Weldon Spring Ordnance Works 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 ordnance works 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 1991. 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 ordnance works: 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 Weldon Spring Ordnance Works for FY00 through FY03 is detailed below.

In FY00, remedial action (RA) work for OU 1 continued, including stabilization and disposal of stockpiled lead-contaminated soil, supplemental DNT characterization of selected areas per EPA requirements, and excavation and disposal of DNT-contaminated soil. USACE changed the remedy for disposal of the rest of the contaminated soil to disposal in the adjacent DOE containment cell, which required documentation in an explanation of significant differences (ESD).

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 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-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 awarded a contract for remediation of this site. T-14 required no further action. USACE used geographic information system technology to present groundwater data more effectively. RAB members actively participated in groundwater remediation decisions and the 5-year review process. The Army initiated the closed, transferred, or transferring (CTT) ranges and site inventory for the Military Munitions Response Program (MMRP).

FY04 IRP Progress

USACE completed the supplemental FS, PP, and public review period and meeting for OU 2. Monitored natural attenuation with land use controls was the selected remedy for OU 2. The Army, MDNR, and EPA signed the ROD for the OU 2. USACE also completed the OU 1 closure and T-13 remediation, and submitted the final RA report and the 5-year review to EPA.

USACE held RAB meetings once per quarter.

FY04 MMRP Progress

The Army conducted the CTT ranges and site inventory and concluded 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 Weldon Spring Ordnance Works property.

Plan of Action

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

IRP

- Complete the remedial design work plan and Phase I RA work plan for OU 2 in FY05.
- Obtain EPA and MDNR concurrence on OU 1 in FY05.
- 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 FY05 or FY06.

| | | | |
|-------------------------|---------------------------------|-------------------------------------|-------------------------|
| FFID: | AR621372018700 | Estimated Cost to Completion | \$ 1.0 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: | Planned FY2005 |
| IAG Status: | None | | |
| Contaminants: | POLs, DDT, Chlordane, TCE | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 29.5 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 FY00 through FY03 is detailed below.

In FY00, presumptive remedies through non-time critical removal actions were implemented at two landfill sites. The Army initiated cap construction at Landfill Site 1 and completed the cap for Landfill Site 32. Finding of suitability to transfer (FOST) I was completed addressing 4,223 acres of CERFA Category 1 land. The Army split FOST II into two parts (FOSTs II and III) because of regulator concern about possible contamination from adjacent property. FOST II was completed for 1,370 acres and FOST III for 1,097 acres. These FOSTs were transmitted to EPA and the state for final concurrence. The installation completed RODs IIID and IV for NFA, clearing an additional eight sites on enclave and excess property. The installation initiated cleanup of two additional environmental sites when land within the enclave was designated for transfer to the public.

In FY01, the Army completed 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.

FY04 IRP Progress

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

FY04 MMRP Progress

No work was performed on Military Munitions Response Program (MMRP) sites at this installation in FY04.

Plan of Action

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

IRP

- Complete the first 5-year review in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|---|--|---|
| FFID: | MO79799F034700 | Media Affected: | Groundwater and soil |
| Size: | 42,786 acres | Funding to Date: | \$ 1.9 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): | \$ 32.7 million(FY 2034) |
| HRS Score: | 50.00; placed on NPL in October 1999 | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2034 |
| IAG Status: | None | Five-Year Review Status: | The installation has not completed a 5-year review. |
| Contaminants: | VOCs, uding TCE and carbon tetrachloride | | |



Progress To Date

The former Fort Crowder is located near the city of Neosho, in southwestern Missouri. The Army used the property during World War II as a Signal Corps training center and again during the Korean conflict as a reception station. 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 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 FY00 through FY03 is detailed below.

In FY00, USACE contributed to planning the technical aspects of an additional source removal action. USACE also continued to monitor and review the successful execution of two administrative orders. A portion of AFP 65 is located on the federally owned Camp Crowder. The National Guard Bureau directed a removal action on this property and planned a remedial investigation and feasibility study (RI/FS).

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 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 chemical warfare materiel site. In addition, DoD initiated a review of potential military munitions and chemical warfare materiel areas.

FY04 IRP Progress

USACE provided technical and legal support to DOJ; monitored several source area investigations and removal actions; and began planning an RI/FS. Efforts continued with DOJ to obtain settlement of DoD liability for non-Military Munitions Response Program (MMRP) restoration.

FY04 MMRP Progress

USACE completed intrusive investigations of the potential chemical warfare materiel site.

Plan of Action

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

IRP

- Implement soil vapor extraction removal action at Quince Road area in FY05.
- Plan RI/FS and negotiate order in FY05.
- Continue settlement discussions with, and monitor removal actions completed by, PRPs in FY05-FY06.
- Provide technical and legal support to DOJ in FY05-FY06.

MMRP

- Prepare proposed plan for institutional controls in FY05.
- Plan for long-term management in FY06.

| | | | |
|------------------------|---|--|---------------------------------|
| FFID: | MA121042027000 | Funding to Date: | \$ 138.7 million |
| Size: | 9,302 acres | Estimated Cost to Completion (Completion Year): | \$ 31.6 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 FY2001/Planned FY2005 |
| 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. 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 commander 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. A 5-year review was approved in FY01.

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 FY00 through FY03 is detailed below.

In FY00, the installation completed remedial investigations for AOCs 50 and 57. The Army made the final decision to remediate the landfill sites, with on-site consolidation, and began remedy construction. The installation completed the final draft report for the 5-year reviews of all ROD sites. The Army approved a no further action (NFA) decision document (DD) for AOC 61Z, a former waste accumulation area. The installation conducted a removal action at AOC 17, the former railroad house.

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 (LRA) 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.

FY04 IRP Progress

The installation completed remedial actions 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 NFA DD for AREE 69 AE, North Post oil spill.

Contracting issues delayed the installation of the modified contingent remedy and the completion of the explanation of significant differences for the Shepley's Hill Landfill groundwater remediation. Regulatory issues delayed the completion of remedial actions and site closeout reports for contaminants discovered in the Grant, Locust, and Cavite

Housing Areas.

FY04 MMRP Progress

The Army performed no work on Military Munitions Response Program (MMRP) sites at this installation in FY04.

Plan of Action

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

IRP

- Obtain EPA certification for operating properly and successfully for AOCs 50 and 57 in FY05.
- Implement the Shepley's Hill Landfill groundwater contingent remedy FY05.
- Complete the 5-year review in FY05.
- Complete the PA/SI/SSI investigation for the Grant, Locust and Cavite Army Family Housing Areas during FY05.
- Sample for perchlorate in the GW monitoring wells associated with a CERCLA ROD on the South Post Impact Area (SPIA) during the first quarter FY05.
- Complete the transfer of all properties leased in furtherance of conveyance in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|--|--|---------------------------------|
| FFID: | NJ221042027500 | Estimated Cost to Completion (Completion Year): | \$ 18.1 million(FY 2017) |
| Size: | 30,997 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2017 |
| Mission: | Provide training and Reserve support | Five-Year Review Status: | Completed FY1999/Planned FY2005 |
| HRS Score: | 37.40; placed on NPL in July 1987 | | |
| IAG Status: | ederal facility agreement signed in September 1991 | | |
| Contaminants: | Heavy metals, VOCs, POLs, chlorinated solvents, PCBs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 12.0 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. 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. The installation completed a 5-year review for the landfill in FY99.

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 FY00 through FY03 is detailed below.

In FY00, Fort Dix petitioned EPA to remove the Sanitary Landfill from the NPL. The installation completed final proposed plans (PPs) and draft RODs for the ANC-9 landfill and the golf course pesticide mixing and storage area. No further action (NFA) PPs were drafted for several areas and were submitted for review. The installation completed the final RI and the draft feasibility study (FS) for the Armament Research and Development Center (ARDC) test facility.

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-8 (EPIC-8) landfill, ARDC site, and Magazine-1 (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. PPs for the EPIC-8 landfill and PDO landfill were completed. The installation received an NFA 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. An investigation of previously removed USTs was conducted.

In FY02, the Army initiated a remedial design and a remedial action (RA) at the taxi stand site and an RI/FS at the pesticide control shop. The UST remedial report 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.

FY04 IRP Progress

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. Fort Dix continued to pursue deletion of the Sanitary Landfill from the NPL. The installation continued long-term monitoring at the Sanitary Landfill. The installation completed, and regulators approved, the draft final RI report (RIR) for the New Egypt Armory site, and an interim removal action of PCB-contaminated soils is underway. The installation submitted the draft RIR for the

former Pesticide Control Shop to the regulators for comment. The cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

Regulatory issues delayed additional delineation work around four monitoring wells. The installation initiated a 5-year review of the Fort Dix Sanitary Landfill NPL site; however, scheduling issues delayed completion.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete 5-year review of the Fort Dix Sanitary Landfill NPL site in FY05.
- Complete investigation and installation of additional monitoring wells needed to completely delineate groundwater plume at the Sanitary Landfill NPL site in FY05.
- Complete RIR at the former Pesticide Control Shop in FY05.
- Complete soil remediation at the New Egypt Armory site and submit final RIR in FY05.
- Continue remediation of 14 Fort Dix sites in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|--|-------------------------------------|---|
| FFID: | NJ221402027500 | Estimated Cost to Completion | \$ 0.0 million(FY 2001) |
| Size: | 31,065 acres | (Completion Year): | |
| Mission: | Provide training and mobilization | IRP/MMRP Sites Final RIP/RC: | FY 2001/FY 2000 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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

Fort Dix supported training and mobilization efforts for the Army. The Army signed a federal facility agreement in 1991. In July 1995, the BRAC Commission recommended realignment of Fort Dix and transfer of excess property. 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 FY00 through FY03 is detailed below.

In FY00, the installation completed draft investigation reports for two potential underground storage tank (UST) sites. The asbestos abatement for BRAC Building 8401 was completed. The installation completed an asbestos survey and prepared a draft supplemental EBS for additional BRAC property (Walson Hospital complex). The draft supplemental EBS report and a draft environmental condition of property (ECP) document for additional BRAC property (Buildings 5651, 5653, and 5654) were completed.

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

In FY02, the installation submitted the SI for 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 close out 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 RAB continued to receive and review documents.

FY04 IRP Progress

The installation completed SI fieldwork at Walson Hospital and the Federal Corrections Institute (FCI) (Areas 5700 and 5800). The Army removed Walson Hospital from the list of excess BRAC properties; Walson Hospital was retained by installation. The installation prepared a draft decision document (DD) for polychlorinated biphenyl (PCB) remediation at FCI.

Technical issues delayed the completion of the SI report for Walson Hospital complex.

The installation continued to coordinate with the RAB and regulators.

FY04 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 DD for PCBs at FCI in FY05 and PCB remediation at FCI in FY05-FY06.
- Complete soil and groundwater investigation for chlorinated solvents at Buildings 5656 and 5657 in FY05-FY06.
- Complete a deed notice for Facility 5675 in FY05-FY06.
- Complete soil investigations for PCBs at Buildings 5651, 5653, and 5654 in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---------------------------|
| FFID: | VA321372032100 | Funding to Date: | \$ 48.7 million |
| Size: | 8,228 acres | Estimated Cost to Completion (Completion Year): | \$ 122.5 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, polyaromatic 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. The community relations plan (CRP) was updated in FY00.

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 FY00 through FY03 is detailed below.

In FY00, the installation completed removal of over 6,000 tons of PCB-contaminated sediment from Bailey Creek. The installation prepared draft work plans for the Fire Training Area (FTA) area and Bailey Creek. The CRP was updated.

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 monitoring 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 DOL Storage Yard. A deep monitoring well was installed and sediment, soil, and groundwater samples were collected at the FTA.

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 installation held two technical review committee (TRC) meetings off-post that were open to the public. 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 for regulatory review. The Army awarded a contract for additional sediment and fish tissue sampling at Eustis Lake. The results will be incorporated into the FS. Free product recovery continues at two UST sites, the Army-Air Force Exchange Services (AAFES) Gas Station and the Helicopter Maintenance Area (HMA). Liquid vapor extraction (LVE) was also initiated at these sites. 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 completed the federal facilities agreement (FFA) and submitted it for regulatory review, however the FFA will not be signed until a resolution has been reached on the land use control dispute. The TRC held two meetings off-post. The Army completed the CTT range and site inventory report. Twelve Military Munitions Response Program (MMRP) sites were identified at this installation.

FY04 IRP Progress

The installation completed the draft remedial investigation (RI) for Felker Airfield and the DOL Storage Yard long-term management plan. The installation conducted monthly LVE events at AAFES Gas Station and the HMA, and continued operation of the SVES at Landfill 7. The installation completed an explanation of significant differences under the ROD for the Oil Sludge Holding Pond Site. The installation initiated the TS at the FTA. The installation completed the Landfill 15 cap renovation and repair. The Army revised the FFA to include the Army model and Navy FFA language, and resubmitted the FFA

for regulatory review. The installation completed RA fieldwork at the Oil Sludge Holding Pond and conducted sampling at Eustis Lake to support the FS. The Army conducted post-interim RA monitoring under the FS for Brown's Lake. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

Low-priority status delayed the ROD for Milstead Island Creek. Regulatory issues delayed the RODs for Brown's Lake, Bailey's Creek and Eustis Lake.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Conduct monthly LVE events at the AAFES Gas Station and the HMA and continue operation of the SVES at Landfill 7 in FY05.
- Develop RODs for Brown's Lake, Bailey's Creek and Eustis Lake after the completion of each FS and post-interim RA monitoring under the FS in FY05.
- Conduct fieldwork to support the TS at the FTA in FY05.
- Complete no further action RODs at Third Port UST and Milstead Island Creek in FY05.
- Complete the FS at Felker Airfield Tank Farm in FY05.
- Complete FFA negotiations with EPA on FY05

MMRP

- Initiate SI in FY05.

| | | | |
|-------------------------|--|--|--------------------------|
| FFID: | MD321022056700 | Estimated Cost to Completion (Completion Year): | \$ 15.6 million(FY 2018) |
| Size: | 13,680 acres | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2017 |
| Mission: | Serve as administrative post for various DoD tenants | Five-Year Review Status: | Underway/Planned FY2005 |
| HRS Score: | 52.0; placed on NPL in July 1998 | | |
| IAG Status: | Federal facility agreement under negotiation | | |
| Contaminants: | Heavy metals, petroleum hydrocarbons, VOCs, UXO | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 73.9 million | | |



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.

To date, the Army has completed three No Further Action (NFA) Records of Decision (ROD), two for Tipton Airfield and one for the clean fill dump. The cleanup progress at Fort Meade for FY00 through FY03 is detailed below.

In FY00, the installation completed the proposed plan (PP) and NFA ROD for the clean fill dump.

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 (FFA).

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 need 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). The RAB

continued involvement in installation restoration activities including document reviews, training sessions, and other activities.

In FY03, the installation completed the FS and PP 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 continued partnering with the RAB in installation restoration activities including document review, site tours and training. 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.

FY04 IRP Progress

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 groundwater plume and opened an investigation of FGGM 13. Preparations for the initiation and implementation of the performance-based contract strategy continued.

Although the Army continued towards the resolution of issues associated with development of the ODA decision document (DD), regulatory issues delayed completion. Technical issues delayed completion of the 5-year review for the Tipton Airfield segment of the BRAC parcel.

FY04 MMRP Progress

The Army completed the CTT range and site inventory for the active portion of Fort Meade. The MMRP inventory evaluated six areas and proposed two for additional evaluation.

Technical issues delayed completion of the NTCRA at Patuxent Research Refuge.

Plan of Action

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

IRP

- Complete the 5-year review for the Tipton Airfield BRAC Parcel and initiate 5-year review for Clean Fill Dump BRAC Parcel in FY05.
- Complete DD for ODA and submit FFA to the EPA in FY05.
- Continue closed sanitary landfill RI and comprehensive evaluation of all historical data in FY05.
- Closeout Battery Shop and Granite Nike Control Site in FY05.
- Award PBC contract for 11 sites in FY05.

MMRP

- Complete NTCRA Patuxent Research Refuge BRAC Parcel in FY05.

| | | | |
|--------------------|--|--|---|
| FFID: | WA021402050600 | Contaminants: | VOCs, PCBs, heavy metals, e 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: | \$ 68.0 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): | \$ 59.4 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 FY1997 and FY2002 |



Progress To Date

EPA placed two Fort Lewis sites, Landfill No. 5 and the Logistics Center, on the NPL after investigations revealed soil and groundwater contamination. EPA removed Landfill No. 5 from the NPL in FY95. 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 the Logistics Center, Landfill 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 FY00 through FY03 is detailed below.

In FY00, the Army completed site closeout at Vancouver Barracks and an old explosive ordnance disposal site remedial investigation (RI. The contract to remove containerized sources [drums of trichloroethylene (TCE)] from Landfill No. 2 was completed. The installation investigated the Logistics Center lower aquifer for TCE contamination. The installation's contractor completed the old explosive ordnance disposal site RI. No further action (NFA) was approved for two Installation Restoration Program (IRP) sites.

In FY01, removal of 29,000 pounds of TCE in drums (Logistics Center contaminating source) and 250 tons of RCRA waste occurred during the Landfill No. 2 vadose zone source removal project. The Army completed the engineering evaluation and cost analysis report for Landfill No. 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 Landfill No. 2.

In FY02, the installation completed a 5-year review for the Logistics Center, Landfill 4, and the Illicit PCB Dump Site. It also completed a Phase II RI at Landfill No. 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 Landfill 2 vadose zone and unconfined aquifer TCE DNAPL began. The monitoring of Landfill No. 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 interest.

FY04 IRP Progress

The installation operated and maintained remedies at the Logistics Center (two groundwater pump and treat systems) and the Illicit PCB Dump Site (cap and fence). Long-term monitoring of final remedies at the Logistics Center, Landfill 4, and Landfill 1 continued. The installation completed the delineation of extent of TCE plume in Logistics Center Sea Level Aquifer (lower aquifer) and the associated study. The installation developed a numerical groundwater model to support the selection of final remedy for Logistics Center Sea Level Aquifer and existing modifications to existing pump and treat systems. The installation completed a Sea Level Aquifer focused feasibility study for the Logistics Center. The installation completed the field sampling portions of a vapor intrusion study for Madigan Housing Area at the Logistics Center. The installation completed pre-design for modification to one Logistics Center pump and treat system in order to improve performance and decrease life-cycle costs. 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 IRP sites. Work continued to document land use controls

that are components of the final remedies at eight sites. The Army completed the confirmatory sediment investigation at Park Marsh Landfill. The installation completed in situ thermal treatment of Area 1 at the Logistics Center 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 cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

The installation continued the community relations program. Fort Lewis continued to meet regularly with EPA Region 10 personnel to discuss progress and issues for the Logistics Center and other EPA regulated IRP sites.

FY04 MMRP Progress

The Army completed the Phase III CTT inventory. The installation completed an IRA for the Former Skeet Range.

Plan of Action

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

IRP

- Obtain approval of DD recommending NFA for Park Marsh Landfill in FY05.
- Maintain institutional controls and community relations program in FY05-FY06.
- Continue operation and maintenance for final remedies at the Logistics Center and the Illicit PCB Dump Site in FY05-FY06.
- Continue long-term monitoring of final remedies at the Logistics Center, Landfill 4, and Landfill 1 in FY05-FY06.

MMRP

- Complete State public comment requirements for IRAs in FY05.
- Complete IRA (soil removal) for Former Evergreen Infiltration Range in FY05.
- Complete IRA (fencing) for Former Skeet Range in FY05.
- Initiate site inspection in FY05.

| | | | |
|------------------------|--|--|---|
| FFID: | AL421372056200 | Funding to Date: | \$ 168.0 million |
| Size: | 41,191 acres | Estimated Cost to Completion (Completion Year): | \$ 182.9 million(FY 2023) |
| 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 2017 |
| 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 closure of 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 (USTs); landfills; incinerators; storage handling areas for toxic and hazardous materials; and chemical agent and radioactive substance training, storage, and disposal areas. Trichloroethylene (TCE) and 1,1,2,2-tetrachloroethane are the main contaminants affecting groundwater. 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 Army provided technical assistance for public participation (TAPP) contracts for the RAB in FY02 and FY03. The installation completed its environmental baseline survey and BRAC cleanup plan version I in FY98.

The Army has identified 140 sites at the installation and transferred over 18,124 acres. To date, the Army has completed 86 decision documents, 4 action memoranda, and a Record of Decision. The cleanup progress at Fort McClellan for FY00 through FY03 is detailed below.

In FY00, the installation completed a radiological historical site assessment. The Army and the U.S. Fish and Wildlife Service signed a memorandum of agreement for natural and cultural resource management responsibilities. The installation completed 33 site inspections (SIs) for previously uncharacterized parcels. The Army conducted radiological release surveys for 28 radiological commodity storage sites and an engineering evaluation and cost analysis (EE/CA) for three small-arms ranges and one skeet range. The Army removed USTs from a former gas station. The installation completed a general installationwide work plan for the ordnance and explosives (OE) field program that is supplemented by site-specific work plans and the OE EE/CA for the Eastern Bypass and the M2 Parcel. The Army completed a finding of

suitability to lease for 2,387 acres and approved a finding of suitability to transfer (FOST) for 1,971 acres.

In FY01, the Army Environmental Center technical assistance team reviewed the draft fill area EE/CA report, presented its findings and recommendations, and received regulatory comments. Decommissioning activities at Rideout Field burial mound began. The environmental condition of property determination for two federal-to-federal transfers was approved. The BCT reviewed and recommended approval for four FOSTs for 301 acres.

In FY02, the Army completed two FOSTs, the M1.01 Parcel and M3 Miscellaneous Property EE/CA, removal reports for the M2 Parcel and the Eastern Bypass construction support surface clearance, and transferred approximately 2,847 acres. The BCT reviewed the EE/CAs for the M1.01 Parcel, 33 chemical warfare materiel (CWM) sites, and 11 fill areas. The Army 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 installation completed decommissioning activities at Rideout Field burial mound and submitted the final report to the Nuclear Regulatory Commission. The Army completed the EE/CA for 11 fill areas and fieldwork for SIs at the historical ranges. The Army entered into an environmental services cooperative agreement (ESCA) with the LRA, which transferred the responsibility for cleanup of 13 sites to the LRA and allowed for the early transfer conveyance of approximately 4,692 acres to the LRA. The Army completed four FOSTs and one environmental condition of property for a federal-to-federal transfer. The Army completed the closed, transferring, and transferred ranges and sites inventory report. Twelve Military Munitions Response Program (MMRP) sites were identified at this installation. In 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. The BCT held facilitated monthly meetings.

FY04 IRP Progress

The installation completed CWM 3X scrap removal field activities at Training Areas T-38 and T-24A and a FOST for Highway 21. The Army transferred 158 acres to the Alabama

Department of Transportation. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

Additional site characterization needs delayed completion of the Phase II ESCA negotiations on remaining LRA property.

The Army extended the TAPP contract for the RAB. The BCT held facilitated monthly meetings.

FY04 MMRP Progress

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 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 interim removal actions, 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.

Additional sampling requirements delayed completion of the Bravo Area EE/CA. Technical issues delayed completion of the Charlie Area EE/CA.

Plan of Action

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

IRP

- Complete interim removal action on Iron Mountain Road Ranges in the Eastern Bypass corridor in FY05.
- Complete negotiations on ESCA II to transfer remaining cleanup responsibility to LRA in FY05-FY06.

MMRP

- Complete Bravo Area EE/CA in FY05.
- Complete Charlie Area EE/CA in FY06.

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|------------------------|--|--|-------------------------|
| FFID: | NJ221382059700 | Funding to Date: | \$ 24.5 million |
| Size: | 1,338 acres | Estimated Cost to Completion (Completion Year): | \$ 3.6 million(FY 2017) |
| Mission: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2003/FY 2017 |
| HRS Score: | N/A | Five-Year Review Status: | Planned |
| 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 July 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. 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 (USTs), 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 FY00 through FY03 is detailed below.

In FY00, the Army completed a preliminary groundwater model in Parcels A, B, C, and D. The Army completed removal actions for metals- and PCB-contaminated soil at the metal plating facility, assessed the PCB spill site and contracted for its remediation. All cleanup activities at UST sites and remediation of mercury in the sewer system were completed. The installation completed a finding of suitability to transfer (FOST) for Parcel E.

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 FOST and BRAC disposal support packages for Parcels A and A'. The Army completed the Historic and Cultural Resources memorandum of agreement 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; no Military Munitions Response Program (MMRP) sites were identified at this installation.

In FY03, the installation transferred Parcels D' and F via deed. PCB soil remediation was completed in Parcels A and D.

FY04 IRP Progress

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. Jersey Central Power and Light completed Parcel G RAs and the installation initiated the FOST. The Army obtained regulatory approval for the remediation or land use controls for all chemical storage shed discharge areas. The installation has completed all PCB remediation and restoration actions within Parcel C and adjacent residential properties.

Administrative issues and RAs delayed the deed transfer actions for Parcels B (partial) C, D, E and G.

FY04 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 Hazardous Shed PCB soil remediation of Building 9053 (Parcel D) in FY05.
- Complete hazard abatement within Historic Buildings (Parcel C) in FY05.
- Assess and delineate wetlands within Parcel B in FY05.
- Conduct negotiated sale of Parcel G in FY05.
- Complete EBSs and FOSTs for Parcels C, D and G in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--|
| FFID: | CA921372067600 | Funding to Date: | \$ 304.8 million |
| Size: | 27,827 acres | Estimated Cost to Completion (Completion Year): | \$ 374.3 million(FY 2028) |
| 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 2016/FY 2022 |
| HRS Score: | 42.24; placed on NPL in February 1990 | Five-Year Review Status: | Completed FY1999, FY2001, and FY2002/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 has completed three 5-year reviews: one in FY99, one in FY01, and one in FY02.

The Army has identified 46 Installation Restoration Program (IRP) category sites at Fort Ord. The Army has transferred over 1,900 acres and completed seven Records of Decision (RODs) to date. The cleanup progress at Fort Ord for FY00 through FY03 is detailed below.

In FY00, the installation completed the construction enhancement for the Operable Unit 2 (OU 2) groundwater systems. The installation completed Fort Ord's first economic development conveyance for the transfer of 245 acres. The Army completed a finding of suitability for early transfer (FOSET) for the Fritzsche Army Air Field (FAAF) OU, which was approved by EPA.

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 FOSETs and one finding of suitability to transfer (FOST) and completed a 5-year review for 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 final clearance work at the Del Rey Oaks parcel. Maintenance actions included munitions and explosives of concern (MEC) school safety presentations, clearance of fuel breaks in the multi range 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.

FY04 IRP Progress

The installation completed the Track 1 proposed plan (PP) and public comment period. The Army completed the non-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 and submitted it for concurrence. The installation completed the PP and public comment period related to the ecological risk issues at Site 3. The Army transferred 95 parcels totaling 1,227 acres. The installation completed the pilot study for the carbon tetrachloride soil vapor extraction removal project.

Regulatory issues delayed the Track 1 ROD.

FY04 MMRP Progress

The Army completed a 500-acre vegetation removal and surface removal at 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.

The installation completed the majority of the clearance work at Seaside Parcels 1-4 and Monterey County Parcel 2; however, technical issues prevented completion.

Plan of Action

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

IRP

- Finalize optimization strategy and begin implementation for groundwater treatment systems at OU 2 and Site 2/12 in FY05.
- Continue to transfer Track 0-related properties in FY05.
- Complete RI/FS for carbon tetrachloride site in FY05-FY06.
- Complete ROD for Track 1 and initiate related property transfers in FY05-FY06.

MMRP

- Complete remedial actions to depth at Ranges 43 through 48 in FY05.
- Transfer Del Rey Oaks parcel in FY05.
- Initiate prescribed burn project planning for MR Site 16 in FY05.
- Continue development of RI/FS for Track 3 sites in FY05-FY06.

| | | | |
|------------------------|---|--|---|
| 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: | The installation has not completed a 5-year review. |
| 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 (BCT) and a Restoration Advisory Board, while the LRA developed a land reuse plan.

To date, the Army has transferred approximately 45,100 acres from Fort Pickett, over 42,000 acres of which went to the Army National Guard. The remaining 60 acres will be transferred upon completion of environmental cleanup and documentation. The cleanup progress at Fort Pickett for FY00 through FY03 is detailed below.

In FY00, the installation completed a finding of suitability to transfer (FOST) and a supplemental environmental baseline survey document (EBS) for 2,792 acres of the excess property. The installation transferred 1,608 acres of excess property to the Nottoway County LRA. In addition, it completed draft remedial investigations (RIs) for the former Firefighter Training Area, the former Storage Compound, and the former Service Station and a Phase I RI for the former Salvage Yard. The installation also achieved closure of the underground gasoline pipeline and closed all of the petroleum release sites adjacent to the pipeline after completion of several site assessment reports.

In FY01, the installation completed a site characterization report for Former Fuel Station #1 and began a quarterly monitoring program. It also completed the 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.

In FY02, the installation awarded a guaranteed fixed price remediation (GFPR) contract to complete restoration activities at the former Salvage Yard (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 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 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 the installation.

FY04 IRP Progress

The installation completed the RI and feasibility study at the former Salvage Yard (EBS-13); additionally the draft proposed plan is under review. The installation completed the FOSTs for the Motor Pools and the former Storage Compound.

Regulatory reviews delayed the completion of the DDs for the Motor Pools (EBS-115, EBS-124) and the former Storage Compound (EBS-79).

FY04 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

- Complete remedial actions at the Former Salvage Yard in FY05.
- Complete DDs for the Motor Pools (EBS-115 and EBS-124) and the former Storage Compound (EBS-79) and transfer the property in FY05.

- Complete the DD for the Former Salvage Yard (EBS-13) in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|---|--|---------------------------|
| FFID: | AK021452215700 | Funding to Date: | \$ 84.2 million |
| Size: | 64,470 acres | Estimated Cost to Completion (Completion Year): | \$ 293.5 million(FY 2028) |
| Mission: | Support and sustain forces assigned to U.S. Army Alaska | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2017 |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Completed FY2003 |
| 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. The EPA placed Fort Richardson on the NPL in 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 initial 5-year review was completed in FY03.

Preliminary assessments and site inspections ending in FY93 identified 38 potential contaminated sites. Four Records of Decision (RODs) have been signed to date. The cleanup progress at Fort Richardson for FY00 through FY03 is detailed below.

In FY00, the Army, the Alaska Department of Environmental Conservation, and EPA signed the Operable Unit (OU) D ROD. Ten of 12 OU D sites were determined to require no further action. Two sites (Building 35-752 and a potential burial site discovered during investigation of OU D) were recommended for further investigation under a new OU (OU E). The installation used ground-penetrating radar to delineate and identify potential areas of contamination in the OU E sites.

In FY01, a review of all data collected for 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.

FY04 IRP Progress

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

Contracting issues delayed the ROD for OU E. The detection of free-phase solvent in several monitoring wells at OU B delayed development of the exit strategy.

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.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete the ROD for OU E in FY05.
- Conduct an evaluation of the long-term mortality monitoring plan and initiate exit strategy to meet long-term RA objectives at OU C in FY05.
- Conduct treatment of contaminated soil area at OU B and finalize closure strategy, based on treatment success, in FY05.
- Conduct two RAB meetings and one site visit in FY05.

MMRP

- Begin site evaluations in FY06.

| | | | |
|----------------------|---|--|--|
| FFID: | KS721402075600 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 100,656 acres | Funding to Date: | \$ 64.1 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): | \$ 19.9 million(FY 2017) |
| HRS Score: | 33.8; placed on NPL in August 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2017 |
| IAG Status: | IAG effective June 1991 | Five-Year Review Status: | Completed FY2002 |
| 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), and OUs 6 and 7, which address inappropriately closed sites. Groundwater contamination from OU 4 extends off post. A 5-year review for OU 1 and OU 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 two Records of Decision (RODs), one for OU 1 and one for OU 2. The cleanup progress at Fort Riley for FY00 through FY03 is detailed below.

In FY00, the Army completed construction for the Southeast Funston Landfill/Incinerator removal action and Phase I of the Forsyth Landfill Area 2 riverbank stabilization. The installation initiated a work plan addendum for OU 5. Direct-push screening (soil gas, soil, and groundwater sampling with on-site analysis) defined the nature and extent of contamination at OU 5. The U.S. Geological Survey, in coordination with Fort Riley, issued a water resources report on groundwater modeling of the Kansas River valley. The installation operated a free-product recovery pilot system near the tank farm.

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 OU 3, OU 4, and OU 5. The Army initiated the first 5-year review, focusing on OU 1 and OU 2. The installation initiated a new project to repair excessive settlement at OU 1. A site investigation (SI) was initiated 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 (CTT) ranges and sites with unexploded ordnance, discarded military munitions, or munitions constituents.

FY04 IRP Progress

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

FY04 MMRP Progress

The Army conducted the initial site visit and a historical records review for the site inspection (SI).

Plan of Action

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

IRP

- Complete FS addendum and PP for OU 3 in FY05.
- Complete ROD for OU 4 in FY05.
- Complete FS and PP for OU 5 in FY05.
- Complete Phase II of SI for POL Tank Farm in FY05.

- Establish OUs 8, 9, and 10 for inappropriately closed sites in FY05.

MMRP

- Generate the historical records review report in FY05.
- Conduct SI sampling event in FY05.

| | | | |
|-------------------------|---------------------------------------|--|-------------------------|
| FFID: | MD321022075800 | Estimated Cost to Completion (Completion Year): | \$ 3.4 million(FY 2005) |
| Size: | 1,374 acres | IRP/MMRP Sites Final RIP/RC: | FY 2005/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 | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 8.8 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 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 (EE/CA) for the ordnance and explosives (OE) 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 FY00 through FY03 is detailed below.

In FY00, the Army completed a removal action in the administrative area and the decision documents (DDs) for the auto craft shop and the former hospital area. The installation completed an ordnance and explosives action memorandum for the munitions impact area.

In FY01, the Army completed the Directorate of Public Works maintenance area removal action. The installation completed 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.

FY04 IRP Progress

The installation completed the polishing round of permanganate treatment under the motor pool floor slab and continued monitoring motor pool wellheads.

Technical issues delayed the next step determination.

FY04 MMRP Progress

The installation executed family housing relocation, which delayed completion of 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

- Continue monitoring motor pool wellheads and determine next step in FY05.

MMRP

- Complete the MEC removal action in the Fill Area in FY05.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | IL521402083800 | Funding to Date: | \$ 56.7 million |
| Size: | 709 acres | Estimated Cost to Completion (Completion Year): | \$ 2.2 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 submitted a technical assistance for public participation (TAPP) application for installation approval in FY99.

The cleanup progress at Fort Sheridan for FY00 through FY03 is detailed below.

In FY00, the installation completed the Phase III RI for non-surplus property and prepared a no action decision document (DD) for several study areas within that property. The TAPP contractor independently evaluated Landfill 6 and 7 interim remedial action (RA) design plans as requested by the RAB.

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 RAs for the DoD OU property.

In FY02, the Army completed the final Landfill 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) 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.

FY04 IRP Progress

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

FY04 MMRP Progress

The Army performed no work on MMRP sites at this installation in FY04.

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 FY05.
- Complete the DD for Landfill 1 and implementation of the remedy in FY05.
- Complete and implement the O&M plan and the

groundwater monitoring plan for Landfills 6 and 7 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | NY221022089700 | Funding to Date: | \$ 0.9 million |
| Size: | 175 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2003) |
| Mission: | Provided administrative and logistical support and housing; non-excess property currently used as an Army Reserve enclave | IRP/MMRP Sites Final RIP/RC: | FY 1998/FY 2003 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | hydrocarbons and metals | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In 1995, the BRAC Commission recommended closing Fort Totten, except for use as an enclave for the U.S. Army Reserve. In 1989, the installation initiated a broad Installation Restoration Program (IRP). The Army conducted several preliminary studies, including groundwater sampling at the former landfill area and soil sampling throughout the installation. The installation completed several interim remedial actions and removals, including removing and replacing polychlorinated biphenyl (PCB)-containing transformers, removing and replacing tanks, and removing petroleum-contaminated soil. In FY96, the Army performed an unexploded ordnance (UXO) archive search, along with a limited field survey. In FY97, the Army completed the environmental baseline survey and began an environmental investigation. The installation has a BRAC cleanup team and a Restoration Advisory Board.

The Army identified 100 acres of CERFA-uncontaminated acreage at this installation for transfer. To date, the Army has transferred 37 acres to the New York City Fire Department. As of FY04, the Army transferred all four BRAC parcels. The Military Munitions Response Program (MMRP) status at the installation is response complete (RC). The cleanup progress at Fort Totten for FY00 through FY03 is detailed below.

In FY00, the installation removed 11 fuel oil underground storage tanks (USTs). Soil was sampled at five former UST sites to determine a further course of action. The installation began preparing a draft finding of suitability to transfer (FOST).

In FY01, the Army and the City of New York completed the cultural resources programmatic agreement. Regulators required additional groundwater monitoring at five former UST sites and additional soil removal at one former UST site. The installation prepared a draft FOST and requested public and regulatory review and comments. The installation incorporated comments into the final FOST.

In FY02, the Army completed the environmental documentation required for property transfer, consisting of the FOST and base disposal support package. Groundwater monitoring at five former UST sites continued. The Army completed soil removal at one former UST site. The Army completed a public benefit

conveyance (PBC) through the Department of Education, transferring 37 acres to New York City Fire Department. The installation prepared two additional assignment packages for PBCs to the Department of the Interior (DOI) and the Department of Health and Human Services (HHS) and sent them to Headquarters, Department of the Army for review.

In FY03, the installation completed groundwater monitoring at five former UST sites and plans no further monitoring. The Army completed assignment of two PBCs to New York City; one parcel went through DOI and one went through HHS. The Army completed an inventory of closed, transferred, and transferring ranges and sites with UXO, discarded military munitions, or munitions constituents for the BRAC portion of the installation. The Army identified four MMRP sites on the BRAC portion of the installation.

FY04 IRP Progress

The Army completed assignment of the PBC parcel to the DOI, Parks and Monuments and transferred the deed to New York City. The Army has transferred all four BRAC parcels for community reuse.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04. The MMRP status is RC.

Plan of Action

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

IRP

There are no IRP actions scheduled for FY05 or FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---------------------------------|
| FFID: | AK021452242600 | Funding to Date: | \$ 130.2 million |
| Size: | 917,993 acres | Estimated Cost to Completion (Completion Year): | \$ 276.2 million(FY 2024) |
| Mission: | House the headquarters of the 6th Light Infantry Division | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2017 |
| HRS Score: | 50.00; placed on NPL in August 1990 | Five-Year Review Status: | Completed FY2001/Planned FY2006 |
| IAG Status: | Federal facility agreement signed in November 1991 | | |
| Contaminants: | Petroleum/oil/lubricants, heavy metals, solvents, pesticides, paints, UXO | | |
| 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 installation divided sites into five operable units (OUs). The installation established a technical review committee in FY90. In FY97, it established a Restoration Advisory Board (RAB). A 5-year review was completed in FY01. The entire installation achieved construction complete in FY02. One site was closed out in FY04.

The installation has signed five Records of Decision (RODs). The cleanup progress at Fort Wainwright for FY00 through FY03 is detailed below.

In FY00, the installation negotiated long-term monitoring plan agreements with the state on petroleum-contaminated sites, and completed operations and maintenance (O&M) reports for OU 1, OU 2, and OU 4. The installation completed the interim remedial action reports (RAR) for OU 2, 4, and 5. Remediation systems were expanded at OU 5 to enhance Chena River protection. The installation removed and recycled old air-sparging and soil vapor extraction systems for reuse at other sites.

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 comprehensive exit strategies (CLOSES) for several sites, resulting in a decrease in monitoring frequency. The restoration program managers approved 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 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 sites; six were closed and three were transferred.

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 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.

FY04 IRP Progress

The installation completed CLOSES at six additional sites. The Army achieved site closeout at the Coal Storage Yard site (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 cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

Technical issues delayed the site closeout of Building 1168 (OU 2).

The RAB adjourned at the recommendation of the community co-chair and community RAB members.

FY04 MMRP Progress

The installation reviewed the MMRP sites during the annual Installation Action Plan (IAP) Workshop and included them in the final FY04 IAP.

Plan of Action

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

IRP

- Develop the ESD for the removal action at the Birch Hill Tank Farm aboveground storage tank (AST) site in FY05.
- Complete site closeout of Building 1168 (OU 2) in FY05.
- Continue using the CLOSES evaluations to reduce O&M requirements in FY05-FY06.
- Initiate and complete a removal action at the Birch Hill Tank Farm AST site (OU 5) in FY05-FY06.
- Complete site closeout of additional POL site in FY06.

MMRP

- Continue evaluation of sites during IAPs in FY05-FY06.
- Conduct site inspection in FY06.

| | | | |
|----------------------|--|--|---|
| FFID: | NM621382097400 | Media Affected: | Groundwater and soil |
| Size: | 21,881 acres | Funding to Date: | \$ 34.4 million |
| Mission: | Stored, shipped, and received ammunition components and disposed of obsolete or deteriorated explosives and ammunition | Estimated Cost to Completion (Completion Year): | \$ 37.8 million(FY 2015) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2015 |
| IAG Status: | None | Five-Year Review Status: | The installation has not completed a 5-year review. |
| Contaminants: | Explosive compounds, UXO, PCBs, pesticides, heavy metals, asbestos, lead/PCB-based paint | | |



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 501 and 11, 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 FY00 through FY03 is detailed below.

In FY00, the installation received New Mexico Environment Department (NMED) approval for no further action status on its southern properties, and was able to transfer the entire parcel (4,527 acres) to the Bureau of Land Management after a fence was built around the OB/OD area. Wells were installed at Buildings 542 and 600. The installation conducted quarterly groundwater sampling at the OB/OD area and the TNT Leaching Beds and completed the installationwide soil background studies.

In FY01, the installation completed a remedial action at the western landfill, and remedial investigations for Building 537 and Building 9. 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 NMED 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.

FY04 IRP Progress

The installation completed quarterly groundwater sampling at the TNT Leaching Beds.

Although the installation received the draft RCRA post-closure permit from NMED for the OB/OD area, regulatory issues delayed the post-closure permit and the development of the cleanup requirements for explosive compounds.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Negotiate RCRA post-closure permit requirements and develop a work schedule and funding requirements in FY05.

MMRP

- Discuss future MMRP actions during the RCRA post-closure permit requirements negotiation in FY05.

| | | | |
|-------------------------|---|--|--|
| FFID: | MN517002291400 | Estimated Cost to Completion (Completion Year): | \$ 8.4 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 FY2004 - remedy remains protective |
| 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: | \$ 35.2 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. Naval Sea Systems Command sold the NIROP site in June 2004. The facility was placed on the NPL in FY90 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. 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 FY00 through FY03 is detailed below.

In FY00, the installation completed evaluation of on-site and residual off-site groundwater contamination. The installation continued implementing the groundwater remedy.

In FY01, the installation completed the remedial investigation (RI) and the risk assessment for OU 2 and OU 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 OU 2 and OU 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.

FY04 IRP Progress

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.

Equipment failures caused limited down time to the OU 1 pump and treat groundwater contamination system.

FY04 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 FY05.
- Continue monitoring the enhanced

bioremediation pilot study site in FY05-FY06.

- Evaluate the feasibility of treating the groundwater under the building in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|-------------------------|
| FFID: | OH597152435700 | Funding to Date: | \$ 10.3 million |
| Size: | 164 acres | Estimated Cost to Completion (Completion Year): | \$ 0.9 million(FY 2005) |
| 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 FY2004 |
| IAG Status: | None | | |
| Contaminants: | Residual POLs, solvents, pile runoff (VOCs and SVOCs), and metals | | |
| 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. 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.

The installation has identified 22 sites and 48 AOCs. To date, one Record of Decision has been signed. The cleanup progress at Gentile AFS for FY00 through FY03 is detailed below.

In FY00, the BCT signed a decision document (DD) selecting long-term management (LTM) as the final remedy for Parcel B groundwater. The removal actions at Sites SD001 (C1) and LF008 (D1) were completed, and the final removal action report for LF008 was published. The supplemental remedial investigation report for Parcel E was published.

In FY01, Parcel B was transferred to the local redevelopment authority (LRA), and LTM began. The final removal action report was published and the draft 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 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 (R2) and SS028 (Parcel B) were completed. Semiannual groundwater monitoring was also conducted at these two sites. The last remedy-in-place milestone was reached at two 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 (R2) was finalized and semiannual groundwater sampling at Sites WP026 (Parcel A), SS028 (Parcel B), LF008, and SS035 (Parcel E) was conducted. The installation signed explanation of significant differences to remove commercial/industrial use restrictions at Sites 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 (OP&S) determination for groundwater monitoring following a soil removal action. No Military Munitions Response Program (MMRP) sites were identified or reported.

FY04 IRP Progress

Gentile AFS completed the first 5-year review, which received EPA concurrence. The installation finalized the OP&S determination for Sites C7 and D1 in Parcel E and received an OP&S 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 Parcel B and Sites C7, D1, and R2 continued. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the transfer of Parcel E to the LRA.

FY04 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

- Transfer the last parcel Parcel E to the LRA in FY05.
- Adjourn the Gentile RAB after Parcel E is transferred in FY05.
- Continue RA-O sampling of groundwater at Parcel B and Sites C7, D1, and R2 in FY05.
- Decommission all obsolete monitoring wells in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|-------------------------|---|--|---------------------------------|
| FFID: | CA957002445300 | Estimated Cost to Completion (Completion Year): | \$ 30.9 million(FY 2034) |
| Size: | 5,062 acres | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2005 |
| Mission: | Provided tactical fighter operations support | Five-Year Review Status: | Completed FY2000/Planned FY2005 |
| 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: | \$ 93.3 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. In FY93, the installation closed and a 5-year review was completed in FY00.

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 FY00 through FY03 is detailed below.

In FY00, construction and installation of the soil vapor extraction pilot system for OU 2 were completed. A CERCLA-mandated 5-year review of the overall cleanup program was completed. Closeout of bioventing site WP-17 was completed, and all work plans were submitted to the BCT for approval. The installation initiated sampling at identified UST sites.

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 polyaromatic hydrocarbons (PAHs) and lead shot at the second skeet range.

In FY03, the installation completed the draft planning document for removal action at the Site 28 Defense Reutilization Marketing Office site 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 Air Force and EPA agreed on a risk based closure of the second skeet range to unrestricted usage of the property.

FY04 IRP Progress

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 1000 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 cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the FS for OU 2. Technical issues delayed the draft 5-year review revisions.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation. In addition, the installation initiated a project to confirm that the proper Explosive Ordnance Disposal (EOD) removal was performed in the 1990s.

Plan of Action

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

IRP

- Initiate risk based closure at WP-17 in FY05.
- Optimize OU 1 treatment system operations in FY05.
- Submit revised 5-year review document in FY05.

MMRP

- Obtain closure at the EOD site in FY05.

| | | | |
|------------------------|--|--|---|
| FFID: | NY257002445100 | Funding to Date: | \$ 122.8 million |
| Size: | 3,638 acres | Estimated Cost to Completion (Completion Year): | \$ 24.6 million(FY 2036) |
| Mission: | Operate air refueling and long-range bombardment facility | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2005 |
| HRS Score: | 34.20; placed on NPL in July 1987 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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 and a Restoration Advisory Board in FY95. The BRAC cleanup plan was completed the same year. The installation received technical assistance for public participation funding in FY99.

Environmental studies identified 61 sites at Griffiss AFB. To date, a property disposal Record of Decision (ROD) has been signed for base realignment. The proposed plan (PP) was completed for Landfill 1 (LF 1), and five no further action (NFA)/institutional control RODs were completed. The installation has also signed 21 of the required 41 environmental RODs. The cleanup progress at Griffiss AFB for FY00 through FY03 is detailed below.

In FY00, the area of concern (AOC) expanded site inspection was completed. The installation also began interim remedial actions (IRAs) at the ST26 Building 43 refueling station and received final approval on all RCRA site closures.

In FY01, the installation executed the LF 6 ROD. RODs have now been issued for all landfills, and landfill closure plans are being prepared. An additional five RODs were signed and six PPs were submitted. IRAs began at three sites. A contract to remediate petroleum-contaminated soil was awarded. IRAs for Building 789 and the Pumphouse 5 site were completed.

In FY02, a treatability study (TS) commenced for four trichloroethylene (TCE) plumes. Remediation for three of the five remaining landfills began. Six PPs were submitted and

approved. Three RODs were executed and an additional three are awaiting EPA comments. The Apron bioventing system was installed and initiated. The feasibility study (FS) and remediation activities for the creeks were rescheduled 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 the fourth. Four hardfill areas received closure approval and an explanation of significant differences was executed closing the groundwater component of four sites. The FS for the two creeks was completed and the associated PPs were approved. Reconstruction of the landfarming operation was completed involving 80,000 cubic yards of contaminated soil. Remediation of the small arms range was completed. Installations of the bioventing systems were completed for Apron 1 and 2. Removal of 11,000 cubic yards of contaminated soil was completed at the Tank Farms 1 and 3 sites. Griffiss AFB completed installation of the Pumphouse 1 free product recovery system and closed 12 petroleum spill sites.

FY04 IRP Progress

The installation initiated remediation of the final landfill, completed the LF 2/3 and LF 1 covers, and completed the TS for four TCE plumes. Griffiss AFB executed the RODs for two creeks and awarded the remediation contract. The installation also issued the remedial investigation and FS results for SS62 AOC9. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Award performance-based contracts for the remediation of the TCE plumes and for the long-term monitoring in FY05.
- Complete five RODs in FY05.
- Complete seven RODs in FY06.
- Complete partial NPL deletion in FY06.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|------------------------|--|--|---|
| FFID: | IN557212447200 | Funding to Date: | \$ 18.3 million |
| Size: | 2,722 acres | Estimated Cost to Completion (Completion Year): | \$ 17.0 million(FY 2035) |
| Mission: | House a refueling wing; formerly housed a bombardment wing | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2005 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Household and industrial waste, spent solvents, fuels, waste oil, pesticides, lead, munitions, asbestos, radiation contamination, PCBs, and lead-based paint | | |
| 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 1,380 acres for military activities and returned 1,342 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. In FY94, the installation completed a basewide environmental baseline survey (EBS); subsequently, supplemental EBSs are 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. To date, Records of Decision (RODs) have been signed for Fire Protection Training Areas (FPTAs) 1 and 2, the Polychlorinated Biphenyls (PCBs) Site, the two landfills, a small arms firing range, a munitions burn/burial area, and various spill sites. Nine no further remedial action planned documents were signed to close out areas of concern (AOCs), and findings of suitability to transfer were signed. Underground storage tank (UST) sites within military family housing were closed and required no further action (NFA). The cleanup progress at Grissom AFB for FY00 through FY03 is detailed below.

In FY00, the installation finalized the focused feasibility study (FS) and began quarterly groundwater monitoring at the two FPTAs. The remedy-in-place (RIP) decision document (DD) for Landfill 1 (LF1) was signed. Soil removal and closure of the abandoned UST site (ST009) were completed. The field investigation of the former interim RCRA hazardous waste storage area was completed. The remedy for the indoor and outdoor small arms firing ranges was completed, and the sites will close with NFA.

In FY01, the focused site assessment at the Central Heat Plant (CHP) was initiated. The remedial investigation/FS was started for the PCBs site. Removal actions were completed for the buried B-58 site. The DD for the remedy at LF2 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 as well as the PCB Site were signed. The State approved the proposed remedies for both the flightline gas station and Building 14. Investigation of the oil-water separator at former Building 122 was completed and the final report awaits regulatory review. Site investigation for the CHP was completed. Regulators approved the B-58 survey as well as removal action recommending NFA 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. 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, Installation Restoration Program (IRP) Sites FT001 and FT002, was operating properly and successfully. The BCT also 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 one IRP site and six AOCs.

FY04 IRP Progress

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; the first round of post supplemental RA groundwater samples were non-detect for the contaminant of concern. The site will close in a year pending the results of the groundwater sampling. The installation performed an investigation and discovered previously undocumented groundwater contamination south of Building 190. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

RIP was not attainable due to field conditions.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Achieve RIP for the CHP and Building 747 in FY05.
- Complete the demonstration that natural attenuation has remediated the petroleum contamination of groundwater at the flightline gas station and Building 14 in FY05.
- Select a remedy for the groundwater contamination at Building 190 in FY05.
- Award the PBC in FY05.
- Conduct RA fieldwork in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|--------------------|--|--|---|
| 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: | \$ 113.0 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 35.6 million(FY 2011) |
| IAG Status: | IAG signed in 1993 | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



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 1993. 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. Environmental studies at the installation have identified 64 sites. The installation has achieved response complete at 44 sites. To date, the installation has signed no further action (NFA) Records of Decision (RODs) for three sites. The cleanup progress at Guam Apra Harbor Complex for FY00 through FY03 is detailed below.

In FY00, the installation completed design and began construction of a landfill cap at NAVACTS Site 1 and a removal action at NAVACTS area of concern (AOC) 2. The installation initiated an interim remedial action (IRA) at NAVACTS Site 4. It also completed the draft revised screening ecological risk assessment (ERA) for FISC Site 19. The installation conducted groundwater sampling at PWC Site 17. Maintenance and monitoring continued at PWC Site 28-10.

In FY01, the installation completed the screening ERA for PWC solid waste management unit (SWMU) 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 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 the IRA and submitted the proposed plan (PP) recommending NFA at NAVACTS Site 4. The installation also completed fish sampling for the screening human health risk assessment at NAVACTS Site 1 and remedial actions at NAVACTS AOCs 1 and 3. Additionally, the installation completed the site closeouts for NAVACTS SWMU 49 and PWC AOC 1 and signed NFA RODs for NAVACTS SWMU 49 and PWC AOC 1. The installation completed the removal action at NAVACTS SWMU 26 and began the removal action at PWC Site 17. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. No MMRP sites were identified at this installation.

In FY03, NAVACTS completed revegetation work for Site 1 and initiated Phase II remedial investigation (RI), including source characterization and risk evaluations. The installation completed site closeout for NAVACTS Site 4 and closure of on-site monitoring wells for PWC Site 2810.

FY04 IRP Progress

The installation completed NFA ROD for NAVACTS AOC 2, and PP public meeting for AOC 1 and AOC 3. The installation also negotiated restricted land use for Site 28 with regulators, and continued the Phase II RI, including groundwater dye trace study and installation of new groundwater monitoring wells for NAVACTS Site 1.

The Site 28 and AOC 1 ROD was delayed due to regulatory issues. The baseline ERA for FISC Site 19 was not performed due to regulatory concerns. Instead, a revised screening ERA was performed and is pending a regulatory review.

FY04 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 NFA RODs for NAVACTS AOC 1, AOC 3, and PP/ROD for Site 28 in FY05.
- Complete RI activities for NAVACTS Site 1 and initiate IRA for FISC Site 19 in FY05.
- Conduct site investigation (SI) for PWC Site 16 and initiate SI for FISC Site 34 in FY05.
- Initiate removal site evaluation for NSRF Site 24 in FY05.
- Complete updated human health & ecological risk assessment for NAVACTS SWMU 26 in FY05.
- Complete Phase II removal action for FISC SWMU 12 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|-------------------------|
| FFID: | CA921402303800 | Funding to Date: | \$ 32.2 million |
| Size: | 669 acres | Estimated Cost to Completion (Completion Year): | \$ 6.0 million(FY 2005) |
| Mission: | Conducted Reserve training | IRP/MMRP Sites Final RIP/RC: | FY 2005/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" (A-2, A-3, A-4, A-5, and A-6), 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), semivolatiles 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 A-2, A-3, A-5, and A-6 to the City of Novato. In FY03, the Army transferred the hospital parcel to the City of Novato; Out Parcel A-4 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 has completed two Records of Decision (RODs) to date, both in FY03. The cleanup progress at Hamilton Army Airfield for FY00 through FY03 is detailed below.

In FY00, the installation completed the interim removal actions for several airfield sites. It also prepared and submitted closure reports for Out Parcel A-4, the POL Hill, and the hospital area to the regulators for review.

In FY01, the installation completed the sampling plan for the coastal salt marsh (CSM) sites and collected additional samples. The Army provided the ROD for the airfield for public comment and completed closure reports for Out Parcel A-4 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 CSM 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 A-4 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 CSM sites. The Army completed a FS for CSM 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 the A-4 Parcel 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 added four community members and reviewed the ROD/RA plan and FOSET for the Main Airfield Parcel and the POL Hill FOST.

FY04 IRP Progress

The installation completed the FOST for the levee parcel that was removed from the FY03 early transfer. The Army transferred the POL Hill and Levee parcels. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

Technical issues delayed completion of the remedial design (RD) for the CSM sites.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

Plan of action items for Hamilton Army Airfield are grouped below according to program category.

IRP

- Complete the CSM RD and RAs in FY05.
- Complete the remaining RD and RAs for inboard sites in FY05.
- Perform biological monitoring for the CSM RAs in FY06.
- Complete project documentation and closeout in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---------------------------------|
| FFID: | MA157172442400 | Funding to Date: | \$ 35.3 million |
| Size: | 826 acres | Estimated Cost to Completion (Completion Year): | \$ 10.3 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 FY2002/Planned FY2007 |
| 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 FY00 through FY03 is detailed below.

In FY00, the installation completed a supplemental remedial investigation, a human health risk assessment, and an environmental risk assessment for OU 3/IRP Site 21 and finished a focused feasibility study (FFS) and a proposed plan (PP) for OU 3/IRP Site 6. Also, an FFS and an interim PP were completed for OU 1.

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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

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. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

The installation continued the 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.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

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, and OU 3/IRP Site 21 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|-------------------------------------|-------------------------------------|---------------------------|
| FFID: | NE79799F041100 | Estimated Cost to Completion | \$ 110.4 million(FY 2049) |
| Size: | 48,753 acres | (Completion Year): | |
| Mission: | Produce, load, and store ammunition | IRP/MMRP Sites Final RIP/RC: | FY 2024/FY 1999 |
| HRS Score: | 42.24; placed on NPL in June 1986 | Five-Year Review Status: | Completed FY2002 |
| IAG Status: | IAG (effective September 1998) | | |
| Contaminants: | UXO, VOCs, PAHs, heavy metals | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 72.4 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 former naval yard dump, the explosives disposal area, and the bomb and mine complex production facility (OU 16); and an OU for a 44,500-acre area that consists of all areas of the former NAD not included in the other OUs (OU 15). EPA placed the property on the NPL in 1986 and the Army and EPA signed an interagency agreement in 1998. USACE formed a Restoration Advisory Board (RAB) at this property. USACE procured a technical assistance for public participation contract in FY99 to support the RAB. USACE completed the first 5-year review in FY02.

To date, EPA signed one Record of Decision (ROD) for removal of surface soil, which was amended in FY95. The Army approved a Military Munitions Response Program (MMRP) project in FY96. The cleanup progress for Hastings Groundwater Contamination Site for FY00 through FY03 is detailed below.

In FY00, USACE submitted a final OU 4 technical memorandum addressing carcinogenic polyaromatic hydrocarbons (cPAHs) and issued a proposed plan (PP). The OU 8 Phase II soil vapor extraction (SVE) systems were constructed and began operating. USACE submitted to the regulators the draft final feasibility study (FS) for groundwater contamination at OU 14 and the draft final engineering evaluation and cost analysis (EE/CA) for OU 15. EPA approved the ecological risk assessment for OU 15. USACE also completed the OU 16 EE/CA. USACE developed the Hastings Project Web page as a communication tool for RAB members and the general public.

In FY01, USACE submitted the draft ROD for cPAH-contaminated surface soil (OU 4, OU 15, and OU 16) to the regulators. The cPAH predesign investigations of residential properties were completed. They also prepared a revision to the groundwater contamination FS. 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 SVE and pistol/rifle range soil removal). USACE completed the performance evaluation of the OU 8 Phase II SVE operating systems. The naval yard dump system was moved to Area 10 (OU 15) for future SVE remediation efforts.

In FY02, USACE completed the OU 4 PP and ROD for the cPAH contamination in soils at the NAD residential properties. The Army and EPA signed the residential cPAH ROD, completed design, and began soil remediation. The OU 15 pistol range removal action was completed. A contractor constructed the SVE system at Area 10. The Army approved the removal action to provide alternate water to residents with contaminated groundwater. Installation of new supply wells for affected residents began. The provision of alternate water was a component of each remediation alternative in the sitewide groundwater FS. The Army completed the initial 5-year review for the NAD. USACE submitted the final FS for OU 14.

In FY03, USACE completed the cPAH remedial action (RA) for the nine residential properties and installed alternate water supply wells for residents with contaminated groundwater. USACE initiated a quarterly sampling program to ensure the new wells were in compliance with federal and state drinking water standards. USACE completed a two phase predesign investigations to support the future design of the OU 14 groundwater remediation system and initiated the groundwater modeling based on the investigation results. A FS to document completed removal actions for the OU 16 sites was initiated. Technical discussions with the regulators concerning cPAH cleanup levels for the non-residential properties of the NAD began.

FY04 IRP Progress

USACE completed the explanation of significant differences, which modified the 2002 cPAH ROD to include remediation of the remaining 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 to optimize groundwater remediation scenarios. Additionally, USACE conducted quarterly monitoring of the alternate water

supply wells. USACE supported the Department of Justice in preparing and filing litigation against a potentially responsible party. Operation of the SVE system at Area 10 (OU 15) continued. The cost of completing environmental restoration at this installation changed significantly due to technical, regulatory, and estimating criteria issues.

Technical issues delayed the OU 15 baseline risk assessment. Regulatory issues delayed the regulatory review and completion of the OU 16 FS.

FY04 MMRP Progress

USACE completed the ordnance and explosive (OE) recurring review work plan and the site visit.

Plan of Action

Plan of action items for Hastings Groundwater Contamination Site are grouped below according to program category.

IRP

- Complete remediation of cPAH contaminated soils at the NAD non-residential properties in FY05.
- Conduct groundwater studies to support development of remediation alternatives in FY05.
- Develop the PP for groundwater remediation in FY05.
- Complete the FS for OU 16 and the risk assessment for OU 15 in FY05.

MMRP

- Complete the MEC recurring review report in FY05.

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|-------------------------|---|--|--|
| FFID: | UT857172435000 | Estimated Cost to Completion (Completion Year): | \$ 312.5 million(FY 2028) |
| Size: | 6,666 acres | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2014 |
| Mission: | Provide logistics support for weapons systems | Five-Year Review Status: | Completed FY1997 and FY2003/Planned FY2008 |
| 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: | \$ 205.1 million | | |



Progress To Date

The mission of Hill Air Force Base (AFB) is to provide logistics support for weapons systems. 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, 109 sites have been identified. Forty-two of these sites have been grouped into twelve operable units (OUs). To date, the installation has signed Records of Decision for six OUs. The cleanup progress at Hill AFB for FY00 through FY03 is detailed below.

In FY00, construction of groundwater collection and treatment systems began at six cleanup sites in OU 1. In addition, natural attenuation has been implemented at some off-base areas of OU 1. The installation closed seven sites, and final remedial actions (RAs) were completed at eight sites.

In FY01, the base reduced on-site treatment costs through partnerships with local sewer districts. Hill AFB completed final RAs at five sites and closed six sites. A comprehensive range inventory was initiated. This inventory was designed to be an annual, iterative effort. To supply data for the inventory, a detailed questionnaire was completed that collected data on the types of munitions used, the range’s environmental status, and the type and level of external stakeholder interest. 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 Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. MMRP sites were identified at this installation. 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. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site. 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.

FY04 IRP Progress

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 sites and closed seven sites. The Air Force continued to make significant progress towards signing an innovative cleanup agreement for the Utah Test and Training Range (UTTR) areas of concern (AOCs). The Air Force completed indoor air sampling at over 600 off-base residences and installed vapor removal systems in homes requiring remediation. The Air Force also developed geospatial-based land use controls, a lease tracking database, and geographic information system tools to facilitate data analysis. The cost of completing environmental restoration at this installation changed significantly due to estimating criteria issues.

The discovery of additional contamination, funding issues, and weather conditions delayed the planned OU 9 FS. The completion of the UTTR AOCs were delayed by Air Force and State legal reviews.

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.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Complete remedy in place for one site, response complete (RC) for one site, close out one site, and reduce risk from Medium to Low at one site in FY05.
- Complete the study phase for four sites, including completing RI/FS at OUs 9 and 12 in FY05.
- Finalize RC at 20 additional AOCs in FY05.
- Continue to sample and remediate vapor intrusion around the base in FY05.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|-------------------------|---|--|---------------------------------|
| FFID: | FL457212403700 | Estimated Cost to Completion (Completion Year): | \$ 5.0 million(FY 2015) |
| Size: | 2,938 acres | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2014 |
| Mission: | Housed the Air Combat Command 31st Fighter Wing | Five-Year Review Status: | Completed FY2003/Planned FY2008 |
| HRS Score: | 42.24; placed on NPL in February 1990 | | |
| IAG Status: | Federal facility agreement signed in March 1991 | | |
| Contaminants: | Heavy metals, VOCs, cyanide, pesticides, solvents, PCBs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 31.4 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, a 5-year review was completed.

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 five 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 FY00 through FY03 is detailed below.

In FY00, remedial action (RA) plans were completed for OUs 20/21, 30, and 31. Closeout of SS-20, Building 766, and one site within SS-15B Pump House 4 was completed with no further action required.

In FY01, interim 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, allowing the Air Force and regulators to update the community on the program's status.

In FY03, the installation completed the 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. As of the end of FY03, no Military Munitions Response Program (MMRP) sites were identified or reported.

FY04 IRP Progress

The installation completed canal remediation at OU 11. The sampling for the long-term monitoring sites schedule was negotiated and OU 22 was moved from the Installation Restoration Program (IRP) to the State Petroleum Program. OU 11 and OU 18 were transferred from the Air Force Real Property Agency to the AFRC, the 482nd Fighter Wing, and OU 14, OU 20/21, OU 22, OU 26, and OU 28 through OU 31 were separated into their own parcel. The cost of completing environmental restoration at this installation has changed significantly due to regulatory and estimating criteria issues.

Regulatory issues delayed the completion of the RODs for OUs 20/21, 30, and 31.

FY04 MMRP Progress

The Air Force 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 RODs for OUs 20/21, 30, and 31 in FY05.
- Complete a ROD to close out the terrestrial portion of OU 11 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | CA917002278400 | Funding to Date: | \$ 302.0 million |
| Size: | 934 acres | Estimated Cost to Completion (Completion Year): | \$ 107.4 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: | The installation has not completed a 5-year review. |
| 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 this installation. 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). The installation was placed on the NPL in November 1989. In addition, it signed a federal facility agreement in September 1990 which was revised in January 1992. A BRAC cleanup team (BCT) was formed in FY94. The installation prepared its BRAC cleanup plan in FY94 and updates it regularly. 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.

Environmental studies at the installation have identified 78 CERCLA sites. The installation has completed a Record of Decision (ROD) for no further action at Parcel A. In addition, it has completed a National Environmental Policy Act (NEPA) ROD and a finding of suitability to transfer (FOST) for Parcel A. The cleanup progress at Hunter's Point Annex Treasure Island for FY00 through FY03 is detailed below.

In FY00, the installation completed NEPA and California Environmental Quality Act documents. The installation also submitted the Parcel B draft final land use control implementation plan for review. Additionally, the installation developed an action memorandum to remove steam lines, fuel lines, and contaminated soil from Parcels C and D, and one for the remediation of low-level radioactive contamination at four buildings in Parcels D and E. It also developed a work plan for performance of soil vapor extraction and groundwater chemical oxidation treatability studies (TS) at Parcels B, C, and E.

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 and completed a Parcel D draft feasibility study (FS). 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 prepared the Parcel A draft final FOST. The installation also completed the Parcel B Risk Management Review. The installation successfully completed innovative groundwater cleanup technology under TSs for the plumes and data gap sampling for Parcels C and E.

FY04 IRP Progress

The FOST for Parcel A was finalized at the end of September. In Parcel C, the installation achieved significant VOC contaminant reduction through zero-valent iron in situ treatments under a TS. It also completed a removal action in Parcel D in which contaminated soil was removed and soil stockpiles were sampled and removed. The installation divided Parcel E, with 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, the installation performed two data gap investigations and summarized the results in a validation study report. In addition, the basewide historical radiological assessment (HRA) was finalized, identifying 91 rad-impacted areas.

The decision to pursue a Technical Memo in Support of a ROD Amendment (TMSRA) at Parcel B delayed the proposed plan (PP). The FS and PP for Parcels C and D were delayed by ongoing negotiation with regulatory agency risk assessors regarding risk assessment methodology.

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

FY04 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

- Convey Parcel A in FY05.
- Complete a TMSRA on Parcel B and issue a new PP to support a ROD amendment in FY05.
- Complete an FS on Parcel C, D, and F, and an RI/FS on Parcel E-2 in FY05.
- Complete three removal actions on Parcel E in FY05-FY06.
- Conduct radiological surveys identified in the HRA in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or 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: | \$ 26.8 million |
| HRS Score: | 50.00; placed on NPL in February 1995 | Estimated Cost to Completion (Completion Year): | \$ 61.3 million(FY 2016) |
| IAG Status: | Signed federal facility agreement | IRP/MMRP Sites Final RIP/RC: | FY 2014/FY 2015 |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



Progress To Date

The Naval District Washington-Indian Head (NDWIH) 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 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 88 sites. Records of Decision (RODs) have been completed for Sites 12, 13, 25, and 44. To date, the installation has signed a no further action (NFA) ROD, or equivalent decision documents (DD) for Sites 5, 32, 34, 40, 44, 51, 52, and solid waste management unit (SWMU) 74. The cleanup progress at NDWIH for FY00 through FY03 is detailed below.

In FY00, the installation completed work plans for the remedial investigation (RI) fieldwork at Sites 15, 16, 49, and 53. The RI fieldwork at Sites 11, 13, 17, 21, and 25 was completed. Draft proposed plans and RODs were completed for Sites 12, 41, and 44. The remedial action construction contractor completed the constructability and implementability analysis for Sites 12 and 42.

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 workplan 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, and it was moved to the high-risk category. The installation initiated an RI and removal actions for Sites 12 and 41. The NFA ROD for Site 44 was signed. 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 the removal actions for Site 12. The NFA documents were signed at Sites 32, 34, 51, and 52. In addition, the pilot study using hydrogen-reducing compounds was implemented at Site 57. The lessons learned for Site 12 were compiled and include 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.

FY04 IRP Progress

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. The installation signed RODs for Sites 12, 13, and 25, and NFA DDs for Sites 5, 40, and SWMU 74. The installation improved techniques by using desktop evaluations for several sites to reach decisions for NFA. Also, a cost savings will be seen at Site 6 by conducting a removal action instead of a baseline environmental risk assessment (BERA) and then closing out the site. The cost of completing environmental restoration at this installation changed significantly due to technical and estimating criteria issues.

The NFA DD for Site 45 was delayed pending regulatory review.

FY04 MMRP Progress

The installation completed the draft final PA reports for the Indian Head main facility and Stump Neck Annex.

Plan of Action

Plan of action items for Indian Head Naval Surface Warfare Center are grouped below according to program category.

IRP

- Complete a BERA and removal action at Sites 17, 47, and the Lab Area in FY05.
- Complete site screening process investigations for Sites 1, 2, 3, 4, 7, 8, 9, 19, 20, 23, 24, 26, 27, 33, 36, 38, 43, 46 and 48, and SWMUs 14 and 30 in FY05.
- Sign NFA DDs for Sites 8, 20, 24, 45, 46, 48, and 56 in FY05.

MMRP

- Complete PA for MMRP sites in FY05.
- Complete site recommendations, site prioritization, and cost analysis documents for MMRP sites in FY05.

| | | | |
|--------------------|---|--|---|
| FFID: | IN517002349900 | Contaminants: | Solvents, degreasers, alcohol, chemical laboratory waste, pesticides, heavy metals, acids, POLs, PCBs, VOCs |
| Size: | 185 acres | Media Affected: | Groundwater and soil |
| Mission: | Conduct research, development, engineering, and limited manufacturing of aviation electronics and of missile, space-borne, undersea, and surface weapons systems, and related equipment | Funding to Date: | \$ 1.7 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2003) |
| IAG Status: | None | IRP/MMRP Sites Final RIP/RC: | FY 2001/None |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



Progress To Date

Indianapolis Naval Air Warfare Center, Aircraft Division (NAWCAD) was commissioned in 1942 as a naval ordnance plant. Its mission was later redefined to add space, undersea, and surface weapons. Typical operations conducted at the facility included machining; electroplating; degreasing of metal parts; carpentry; painting; operation of photographic laboratories; testing and evaluation; destruction of documents; and storage of supplies, materials, and fuels. In July 1995, the BRAC Commission recommended closure of NAWCAD. A Restoration Advisory Board was formed in FY96. The installation also established an information repository and completed a community relations plan. A BRAC cleanup team was formed in FY96.

To date, the installation has completed a finding of suitability to transfer (FOST) for Parcels 1A, 1B, and 2A. The FOST for Parcel 2A covers 19.9 acres. The cleanup progress at Indianapolis NAWCAD for FY00 through FY03 is detailed below.

In FY00, the installation prepared an engineering evaluation and cost analysis action memorandum. The final Phase II remedial investigation report and a FOST for Parcel 1A were completed. A remedial action (RA) was conducted for Site 1. A final feasibility study and proposed plan were completed. A government radioactive materials survey was also completed. The BRAC cleanup plan was revised. Initial transfer of property was completed.

In FY01, the installation completed the first round of groundwater sampling and the work plan for polychlorinated biphenyls (PCBs) decontamination. The FOST was completed for Parcel 2A, which consists of 19.9 acres. The interim RAs for area of concern (AOC) 10 and 17 were completed.

In FY02, the installation completed PCB cleanup of Building 1000. 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 the FOST for Parcel 1B.

FY04 IRP Progress

The installation completed decision documents for the Installation Restoration Site, AOCs 2, 4, 5, 7, 10, 16 and 18. The installation completed the FOST for Parcel 2B. All transfers are completed for Indianapolis NAWC; therefore this is the last narrative for the installation.

FY04 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Indianapolis Naval Air Warfare Center are grouped below according to program category.

IRP

There are no IRP actions scheduled for FY05 or FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|--|-------------------------------------|--------------------------|
| FFID: | IA721382044500 | Estimated Cost to Completion | \$ 27.4 million(FY 2039) |
| Size: | 19,011 acres | (Completion Year): | |
| Mission: | Load, assemble, and pack munitions | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2017 |
| HRS Score: | 29.73; placed on NPL in August 1990 | Five-Year Review Status: | Planned FY2005 |
| IAG Status: | IAG signed in December 1990 | | |
| Contaminants: | Explosives, heavy metals, Rad, VOCs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 80.5 million | | |



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 of 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): a soil OU (OU 1), a groundwater OU (OU 3), and an overall OU (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 (AEC) activities have been conducted. The installation formed a Restoration Advisory Board (RAB) in FY97.

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 sites have been accepted into Formerly Utilized Sites Remedial Action Program (FUSRAP). The cleanup progress at IAAP for FY00 through FY03 is detailed below.

In FY00, the installation completed the cap extension at the inert disposal area and final removal of soil from around production buildings at Lines 5A/5B.

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; metals treatment for the same soil was initiated. Evaluations related to past AEC activities began. Various sites were reviewed 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 AEC 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.

FY04 IRP Progress

The Army awarded a performance-based contract (PBC) to address the entire Installation Restoration Program (IRP) effort at IAAP. The Army resolved the formal scheduling dispute with EPA. The Army removed soil contaminated with VOCs from the former fuel station and received a No Further Action Certificate from the State of Iowa. The installation 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 cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

The installation's RAB received training on hydrogeology, radiological contaminants and ecological risk assessments (ERAs), reviewed project activities, and helped establish project priorities.

FY04 MMRP Progress

The Army completed the CTT ranges and sites inventory. The Army has identified three Military Munitions Response Program (MMRP) sites at this installation.

Plan of Action

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

IRP

- Complete a 5-year review of all remedial activities and baseline ERA in FY05.
- Treat soil at Site IAAP-020 in FY05.
- Complete remedial design field work for Sites IAAP-002, 003, 004, 007, 044, 047 in FY05.
- Conduct off-site groundwater pilot study in FY05.
- Implement Brush Creek point source controls in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|---|--|--|
| FFID: | FL417002441200 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 3,820 acres | Funding to Date: | \$ 84.0 million |
| Mission: | Maintain and operate facilities; provide services and materials to support aviation activities and aircraft overhaul operations | Estimated Cost to Completion (Completion Year): | \$ 24.0 million(FY 2021) |
| HRS Score: | 31.02; placed on NPL in November 1989 | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2013 |
| IAG Status: | Federal facility agreement signed in October 1990 | Five-Year Review Status: | Completed FY2001 - remedy remains protective |
| 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. 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. EPA placed the installation on the NPL in November 1989 and the installation signed a federal facility agreement in October 1990. In FY91, the installation completed its community relations plan and established an administrative record and an information repository. In FY01, the installation completed a 5-year review.

The installation contains 49 CERCLA sites, 24 underground storage tank (UST) sites, and five RCRA solid waste management units (SWMUs). Jacksonville NAS has identified 78 sites. The installation has completed Records of Decision (RODs) for Operable Unit (OU) 2, OU 3, point source of contamination (PSC) 16, and PSC 21. In addition, an interim ROD has been completed for one site. The installation has also completed no further action designation for UST 13 and Area A at UST 17. The cleanup progress at Jacksonville NAS for FY00 through FY03 is detailed below.

In FY00, the remedial investigation and feasibility study (RI/FS) and RODs were completed for OU 3, PSC 16, and PSC 21. A remedial system was implemented at UST 4. Work plans began on the site assessment report (SAR) and remedial action (RA) plan for UST 14.

In FY01, the installation continued efforts to obtain a RCRA closure permit for Hangar 1000 and the T-56 wash area. The RI/FS for Hangar 1000, PSC 46, PSC 47, and PSC 51 was underway. The remedial designs for three sites were completed. 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 SAR for UST 14. The 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, 22I, and 23 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.

FY04 IRP Progress

Jacksonville NAS completed RI/FS for PSCs 52 and 11 (Areas A and E). The installation completed the treatability studies for PCAs 4, 14, and 16. The 5-year review progressed. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the RODs for PSCs 11 (Areas A and E), 46, 47, 51, and 52. Regulatory issues also delayed the removal action at PSC 46. Additional mobilizations and field events necessary to provide complete delineation of groundwater contamination delayed the RI/FS for PSC 47.

FY04 MMRP Progress

The installation added and approved a site for the MMRP.

Plan of Action

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

IRP

- Complete RODs and the 5-year review in FY05.
- Complete optimizations of PSCs 11 (Building 780), 26, and 48 (Building 106) in FY05.

- Excavate contaminated soils at PCA 16 and PSC 46 in FY07.

MMRP

- Develop the cost to complete for the identified site and plan investigation work in FY05.

| | | | |
|------------------------|--|--|---|
| FFID: | IN521382045400 | Funding to Date: | \$ 26.6 million |
| Size: | 55,270 acres | Estimated Cost to Completion (Completion Year): | \$ 0.9 million(FY 2006) |
| Mission: | Performed production acceptance testing of ammunition, weapons, and their components | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2003 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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 (approximately 1,200 acres). The cleanup progress at Jefferson Proving Ground for FY00 through FY03 is detailed below.

In FY00, the installation received regulatory concurrence from EPA Region 5 on the closure of the open burning unit. The installation continued to prepare technical memoranda for selected sites slated for future closure.

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 RAB held quarterly meetings and the community TAPP provider reviewed the draft final RI. 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.

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 RAB held quarterly meetings and the community TAPP provider reviewed the draft FS.

FY04 IRP Progress

The Army transferred the Airfield parcel. The installation completed the proposed plan for the area south of the firing line. The installation drafted a Record of Decision (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. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The Army submitted the deed to transfer the Northeast parcel to the buyer; it is awaiting signature. Technical issues delayed obtaining Nuclear Regulatory Commission (NRC) indefinite duration possession-only license amendment for the installation's depleted uranium license.

The RAB held quarterly meetings.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Transfer Northeast parcel, pending resolution of buyer deed concerns, in FY05.
- Obtain NRC possession-only license amendment for depleted uranium license, pending resolution of NRC requests for additional information, in FY05.
- Obtain signature on ROD for area south of the firing line in FY05.
- Complete remedy-in-place for all sites in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | CA99799F546700 | Funding to Date: | \$ 0.6 million |
| Size: | 176 acres | Estimated Cost to Completion (Completion Year): | \$ 0.2 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 1992 | | |
| Contaminants: | VOCs and various inorganic chemicals | | |
| Media Affected: | Groundwater | | |



Progress To Date

EPA placed the California Institute of Technology Jet Propulsion Laboratory, which developed aeronautics, rocketry, and space exploration technologies, on the NPL in October 1992. NASA and EPA signed an interagency agreement in 1992. 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).

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). A Record of Decision (ROD) for OU 2 was signed. 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 Jet Propulsion Laboratory for FY00 through FY03 is detailed below.

In FY00, two perchlorate pilot feasibility studies (FSs) were completed. NASA transferred Superfund cleanup oversight for the Jet Propulsion Laboratory property to the Navy and its contractors.

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/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.

FY04 IRP Progress

NASA completed the draft FS and began the RD/RA phase for an expanded treatability system at OU 1. An 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.

The preparation and implementation of the RI addendum plan to further investigate the extent of the chemical plume delayed completion of the final EE/CA, and initiation of the RA and draft FS for OU 3.

FY04 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

- Complete a final FS and draft PP for OU 1 in FY05.
- Complete a draft FS and final EE/CA for OU 3 in FY05.
- Install additional monitoring wells and complete a final RI addendum report for OU 3 in FY05.
- Begin RD/RA phase for OU 3 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|--|--|--------------------------|
| FFID: | IL521382046000 | Media Affected: | Groundwater and soil |
| Size: | 4,677 acres | Funding to Date: | \$ 77.5 million |
| Mission: | Manufacture, load, assemble, and pack munitions and explosives | Estimated Cost to Completion (Completion Year): | \$ 74.3 million(FY 2032) |
| 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 2011/FY 2018 |
| IAG Status: | IAG signed in June 1989 | Five-Year Review Status: | Completed FY2004 |
| 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 14,385-acre LAP Area and the 9,159-acre Manufacturing Area on the NPL in July 1987. 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 18,000 acres, including 15,000 acres to the U.S. Forest Service, in compliance with congressional legislation, and almost 2,500 acres to the State of Illinois for industrial park reuse. The Army also completed an installationwide Record of Decision (ROD) in FY99. The cleanup progress at Joliet AAP for FY00 through FY03 is detailed below.

In FY00, the Army built a bioremediation facility and excavated approximately 50,000 cubic yards of explosives-contaminated soil. The Army also made significant progress on the 3-year project to excavate contaminated soil in the TNT production area. Groundwater monitoring continued, and the Army recommended two sites for closure. A risk analysis study concerning the ecosystem was completed. The installation conveyed 2,013 acres to the State of Illinois for industrial park reuse.

In FY01, the installation completed bioremediation of 35,000 tons of explosives-contaminated soil. It reduced bioremediation costs by using innovative technologies. 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. Military Munitions Response Program (MMRP) sites were identified at this installation. Two sites were cleared of UXO. The excavation of explosives-contaminated soil from the TNT production area resumed and over 40,000 tons were excavated. In addition, prior to the last tenant leaving the installation, their function test area was swept and UXO debris was removed 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 State of Illinois for Island City Industrial Park. The Army initiated a site inspection (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 land transferring to USDA.

FY04 IRP Progress

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 Island City Industrial Park. The installation completed a feasibility study, proposed plan, and ROD for lands transferring 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. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY04 MMRP Progress

The installation initiated the SIs for MMRP sites, but technical issues delayed completion.

Plan of Action

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

IRP

- Complete remedial action in the TNT Area in FY05.
- Transfer additional 320 acres of Deer Run Industrial Park to State of Illinois in FY05.
- Complete transfer of 2,440 acres to USDA in FY05.
- Begin remedial action of future USDA lands in FY05.
- Initiate performance-based contract (PBC) for landfills and groundwater in FY05.

MMRP

- Complete SI of MMRP sites in FY05.
- Procure PBC addressing landfills and groundwater and which will also include optional line items to conduct post-SI actions at the four MMRP sites in FY05.

| | | | |
|------------------------|---|--|---|
| FFID: | MI557002476000 | Funding to Date: | \$ 54.8 million |
| Size: | 4,964 acres | Estimated Cost to Completion (Completion Year): | \$ 17.3 million(FY 2051) |
| Mission: | Conducted long-range bombardment and air refueling operations | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2005 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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 (AST) 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 14 groundwater extraction wells, construction and operation of a groundwater treatment plant, removal of fuel from groundwater at the former petroleum/oil/lubricants (POLs) storage area, and installation of bioventing systems. In FY94, a Restoration Advisory Board 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 ST-04, FT-06, and Landfill 01 (LF-01). The final RA plan (RAP) was completed for LF-01 and a draft RAP was completed for ST-04. In addition, RAs were completed at LF-01.

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 FY00 through FY03 is detailed below.

In FY00, long-term operations of the DP-02 pump and treat system continued. Eight large ASTs and associated underground product piping for Wells Bulk Fuel Terminal were removed. Long-term management of landfill caps was also initiated.

In FY01, a soil vapor extraction system was installed to remediate solvent- and fuel-contaminated soil at FT-06. Operation of treatment systems and groundwater monitoring continued. At OT-13 (Wells Terminal), soil was tested to better define areas of contamination, and a draft screening-of-remedial-alternatives document was completed.

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 OT-13. RD was also completed and RA-C was initiated for the alteration and upgrade of the fuel recovery trench at ST-04.

In FY03, the installation completed drafting the planning document for removal action at the Site 28 Defense Reutilization Marketing Office site and the H1 landfill groundwater slurry wall trench. The installation continued progress with the remedial investigations and feasibility studies 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.

FY04 IRP Progress

The installation completed the RA-C at the Wells Terminal and the modification of the ST-04 interceptor trench. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed the completion of the final basewide master RAP and the final RAP for the Wells Terminal.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified 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

- Award performance-based contract in FY05.
- Deed K.I. Sawyer AFB in FY05.
- Deed Escanaba Area 2 in FY05.
- Close out FT-06 in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

Kaho'olawe Island

Former Navy Bombing/Military Training Range

Kaho'olawe, Hawaii

| | | | |
|----------------------|--|--|--|
| FFID: | N/A | Media Affected: | metals, petroleum, oil, lubricants |
| Size: | 28,800 acres | Funding to Date: | \$460 million (FY1994-FY2004) |
| Mission: | The island and surrounding waters of Kaho'olawe Island were an active naval gunfire and air-to- surface target and military training range for 50 years. | Estimated Cost to Completion (Completion Year): | Kaho'olawe cleanup has been completed. A portion of the funds appropriated to date has been retained to address newly discovered, previously undetected UXO. |
| HRS Score: | Not Scored | IRP/MMRP Sites Final RIP/RC: | None/None |
| IAG Status: | N/A | Five-Year Review Status: | This installation has not completed a 5-year review |
| Contaminants: | UXO and UXO remnants, target vehicles, tires, heavy | | |



Progress To Date

Kaho'olawe Island, previously used as ranch lands, was an active military training and target range for 50 years with the full spectrum of conventional ordnance expended. At its farthest points, Kaho'olawe is 11 miles long and seven miles wide, and covers approximately 28,800 acres. The entire island of Kaho'olawe is on the National Register of Historic Places and portions of the island have been designated as critical habitat for a moth and a plant pursuant to the Endangered Species Act.

Title X of the Department of Defense Appropriations Act for Fiscal Year 1994 directed that the United States convey Kaho'olawe to the State of Hawaii, and enter into a memorandum of understanding (MOU) with the state governing the terms and conditions of a cleanup sufficient to assure meaningful, safe use of the island for cultural, historical, archaeological, and educational purposes as determined by the State of Hawaii. In May 1994, the property was transferred to the State of Hawaii by quitclaim deed and the required MOU was recorded. While the deed reserved to the United States the perpetual right to access the island for ordnance clearance, removal, or environmental restoration activities, the Navy's right to control access to the island expired on November 11, 2003.

By two provisions of special non-Defense Environmental Restoration Account (DERA) legislation, Congress authorized up to \$460 million of non-DERA funding for clearance/cleanup work; \$400 million in one fund, of which 11% was passed to the State of Hawaii as directed by Title X, and \$60 million in another fund, both specifically for cleanup work on Kaho'olawe. Under the Commander, Navy Region Hawaii, the Naval Facilities Engineering Command, Pacific Division, served as the execution agent for the clearance/cleanup work, which was performed by a contractor. The Kaho'olawe Island Reserve Commission, a seven-member volunteer board appointed by the Governor of the State of Hawaii, was designated as the State's representative to the Navy for the Kaho'olawe cleanup.

As of FY03, a total of 20,352 acres had been surface cleared and resolved of environmental concerns. Items removed

include unexploded ordnance (UXO), small arms, targets, tires, miscellaneous solid waste, UXO remnants, fragments, and casings. Of those acres, 2,625 were further cleared subsurface to a four-foot depth. A total of approximately 11.4 million pounds of UXO fragments, remnants and targets have been collected, of which 3.8 million pounds have been thermally processed, and 7.6 million pounds shipped off-island for recycling or disposal. Approximately 14,000 tires (3,510 cubic yards) have been collected and shipped off-island.

In October 2003, the Navy and the State of Hawaii signed an agreement that provides for the Navy to respond to newly discovered, previously undetected ordnance. A prompt response will be provided when ordnance is found in an area where human access occurs regularly; a deferred response will be provided when a sufficient number and types of ordnance have been located to warrant the mobilization of a team for a five-day level of effort. This protocol addresses human safety while maximizing both parties' interest in having a minimal number of Navy visits to the island.

As of FY03, the Navy believes it has accomplished the original Title X goal to provide reasonably safe and meaningful use of the island, as several thousand visits by the public have already been recorded.

The Navy has performed all response actions to date pursuant to the DoD Appropriations Act for FY94 using non-DERA funds. The \$460 million authorized were appropriated over 10 years.

FY04 Progress

The Navy completed demobilization, and cleared observable surface UXO and remnants from an additional 1,660 acres. It also completed approximately 80 percent of the certification packages (quality control documents for each grid cleared, after action reports and notification-certification documents). The Navy completed 16 of 20 work area after action reports, notification-certification documents, and four of eight historical properties reports.

Plan of Action

- Complete the remaining four work area after action reports and notification-certification documents in FY05.
- Complete the overall after action report in FY05.
- Complete the remaining four historical properties reports in FY05.

| | |
|-------------------------|--|
| FFID: | TX657172433300 |
| Size: | 3,997 acres |
| Mission: | Provide depot-level aircraft and engine repair |
| HRS Score: | N/A |
| IAG Status: | None |
| Contaminants: | Metals, VOCs, SVOCs |
| Media Affected: | Groundwater and soil |
| Funding to Date: | \$ 231.4 million |

| | |
|--|---|
| Estimated Cost to Completion (Completion Year): | \$ 141.2 million(FY 2020) |
| IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2005 |
| Five-Year Review Status: | The installation has not completed a 5-year review. |



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 in 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 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 base 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 and two former range sites. Sites were separated into five zones. To date, the installation has transferred approximately 289 acres to the local redevelopment authority (LRA). The cleanup progress at Kelly AFB for FY00 through FY03 is detailed below.

In FY00, the Zone 1 and Zone 5 corrective measures study (CMS) reports were completed, as was the interim remedial action (IRA) for Site S-1. Construction on the Quintana Road stormwater culvert project, which prevents further migration of contaminated groundwater, continued. The IRA for Zone 4 groundwater was completed and is operational. Zone 2 and Zone 3 IRP projects and several RCRA solid waste management unit closure projects were combined into a single comprehensive project.

In FY01, the base was closed and realigned. Seventeen IRP sites were realigned to Lackland AFB in Zone 1 and parts of Zone 5 were transferred. The installation removed an inactive electroplating facility suspected of being a major source of groundwater contamination for Zone 3. The Site S-4 IRA 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, inactive portions of the former industrial wastewater treatment plant (IWTP) were removed. 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 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 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.

FY04 IRP Progress

The installation transferred 114 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 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 cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. Two MMRP sites were identified at this installation. The Firing Range Test Cell Area (OR007) received a No Further Action determination for munitions constituents in FY04; AFRPA has initiated the final ordnance safety determination process with the Air Force Safety Center. The second MMRP site is the Small Arms Firing Range, Indoor (Building 3430).

Plan of Action

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

IRP

- Complete installation of Zone 4 off-base shallow groundwater remedies in FY05.
- Submit closure report for former IWTP in FY05.
- Continue discussions on ecological risk report for Leon Creek in FY05.
- Complete installation of final IRP groundwater and soil remedies in Zone 2 in FY05.

MMRP

- Complete final safety determination actions with the AFSC for the Firing Range Test Cell Area in FY05.
- Investigate the Small Arms Firing Range in FY05.

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|------------------------|--|--|--|
| FFID: | WA017002341900 | Funding to Date: | \$ 32.2 million |
| Size: | 340 acres | Estimated Cost to Completion (Completion Year): | \$ 15.1 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 FY2000 - remedy remains protective/ Planned FY2005 |
| IAG Status: | Federal facility agreement signed in 1990 | | |
| 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 this installation. 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 1990. A community relations plan was completed in FY90 and updated in FY00. The installation completed a 5-year review in FY00.

Environmental investigations identified 13 sites at this installation. The installation has completed a Record of Decision (ROD) for Operable Units (OUs) 1 and 2. The cleanup progress at Keyport Naval Undersea Warfare Center for FY00 through FY03 is detailed below.

In FY00, the installation finalized an institutional control plan and began implementation. Long-term management (LTM) work plans were finalized and monitoring began for OU 1. The 5-year review was completed. The remedial action (RA) was completed at Site 8, and a final closure report was submitted. The time-critical removal action (TCRA) to remove buried drums and associated contaminated soil at Site 23 was completed.

In FY01, the installation finalized the Site 23 TCRA report. Operations and maintenance continued at OU 1. LTM conducted at OUs 1 and 2 identified sediment issues that required resolution with regulators.

In FY02, the installation continued 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.

FY04 IRP Progress

The installation continued RA-O at OU 1 and LTM at OUs 1 and 2 and initiated the second 5-year review.

FY04 MMRP Progress

The Navy has 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

- Complete 5-year review in FY05.
- Resolve sediment issues in FY05.
- Continue RA-O at OU 1 in FY05-FY06.
- Continue LTM at OUs 1 and 2 in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|-------------------------|---|-------------------------------------|--------------------------|
| FFID: | MO721382048900 | Estimated Cost to Completion | \$ 93.0 million(FY 2033) |
| Size: | 3,935 acres | (Completion Year): | |
| Mission: | Manufacture, store, and test small-arms munitions | IRP/MMRP Sites Final RIP/RC: | FY 2007/None |
| HRS Score: | 33.62; placed on NPL in July 1987 | Five-Year Review Status: | Planned |
| IAG Status: | IAG signed in September 1989 | | |
| Contaminants: | Explosives, heavy metals, solvents, VOCs, POLs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 102.7 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 1987, and EPA and the Army signed an interagency agreement in 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 FY00 through FY03 is detailed below.

In FY00, the installation completed the construction of the permeable reactive wall portion of the interim remedial action in the Northeast Corner Operable Unit (NECOU).

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 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 installationwide 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. Second quarter 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.

FY04 IRP Progress

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

Changes in the site conditions delayed completion of the Area 16 abandoned landfill leachate collection system and the NECOU fieldwork. The installation repaired the landfill cover and collected leachate for sampling and disposal.

The installation hosted four RAB meetings and one RAB workshop.

FY04 MMRP Progress

The Army completed the CTT ranges and sites inventory and identified one closed site.

Plan of Action

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

IRP

- Complete RI activities in FY05 and complete FSs for all three OUs in FY06.
- Implement removal actions for "housekeeping sites" in FY05-FY06.
- Execute pilot tests in Area 18 in FY05-FY06.
- Continue operation of the pump and treat system to contain contaminated groundwater in FY05-FY06.
- Complete characterization of inactive sumps, prepare EE/CA and execute removal action in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|-------------------------|---|--|--|
| FFID: | NJ217002727400 | Estimated Cost to Completion (Completion Year): | \$ 44.6 million(FY 2046) |
| Size: | 7,382 acres | IRP/MMRP Sites Final RIP/RC: | FY 2000/FY 2014 |
| Mission: | Perform technology development and engineering | Five-Year Review Status: | Completed FY2001 - remedy remains protective/ Planned FY2006 |
| HRS Score: | 50.53; placed on NPL in July 1987 | | |
| IAG Status: | Federal facility agreement signed in October 1989 | | |
| Contaminants: | Fuels, PCBs, solvents, TCE, waste oils | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 50.5 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 of its sites. The cleanup progress at Lakehurst NAES for FY00 through FY03 is detailed below.

In FY00, the installation completed monitoring at Site 1 and the removal of free product and contaminated soil from Site 42.

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 report 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 irrigation 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.

FY04 IRP Progress

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 three existing pump and treat systems. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY04 MMRP Progress

The installation completed the draft final PAs for four sites.

Plan of Action

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

IRP

- Conduct treatability testing of in situ chemical oxidation for treatment of groundwater at Site 16 in FY05.
- Expand BNP treatment in Areas I and J in FY05.
- Continue 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 in FY05-FY06.
- Complete next 5-year review in FY06.

MMRP

- Distribute draft final PAs to regulators for review and comment in FY05.
- Conduct data collection, site visit and

prepare PA for the Lakehurst Proving Grounds in FY05.

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|------------------------|---|--|-----------------------------|
| FFID: | VA357212447700 | Funding to Date: | \$ 62.9 million |
| Size: | 3,152 acres | Estimated Cost to Completion (Completion Year): | \$ 22.4 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 FY2001 and FY2004 |
| 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 another was completed in FY04 for Spill Site-61 (SS-61).

As of FY01, the Air Force identified 55 sites at the installation. To date, seven Records of Decision (RODs) have been signed. The cleanup progress at Langley AFB for FY00 through FY03 is detailed below.

In FY00, RODs for Site OT-06 and Landfill-13 (LF-13) were signed. The installation finalized remedial investigations (RIs) for 14 sites and submitted draft proposed plans (PPs) for eight sites.

In FY01, the decision document for no further action on Site SS-24 was signed. RIs were completed for seven sites. Feasibility studies (FSs) were completed for 13 sites. PPs were completed for 14 sites, and five sites were closed. The 5-year review was completed. A comprehensive range inventory was also initiated. This inventory was designed to be an annual, iterative effort. To supply data for the inventory, a detailed questionnaire was completed that collected data on the types of munitions used, the range's environmental status, and the type and level of external stakeholder interest.

In FY02, the installation completed remedial designs 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 FSs were completed. Dispute resolution was invoked concerning the institutional control language used for Langley Environmental Restoration Program sites. Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at

eligible non-operational ranges. MMRP sites were identified at this installation.

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 LF-17, OT-55, and SS-63. Remedial actions for LF-05, LF-07, LF-12 and LF-18 as well as remedial designs for 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 SS-61. The installation initiated a no further remedial action planned determination for OT-55 as recommended by the RI/FS. The Air Force updated its MMRP inventory. Cost estimates and risk assessment code scores were updated for each MMRP site.

FY04 IRP Progress

Langley AFB completed a 5-year review on Site SS-61. The installation also completed SIs for three AOCs, an FS for three sites, and remedial action-construction (RA-C) for one site. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The installation drafted RODs for four sites; however these are pending dispute resolution between regulators. Flightline waiver/clearance issues delayed the RA-C for three sites.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Execute a basewide guaranteed fixed price remediation performance-based contract in FY05.
- Develop an NPL delisting strategy in FY05-FY06.

MMRP

- Conduct investigation between FY05 and FY09.

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|----------------------|---|--|--|
| FFID: | PA321382050300 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 18,683 acres | Funding to Date: | \$ 112.5 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): | \$ 15.4 million(FY 2010) |
| 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 2010/None |
| IAG Status: | IAG signed in February 1989 | Five-Year Review Status: | Completed FY2002/Underway FY2004 |
| 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 1987 and the Property Disposal Office (PDO) in 1989. Both sites are in the southern part of the installation. The Army and EPA signed an interagency agreement in 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 four Records of Decision (RODs) to date. The cleanup progress at Letterkenny for FY00 through FY03 is detailed below.

In FY00, the installation developed remedial investigation and feasibility study (RI/FS) and remedial action reports for Sites LEAD-110, 114, and 126. The Army completed a draft focused FS (FFS) for the SE Operable Unit 10 (OU 10) and submitted it to the regulators. The Army completed the PCB removal at the Defense Reutilization and Marketing Office (DRMO) scrap yard and submitted a draft RI and risk assessment to the regulators for SE OU 5.

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 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 DRMO scrap yard PCBs. The installation initiated the 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 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.

FY04 IRP Progress

The Army transferred the Phase III BRAC property. The installation initiated the removal of lead contaminated soil at Old PDO Scrapyard. The ROD for SE OU 10 remained on schedule for signature. The installation continued groundwater sampling for PDO OU 2.

The discovery of new groundwater contamination will delay the ROD for PDO OU 2 beyond FY05.

FY04 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 FY05-FY06.
- Complete the FFS and remedial design phase for the on- and off-post contaminated groundwater (SE OUs 3, 6 and 11) in FY05-FY06.
- Sign ROD and FOST for Phase IV Parcels in FY05-FY06.
- Complete the Phase IV Parcels property transfer in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

Depot

| | | | |
|------------------------|---|--|---|
| FFID: | KY421382050900 | Funding to Date: | \$ 28.0 million |
| Size: | 780 acres | Estimated Cost to Completion (Completion Year): | \$ 2.4 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: | The installation has not completed a 5-year review. |
| 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 two 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 3 of the BRAC cleanup plan in FY99.

The cleanup progress at LBAD for FY00 through FY03 is detailed below.

In FY00, the installation issued statements of basis (SBs) for 10 buildings, Areas A and C, the transformer spill near Building 223, the landing field, the calcium hydrate storage area, Vehicle Wash rack II, and the golf course ponds. The installation submitted the Phase II RFI for soil and groundwater to the regulators and the Army Environmental Center. It also submitted a management plan concerning lead cleanup standards to KDEP for review.

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 an 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 (FOST) 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 the EDC. The installation completed six site SBs with state approval.

FY04 IRP Progress

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.

Regulatory issues delayed the completion of the EDC FOST and the transfer of the 564-acre EDC parcel. Programmatic and comment resolution of the Phase II RFI/CMS issues delayed approval of the SOB documentation for the remaining SWMUs.

FY04 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

- Complete well abandonment in FY05.
- Resolve comments on the final Phase II RFI/CMS in FY05.
- Complete a new agreement order in FY05.
- Submit the deed for transfer for the EDC to the Commonwealth of Kentucky in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | |
|-------------------------|---|
| 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: | \$ 25.6 million |

| | |
|--|-------------------------|
| Estimated Cost to Completion (Completion Year): | \$ 1.2 million(FY 2012) |
| 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 FY00 through FY03 is detailed below.

In FY00, the installation began RCRA facility investigation (RFI) activities at 2 sites and Phase II RFI activities at 11 sites. The RFI activities at the G and O Ponds were completed, and the remedial design (RD) for the ODA began. Groundwater monitoring, required by an agreed order, was performed at two sites.

In FY01, the Army began construction of the soil cover and erosion controls at the NPL site. The installation awarded the 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 RFIs.

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.

FY04 IRP Progress

The installation continued long-term monitoring 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 NFA for sites 78, 79, and 80.

FY04 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

- Complete RI at Site 101 in FY05.
- Initiate long-term monitoring at Site 16 in FY05.
- Continue long-term monitoring at Sites 2, 17, 24, 33, and 34 in FY05.
- Complete RAs at Sites 16 and 20 in FY05.
- Conduct RA at Site 6 in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|---|--|--|
| 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: | \$ 61.2 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 12.3 million(FY 2011) |
| IAG Status: | None | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| | | Five-Year Review Status: | The installation has not completed a 5-year review. |



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. The primary sites of concern are disposal pits into which a variety of wastes were deposited. In FY94, the installation formed a BRAC cleanup team, which completed a BRAC cleanup plan. In addition, the joint NS and NSY technical review committee was converted to a Restoration Advisory Board (RAB). The RAB reviewed Installation Restoration Program (IRP) documents and attended bimonthly meetings.

The installation 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. In FY04, the installation completed a 5-year review for Sites 1-6A, 14, and Palos Verdes Operable Unit (OU) 1. The cleanup progress at Long Beach Naval Complex for FY00 through FY03 is detailed below.

In FY00, the installation completed a ROD for Sites 1 and 2 and began remedial design and remedial action (RA) for the sites. A site management plan was drafted and sent to the regulatory agencies for review. All underground storage tanks (USTs) were removed. Cleanup was underway at the two remaining UST sites. A federal facilities site remediation agreement was executed between the Department of the Navy and the California Department of Toxic Substances Control.

In FY01, the installation completed long-term operations (LTO) and long-term management (LTM) for the year at Sites 1 and 2. The interim RA at Site 14 was completed ahead of schedule.

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 installation.

In FY03, RA 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.

FY04 IRP Progress

The installation began LTM operations at Sites 1, 2, and 14, but did not meet all RA objectives and additional treatment may be required. The installation completed the Site 7 FS, Sites 8 and 10 ROD 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. In addition, the installation completed a 5-year review for Sites 1-6A, 14, and Palos Verdes OU 1. Regulatory agencies requested RODs for Site 14, Palos Verdes OU 1, and all area of concern sites that require institutional controls. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

The RAB met quarterly and the BRAC cleanup team met monthly. Both the RAB installation and community co-chair attended the Navy-hosted RAB workshop in July 2004 and the Navy solicited new RAB membership.

FY04 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 the PP and initiate the ROD for Site 7 in FY05.
- Complete RODs for Sites 9, 11, 12, and 13 in FY05.
- Complete an expanded site inspection at Site 16 in FY05.
- Obtain clean closure of Building 118 (a RCRA-permitted treatment, storage, and disposal facility) in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|---|--|--------------------------|
| FFID: | TX621382052900 | Funding to Date: | \$ 83.8 million |
| Size: | 8,493 acres | Estimated Cost to Completion (Completion Year): | \$ 33.9 million(FY 2032) |
| Mission: | Loaded, assembled, and packed pyrotechnic and illuminating signal munitions | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2018 |
| HRS Score: | 39.83; placed on NPL in August 1990 | Five-Year Review Status: | Completed FY2002/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 (AAP) manufactured pyrotechnic and illuminating signal munitions and solid-propellant rocket motors. EPA placed the installation on the NPL in August 1990. 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 (TAPP) 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. Eighteen of these sites 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 Longhorn AAP for FY00 through FY03 is detailed below.

In FY00, the installation completed the bench-scale treatability study for treatment of perchlorate in the groundwater effluent from the groundwater treatment plant. It also completed perchlorate investigations through Phase II fieldwork. The Army completed the remedial investigation (RI) and the human health risk assessment reports for Site 16. Groundwater-to-surface-water modeling was completed for all watersheds at the plant.

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 RI reports for Group 2s 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.

FY04 IRP Progress

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 two 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 brought LHAAP-045 to response complete without an RI/FS. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory and technical issues delayed preparation of the five Group 2 or 4 draft final FSs. Regulatory and ecological issues delayed the Group 2 RODs. Technical issues delayed completion of the ERA through Phase 1 fieldwork and the Step 3 ERA.

The installation established a RAB.

FY04 MMRP Progress

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 the 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.

Plan of Action

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

IRP

- Complete five Group 2 and 4 FSs in FY05.
- Complete two Group 2 RODs and one Group 4 ROD in FY05.
- Complete sitewide ERA in FY05.
- Conduct removal actions at one Group 2 site and one Group 4 site in FY06.

MMRP

- Complete the SI in FY05.
- Initiate EE/CA in FY05.

| | | | |
|------------------------|--|--|---------------------------------|
| FFID: | ME157002452200 | Funding to Date: | \$ 132.0 million |
| Size: | 9,472 acres | Estimated Cost to Completion (Completion Year): | \$ 34.9 million(FY 2299) |
| Mission: | Support B-52 bombers and KC-135 tankers | IRP/MMRP Sites Final RIP/RC: | FY 2000/FY 2005 |
| HRS Score: | 34.49; placed on NPL in February 199 | Five-Year Review Status: | Completed FY2000/Planned FY2005 |
| 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 include 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 in FY94. In FY98, the BCT published and updated the BRAC cleanup plan. A 5-year review was completed in FY00 and remedies were certified as protective.

Sites at Loring AFB are grouped into 13 operable units. To date, 12 Records of Decision (RODs) have been signed, with the last two signed in FY99. The Air Force has transferred approximately 8,537 acres to date. The cleanup progress at Loring AFB for FY00 through FY03 is detailed below.

In FY00, the installation completed its last RA with the construction of Landfill 3. The first 5-year review was completed and the remedies were certified as protective. Numerous sites were documented as suitable for unrestricted and unlimited access. An explanation of significant differences was developed for the quarry plume when long-term management identified contamination in a compliance boundary well. Two sites along the pipeline from Loring to Searsport were cleaned up. The Air Force also performed a removal action covering 40 acres at the installation. The removal action included small arms, 50-caliber, and starter cartridges, as well as grenades.

In FY01, the installation transferred 2,500 acres of airfield, business, and commercial property by deed to the local redevelopment authority. The treatment system for the Argyle

pump station spill site was installed. An institutional control management plan (ICMP) was initiated. 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, a cleanup plan for Mattawamkeag pump station was drafted and submitted to the Maine Department of Environmental Protection (DEP). The action plan for recently identified polychlorinated biphenyl (PCB) contamination near the east branch of Greenlaw Brook was developed. Support was provided to the State and EPA in their pilot study effort 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 Maine DEP. Groundwater monitoring and systems operations continued. A finding of suitability to transfer (FOST) was coordinated for the 200-mile pipeline from Loring AFB to Searsport. The installation completed the action memo and initiated a time-critical removal action at the Marine Corps Firing Range. Offshore munitions surveys were initiated for the production and manufacturing area and south shore areas. Onshore sites were scheduled for validation following prior removals. Remedial investigations and feasibility studies were anticipated to determine further response actions for the onshore sites. The installation completed drafting the planning documents for a removal action to operate the open burning/open detonation range for disposal of recovered munitions.

FY04 IRP Progress

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 cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Complete FOST and deed transfer for all property at Loring in FY05.
- Continue to operate and monitor remedies in accordance with RODs in FY05.
- Complete second 5-year review in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|------------------------|--|--|--|
| FFID: | LA621382053300 | Funding to Date: | \$ 59.1 million |
| Size: | 14,974 acres | Estimated Cost to Completion (Completion Year): | \$ 3.5 million(FY 2017) |
| Mission: | Manufacture ammunition metal parts and maintain ammunition production facilities | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2017 |
| HRS Score: | 30.26; placed on NPL in March 1989 | Five-Year Review Status: | Completed FY1994 and FY2000/Planned FY2006 |
| 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 five-year reviews for the interim remedial action (IRA) 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 seven sites during a preliminary assessment and site inspection (SI) in FY78 and 13 additional sites in FY93 and FY94: the Y-line etching facility, nine load-assemble-pack lines, and three 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 (NFA) ROD. The cleanup progress at Louisiana AAP for FY00 through FY03 is detailed below.

In FY00, the installation completed remedial investigation (RI) fieldwork for soil (Site 9) and installationwide groundwater (Site 10). It also completed a NFA ROD for soil at the Y-line etching facility. The installation conducted a second 5-year review of the IRAs at the Area P lagoons, and received EPA approval.

In FY01, the installation worked with regulators to resolve their concerns related to the ecological risk assessment (ERA) that had delayed the RI/feasibility study (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.

FY04 IRP Progress

The Army awarded a performance-based contract for remaining environmental restoration sites. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Contracting issues delayed the RI/FS and risk assessments for Sites 9 and 10.

FY04 MMRP Progress

The installation completed the MMRP SI.

Plan of Action

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

IRP

- Complete performance-based contract in FY06.
- Achieve response complete/remedy in place in FY06.
- Complete 5-year review in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or 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): | \$ 1.7 million(FY 2011) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2011/None |
| IAG Status: | None | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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. 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. A 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.

The installation has identified nine sites. Eighty-five percent of the property is leased to the Louisville/Jefferson County Redevelopment Authority as the Navy's first private-in-place installation. The cleanup progress at Louisville Naval Surface Warfare Center for FY00 through FY03 is detailed below.

In FY00, all draft RCRA facility investigation (RFI) reports were completed. The human health risk assessment work plan was approved, and risk assessments were completed for the entire facility. Based on the risk assessments, interim removal actions were identified and initiated. A corrective measures study (CMS) work plan was submitted and approved. An Environmental Baseline Survey for transfer was completed and approved. A screening-level ecological risk assessment was completed.

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) 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.

FY04 IRP Progress

The installation completed all statements of basis and submitted a RCRA permit modification incorporating all selected corrective measures for all sites. The installation is awaiting approval of permit modification from state regulators. It also completed the early transfer to the Louisville/Jefferson County Redevelopment Authority, and initiated long-term monitoring of natural attenuation and land use controls for all sites.

The RAB voted to adjourn, with plans to reconvene if necessary, as all remedial decisions have been made.

FY04 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

- Obtain permit modification approval from the Commonwealth of Kentucky in FY05.
- Continue land use control monitoring in FY05-FY06.
- Continue monitored natural attenuation monitoring in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | CO857002413000 | Funding to Date: | \$ 74.6 million |
| Size: | 1,866 acres | Estimated Cost to Completion (Completion Year): | \$ 16.8 million(FY 2032) |
| Mission: | Housed the 3400th Technical Training Wing; served as a technical training center | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2005 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | IAG under negotiation | | |
| 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 now retains 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. 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 RAB began receiving technical assistance for public participation funding in FY99.

The cleanup progress at the former Lowry AFB for FY00 through FY03 is detailed below.

In FY00, the remedial action (RA) for Coal Storage Zone West was completed. RAs for the UST, aboveground storage tank, and oil-water separator sites were completed, as was delineation of fire training zone hot spots.

In FY01, the 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 Air Force acknowledged 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 ground water was finalized. Groundwater pilot studies were conducted.

In FY03, RAs for soil were completed at two newly-discovered tank sites; Building 1432 and the Fifth & Trenton site. Two of five investigations and RAs for contaminated soils sites were completed. The installation completed an RA and no further

action (NFA) documentation for the skeet range.

FY04 IRP Progress

The installation began a polychlorinated biphenyls (PCBs) removal action at Building 402 and the long-term monitoring for radioactive parameters at the landfill progressed on schedule. The installation completed some investigations and RAs on the remaining contaminated soil sites. The installation also completed long-term monitoring at Building 606 and continued payments for the FY02 privatization agreement.

Investigation and RAs for contaminated soil sites were put on hold pending the outcome of comprehensive agreement negotiations between the Air Force and Lowry Redevelopment Authority that would include privatization of remaining environmental cleanup requirements as well as property transfer issues. In addition, the completion of the RA and the NFA documentation for the Fire Training Zone and Building 402 were delayed by regulatory issues and the privatization comprehensive agreement negotiations. The well abandonment project was delayed due to funding priorities and the comprehensive agreement negotiations.

FY04 MMRP Progress

Pending privatization issues delayed the RA and NFA documentation for the outdoor firing range.

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 (IRP) and Military Munitions Response Program (MMRP) actions, in FY05.
- Complete RA and NFA documentation for the Fire Training Zone and Building 402 in FY05.
- Complete abandonment of two deep wells and RCRA facility assessment follow-up

investigations and RAs in FY05.

- Continue long-term monitoring at landfill radiological disposal area and Building 606 in FY05.
- Continue payments for privatization cooperative agreement in FY05-FY06.

MMRP

- Complete ordnance clearance, RA, and NFA documentation for the outdoor firing range in FY05.

| | | | |
|-------------------------|---|--|--------------------------|
| FFID: | CA957212452700 | Estimated Cost to Completion (Completion Year): | \$ 24.6 million(FY 2021) |
| Size: | 6,606 acres | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2005 |
| Mission: | Maintain, repair, and refuel aircraft | Five-Year Review Status: | Completed FY2004 |
| 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: | \$ 144.4 million | | |



Progress To Date

March Air Force Base (AFB) was placed on the NPL in November 1989. 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 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. A 5-year review was completed in FY04.

To date, 47 sites have been identified at March AFB and grouped into three operable units (OUs). A Record of Decision (ROD) has been signed for OUs 1 and 2. The cleanup progress at March AFB for FY00 through FY03 is detailed below.

In FY00, field activities were completed in support of the basewide remedial investigation and feasibility study (RI/FS).

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 (OP&S) approval. The base continued to optimize the long-term monitoring and maintenance operations. A removal action work plan was completed for Site 43. Another site with methyl tertiary-butyl ether (MTBE) contamination also entered remediation. A draft 5-year review was completed.

In FY02, groundwater pump and treat was initiated and soil vapor extraction continued at Building 550. The basewide 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 allowing the OP&S

determination efforts to resume.

In FY03, the Air Force closed the groundwater portion of Site 43 and continued RA operation activities at landfills, Building 550, and the groundwater monitoring program. The installation also conducted mercury characterizations and research and determined that an RA was not required.

FY04 IRP Progress

The Air Force finalized the OU 2 ROD and the OU 4 (formally known as the basewide OU) RI/FS, and the proposed plan. The installation completed the Weapon Storage Area PA/SI field work and submitted the draft report. RA operation activities at landfills, Building 550, and the groundwater monitoring program continued. The installation completed the first 5-year review. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed the OU 4 ROD.

FY04 MMRP Progress

The Air Force conducted an inventory of MMRP sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Finalize OU 4 ROD in FY05.
- Finalize Weapon Storage Area PA/SI report in FY05.
- Continue RA operations activities at landfills, Building 550, and the groundwater monitoring program in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|--------------------|---|--|--|
| 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: | \$ 167.8 million |
| HRS Score: | N/A | Estimated Cost to Completion (Completion Year): | \$ 66.3 million(FY 2014) |
| 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 | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2014 |
| | | 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 April 1996. 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 FY01. The RAB received technical assistance for public participation grants in FY99, FY02, and FY03. The installation signed a federal facility site remediation agreement in September 1992, which was renegotiated in July 2002.

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 FY00 through FY03 is detailed below.

In FY00, the installation completed the transition of the cleanup team from Engineering Field Activity West to Southwest Division. The installation issued the NFA remedial investigation (RI) for IR 08 and continued negotiations of the early transfer of most of Mare Island to private developers. The installation received three cost proposals from the local redevelopment authority (LRA) for early transfer for a total of 3,800 acres.

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 (ESCAs) 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 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 RI and feasibility studies (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 site investigation 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 the draft 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 production and manufacturing and the south shore areas. RI/FSs are anticipated to determine further response actions for these onshore sites. The installation completed drafting the planning documents for a non-TCRA to operate the open burning/open detonation (OB/OD) range for disposal of recovered munitions.

FY04 IRP Progress

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

Technical and regulatory resource issues delayed the completion of the RI/FSs for A1, A2, F1, F2, and H1.

FY04 MMRP Progress

The removal action at the Marine Corps Firing Range continued. The installation completed the AM for OB/OD range. The installation drafted the AM and other planning documents for the DRMO site.

Technological difficulties and scope growth of munitions and explosives of concern (MEC) delay 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 and the draft ROD for the H1/landfill area and IR 17 in FY05.
- Complete SI level work at the elementary school and the US Fish and Wildlife Service parcel to address residual contamination in FY05.
- Complete RI documents for F1 and F2 in FY05.
- Complete the AM and initiate the removal action at the DRMO site in FY05.

MMRP

- Complete the Marine Corps Firing Range removal action in FY05.
- Commence MEC treatment for inventory of recovered items during investigations and cleanups across the island in FY05.
- Complete a demonstration of the contained detonation chamber in FY05.

| | | | |
|----------------------|---|--|---|
| FFID: | VA317302472200 | Media Affected: | Groundwater, surface water, sediment, land soil |
| Size: | 60,000 acres | Funding to Date: | \$ 52.0 million |
| Mission: | Provide military training and support research, development, testing, and evaluation of military hardware | Estimated Cost to Completion (Completion Year): | \$ 52.8 million(FY 2014) |
| HRS Score: | 50.00; placed on the NPL in June 1994 | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2014 |
| IAG Status: | RCRA FFCA signed December 31, 1991; Federal facility agreement signed February 4, 1999 | Five-Year Review Status: | Completed FY2002 |
| 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. 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 FY00 through FY03 is detailed below.

In FY00, NFA RODs were signed for Sites 1 and 5. Work continued on the arsenic burial area. The basewide background report was finalized. Site screening processes were completed at 10 sites.

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. Quantico Watershed investigation

sampling was implemented. In addition, work on the EE/CA and interim remedial action (IRA) at Site 20 was implemented. 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 final FS for Site 4 was submitted to regulators for review. The installation completed the final post-IRA report for Quantico Embayment. The installation awarded the IRA at Site 20.

FY04 IRP Progress

The installation completed Phase I of the IRA at the Former Rifle Range (Site 20) and implemented Phase II. It also completed an additional IRA for the auto hobby shop (Site 34) resulting in site closure. IRAs were awarded for additional site work. The post-IRA study for contaminated sediments was finalized and a draft FS has been submitted for review. Sampling work continues for the remainder of the Quantico Watershed Study SIs and remedial investigations (RIs). The installation complete EE/CAs for five sites. The cost of completing environmental restoration at this installation has changed significantly due to regulatory issues.

FY04 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 IRA, RI and NFA ROD at Site 20, the former rifle range, in FY05-FY06.
- Finalize FS, ROD and remedial design for Quantico Embayment Sediments in FY05-FY06.
- Complete EE/CAs and IRAs at five sites in FY05-FY06.

- Complete SI for Potomac River Sediments in FY05-FY06.
- Complete RI and ROD for Chopawamsic Creek sediments in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|--|--|---|
| FFID: | MA157282448700 | Contaminants: | Petroleum fuel related compounds (including ethylene dibromide), waste solvents, VOCs, pesticides, metals |
| Size: | 22,000 acres | Media Affected: | Groundwater, surface water, soil |
| Mission: | Provide Army and Air National Guard training and support the East Coast Air Defense and Coast Guard Air and Sea Rescue Units | Funding to Date: | \$ 515.9 million |
| HRS Score: | 45.93; placed on NPL in November 1989 | Estimated Cost to Completion (Completion Year): | \$ 540.9 million(FY 2032) |
| IAG Status: | Federal facility agreement signed in July 1991; last amended in June 2002 | IRP/MMRP Sites Final RIP/RC: | FY 2009/None |
| | | Five-Year Review Status: | Completed FY1997 and FY2002/Planned FY2007 |



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. Two 5-year reviews have been completed at this installation, one in FY97 and one in FY02.

Studies have identified 85 sites at the installation. To date, Records of Decision (RODs) or decision documents have been signed for 73 sites, and 60 sites have been closed. The cleanup progress at MMR for FY00 through FY03 is detailed below.

In FY00, RODs were issued for the Fuel Spill Site 1 (FS-1), Chemical Spill Site 4 (CS-4), CS-20, CS-21, and FS-13 groundwater plumes, and well field design began. Agreements were signed with Bourne Water District and the Town of Falmouth for over 250 private well conversions to municipal water. Remedial groundwater systems were installed for the SD-50 south and CS-10 Leading Edge plumes.

In FY01, the installation issued RODs for the FS-28 and FS-29 plumes. 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 Source Areas program completed remediation at 14 sites, installed four soil vapor extraction (SVE) systems, and utilized advanced excavation planning to reduce overall program costs. Work continued on CS-4, CS-20, CS-21, and FS-29 treatment system designs. The second MMR 5-year review process was initiated. Community involvement efforts included 26 news releases, 14 advisory team meetings, 41 neighborhood notices, and numerous meetings, tours, and fact sheets. The installation completed an inventory of Military Munitions Response Program (MMRP) sites, including

preliminary cleanup cost estimates for sites at eligible non-operational ranges, and did not identify any MMRP sites.

In FY03, the installation completed construction of the FS-1 groundwater treatment system and finalized the 5-year review. Remedial investigation began on the CS-23 groundwater plume and pre-design data was gathered for sites CS-18 and CS-19. The installation also continued operation of eight groundwater treatment systems and four SVE systems. Two SVE systems achieved cleanup goals and were decommissioned. The MMRP inventory was updated and no MMRP sites were identified at this installation. The base continued aggressive community involvement efforts.

FY04 IRP Progress

The installation completed construction designs for CS-4, CS-20, CS-21, and FS-29 groundwater treatment systems (located off-base). Real estate support closed or continued to process easements for 45 properties. MMR submitted an engineering evaluation/cost analysis (EE/CA) and started soil removal action for CS-19. MMR continued the operation and optimization of eight groundwater treatment systems and two SVE systems. The Air Force modified the CS-10 treatment system to capture new contamination outside the original capture zone. A design to optimize the Landfill 1 treatment system began. MMR decommissioned three groundwater systems (old CS-4, SD-5 South, and FS-1 wellpoints) and turned off the SD-5 treatment system. The Air Force replaced the FS-1 treatment system. CS-1 was approved for no further action (NFA). MMR utilized direct push technology to fill data gaps in a timely and cost effective manner. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Technical issues, specifically a pending Army ecological study to support NFA delayed the CS-18 EE/CA. Technical issues delayed the CS-10 ROD.

The installation's community involvement team coordinated 25 news releases, 20 public meetings, 6 fact sheets, 8 neighborhood notices, 27 speaking engagements, and 7 public comment periods.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

Plan of Action

Plan of action items for Massachusetts Military Reservation are grouped below according to program category.

IRP

- Start construction for CS-4, CS-20, CS-21, and FS-29 groundwater treatment systems (located off-base) in FY05.
- Complete removal actions at CS-19 and CS-10 Detail D, and close CS-22, SD-4, and CS-1 sites in FY05.
- Obtain approval for NFA for Eastern Briarwood and Western Aquafarm groundwater sites in FY05.
- Continue the operation and optimization of eight groundwater treatment systems and the SVE system in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|------------------------|--|--|-----------------------------|
| FFID: | CA957002474300 | Funding to Date: | \$ 175.8 million |
| Size: | 5,718 acres | Estimated Cost to Completion (Completion Year): | \$ 89.4 million(FY 2072) |
| Mission: | Provided navigation and electronic warfare officer training; housed SAC Bombing and Refueling Squadron | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2005 |
| HRS Score: | 28.90; placed on NPL in July 1987 | Five-Year Review Status: | Completed FY1999 and FY2004 |
| 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, and excavating pesticide contamination from drainage ditches. In FY94, a Restoration Advisory Board and a BRAC cleanup team were formed. The installation completed 5-year reviews in FY99 and FY04.

Studies have identified 89 sites at the installation, which were grouped into six 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 FY00 through FY03 is detailed below.

In FY00, the base cleanup plan was updated. A focused feasibility study and a proposed plan were completed for OU 6, and the ROD was initiated. Remedial action reports (RARs) were completed for three sites. Soil vapor extraction systems at Sites 18, 23, and 59 were constructed and operational.

In FY01, groundwater monitoring wells for the Phase IV remediation project were installed at 12 of 15 locations. Removal actions at Sites 80, 85, 88, and 89 were completed except for reclamation and reporting. The Draft Remedial Action Work Plan and Preliminary Engineering Report for Phase IV Groundwater Remediation was issued. The RAR for Site 62 and the draft RAR for Site 15 were completed.

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, 60, and 56, as well as Facilities 2595 and 18015 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 (IRP) 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 review/RPO evaluations, one for groundwater monitoring, and one for groundwater remediation. RARs were completed for Sites 69 and 86. Additional buried debris and fuel contamination were found at Site 10C/68.

FY04 IRP Progress

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 second 5-year review report was completed and EPA gave concurrence. The installation initiated the closure process for two CERCLA and two non-CERCLA sites. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Regulatory issues delayed the RARs for Sites 3 through 6, 12, and 20. Regulatory issues also delayed the completion of the institutional control management plan (ICMP). Due to access technicalities of the site, groundwater remediation at Site 7 was not completed.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified 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 the groundwater remediation at Site 7 in FY05.
- Complete ICMP in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|--------------------|--|--|--|
| 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: | \$ 23.8 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): | \$ 22.0 million(FY 2015) |
| 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 2005/FY 2012 |
| | | Five-Year Review Status: | Completed FY1999/Underway FY2004/Planned FY2009 |



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. 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.

Beginning in 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 was signed and two 5-year reviews have been completed for the WTA site. The second 5-year review of the WTA Area recommended that this would be the final CERCLA review for this site. The installation completed a 5-year review at the D/ALGT site in FY99. The cleanup progress at McChord AFB for FY00 through FY03 is detailed below.

In FY00, operating costs were reduced at the installation by placing one of the three extraction wells in the D/ALGT groundwater treatment system on standby and by decreasing the number of wells sampled in the long-term management program. McChord found high levels of TCE in the shallow groundwater near the base boundary, below the north part of Site SS-34. TCE was also discovered off base, below a residential neighborhood and in a few private wells. The installation reopened Site SS-34, received funds for a remedial investigation/feasibility study (RI/FS) of the TCE contamination, and paid to connect the neighborhood properties with private wells to a public water supply. The installation continued to encourage regulatory agencies to provide written concurrence on the closeout of 27 sites.

In FY01, the installation initiated an 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. A comprehensive range inventory was conducted. Six closed ranges were identified. This inventory was designed to be an annual, iterative effort. To supply data for the inventory, a detailed questionnaire was completed that collected data on the types of munitions used, the range's environmental status, and the type and level of external stakeholder interest.

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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. The six closed ranges previously identified at the site were placed on the MMRP inventory. The draft McChord AFB Range Inventory Report was issued.

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. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site.

FY04 IRP Progress

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

The Area D/ALGT second 5-year review is currently in draft and awaiting regulator comments. This review recommended that the existing treatment technology be reevaluated to determine if it is the most efficient and effective method to obtain the goals and address the contamination. Legal issues delayed the finalization of the cleanup action plan.

The installation distributed over 10,000 surveys within the surrounding communities, polling for RAB community interest. Two individuals expressed interest in RAB participation.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Finalize and obtain regulator signature on the second 5-year review and conduct and finalize an RA optimization study for the Area D/ALGT in FY05.
- Conduct Phase II of the Site SS-34N RA (if necessary) in FY05.
- Update the administrative record in FY05.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|----------------------|--|--|-----------------------------|
| FFID: | CA957172433700 | Media Affected: | Groundwater and soil |
| Size: | 3,452 acres | Funding to Date: | \$ 516.9 million |
| Mission: | Provide logistics support for aircraft, missile, space, and electronics programs | Estimated Cost to Completion (Completion Year): | \$ 717.6 million(FY 2032) |
| HRS Score: | 57.93; placed on NPL in July 1987 | IRP/MMRP Sites Final RIP/RC: | FY 2015/FY 2005 |
| IAG Status: | IAG signed in 1989 | Five-Year Review Status: | Completed FY1999 and FY2004 |
| 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 July 1987. Environmental contamination at McClellan AFB has resulted from sumps near industrial operations, landfills, leaks near 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.

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 (RODs) have been signed for OU B1 and the groundwater OU. In addition, two no action RODs have been signed. To date, the installation has transferred 369 acres. The cleanup progress at McClellan AFB for FY00 through FY03 is detailed below.

In FY00, five soil vapor extraction (SVE) systems were installed, and seven SVE sites were connected to the systems. The BCT completed six environmental baseline surveys and findings of suitability to lease, encompassing over 380 facilities. Engineering evaluation and cost analysis removal actions at two radionuclide sites were initiated.

In FY01, all environmental baseline reports were completed. 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. These treatment systems have removed 1,082,430 lbs of volatile organic compounds (VOCs) to date. The TCRA at the large radiological

CS-10 site continued. A removal action at PRL S-33 was completed. 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 for 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 successfully.

In FY03, the installation completed the TCRA for the hexavalent treatment system and the six-site no action ROD. The TCRA at the large radiological site excavated 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.

FY04 IRP Progress

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 interim ROD groundwater Phase III off-base design was completed and the interim ROD groundwater Phase III on-base design began. The second 5-year review was completed for the NPL portion of the base. The 5-year review for the Davis Site was completed.

Completion of the basewide VOC groundwater ROD was delayed due to the time required for resolution of cleanup requirements.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Complete the VOC groundwater ROD and interim

ROD Phase III on-base design in FY05.

- Award guaranteed firm fixed price contract for the Davis site cleanup in FY05.
- Complete the LRA initial parcel ROD #2 in FY06.
- Complete the breakout Shallow Soil Gas ROD in FY06.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|------------------------|--|--|---------------------------|
| FFID: | NJ257182401800 | Funding to Date: | \$ 41.3 million |
| Size: | 3,500 acres | Estimated Cost to Completion (Completion Year): | \$ 260.0 million(FY 2038) |
| Mission: | Provide quick-response airlift capabilities for placing military forces into combat situations | IRP/MMRP Sites Final RIP/RC: | FY 2014/None |
| HRS Score: | 47.20 | 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. In FY99, an interim remedial action (IRA) was completed at the Defense Reutilization and Marketing Office yard. The installation formed a Restoration Advisory Board (RAB).

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 FY00 through FY03 is detailed below.

In FY00, reports evaluating natural attenuation of a trichloroethylene (TCE) groundwater plume and colloidal transport of radionuclides in groundwater at the BOMARC missile accident site were conducted. Two technical review committee meetings were held to discuss the development of a federal facility agreement.

In FY01, the basewide background study and ecological assessment continued, as did the remedial investigation (RI) and feasibility study of the TCE groundwater plume. Partnering among contractors, service agents, action officers, and base personnel began, but required regulator participation to be effective. Two RAB meetings were held after issues concerning the BOMARC project were resolved.

In FY02, the free product recovery equipment began operation at the Bulk Fuel Storage Area. The RI phase to delineate the extent of the TCE groundwater plume 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including

preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

In FY03, the installation completed operation of the free product recovery equipment at pilot scale for the bulk fuel storage area. The basewide background study was also completed. Based on an environmental site inspection, 19 new sites were added, resulting in a total of 42 sites at the installation. Also in FY03, the Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update. 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.

FY04 IRP Progress

The installation began RI work plan development at Landfill 02 (LF02) and LF03. 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 (FT3). McGuire AFB continued the RI study for the TCE groundwater plume delineation and source investigation, as well as for LF03 and the spill site at Building 2227 (SS24). The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The extensiveness of the sources of TCE contamination was larger than expected and required further remedial investigation to delineate, thus the installation did not complete the RI study for the TCE groundwater plume. Funding issues delayed the completion of the RI studies for LF03 and SS24.

The installation held two RAB meetings, one Tier I/II partnering meeting and one Tier III partnering meeting.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

Plan of Action

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

IRP

- Complete Class II/III survey of RW 01 in FY05.
- Complete RI study for SS24 in FY05.
- Complete RI fieldwork for LF03 in FY05.
- Complete RI Phase I fieldwork for LF04 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|--------------------------|
| FFID: | PA317002210400 | Funding to Date: | \$ 29.0 million |
| Size: | 824 acres | Estimated Cost to Completion (Completion Year): | \$ 12.1 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 FY2004 |
| 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. The installation was placed on the NPL in May 1994. 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. A federal facility agreement (FFA) is currently under negotiation.

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 FY00 through FY03 is detailed below.

In FY00, the installation completed the focused feasibility study (FS) and the ROD for soil at Site 3. An action memorandum (AM) and soil removal were completed for Site 15.

In FY01, the installation completed ecological risk assessment (ERA) fieldwork for Site 9 and soil removal at Site 14. An AM and soil removal at Site 15 were completed, as was site investigation (SI) fieldwork for four AOCs. An NFA report for Site 7 was also finished. NFA documents for Sites 12, 13, and 14 and a 28-site AOC NFA document were completed.

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 AOC 22 and 48. The installation completed a groundwater remedial investigation for Site 3. The basewide ERA was completed. The SI was completed 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 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 of the 5-year review.

FY04 IRP Progress

The installation completed the 5-year review and a site management plan. The Site 3 proposed remedial action plan (PRAP) and pilot study were completed. NFA DDs were completed for AOCs 36-A and 38. A Site 9 FS and fieldwork for a bioremediation pilot study were completed. A time critical AM and soil removal was completed for Site 5. Due to the additional soil contamination, Site 5 was reopened and the contractor was tasked to perform a remedial investigation (RI).

Regulatory issues delayed the Site 3 ROD.

FY04 MMRP Progress

No work was performed on the MMRP site at this installation in FY04.

Plan of Action

Plan of action items for Mechanicsburg Naval Inventory Control Point are grouped below according to program category.

IRP

- Complete the FFA in FY05.
- Complete the Site 9 PRAP in FY05.
- Complete the Site 3 ROD in FY05.
- Complete the Site 5 RI work plan and fieldwork in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|--|--|-------------------------|
| FFID: | MQ917002758400 | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2004) |
| Size: | 1,535 acres | IRP/MMRP Sites Final RIP/RC: | FY 2004/None |
| Mission: | Provided aviation support services | Five-Year Review Status: | Completed FY2003 |
| HRS Score: | N/A | | |
| IAG Status: | None | | |
| Contaminants: | Heavy metals, pesticides, PCBs, POLs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 22.0 million | | |



Progress To Date

In 1940, a naval station was established at Midway Island. In 1978, the station was redesignated as the Naval Air Facility Midway Island. The Navy operated and maintained the facility and provided services and materials to support aviation activities. Environmental sites at the installation include landfills, disposal and storage areas, a former power plant, a rifle range, and pesticide spill areas. In FY93, the BRAC Commission recommended closure of Midway as an active naval air facility. A Midway Island BRAC cleanup team (BCT) was formed to accelerate the cleanup and transfer of Midway Island. Also, in an effort to facilitate the transfer process, an information repository was established at the University of Hawaii at Manoa in FY95. The BCT finalized the BRAC cleanup plan in FY96. An executive order transferring legal enforcement authority to the U.S. Fish and Wildlife Service (USFWS) was signed in 1996. In May 1996, the Navy transferred jurisdiction and control of Midway Island to the USFWS. In FY03, the installation completed a 5-year review.

Environmental studies at the facility have identified 39 sites. The cleanup progress at Midway Naval Air Facility for FY00 through FY03 is detailed below.

In FY00, assessment of the site characterization identified the tug and barge as the probable source of polychlorinated biphenyl (PCB) contamination. The BCT agreed on a removal action for the tug and barge and follow-up monitoring.

In FY01, the installation removed and disposed of the abandoned boiler, the landing craft mechanization, and the tug and barge. All petroleum hydrocarbon-impacted soil associated with two previously removed underground storage tanks was disposed of. Sampling confirmed that the tug and barge were the sources of PCB contamination. The installation completed additional work to confirm closure of abandoned petroleum pipelines and construction of a cutoff wall to address an oil sheening problem observed at the Cargo Pier, Sand Island.

In FY02, the 5-year review was conducted for Midway Atoll. A no further action (NFA) Record of Decision (ROD) was pursued for Site 1, but denied by regulators pending the results of fish tissue monitoring. The 5-year review discovered that RODs were needed to document remedies at the other 18 sites on

Midway for closeout. The Navy completed an inventory of all Military Munitions Response Program (MMRP) sites. The installation determined that the rifle range and skeet range on Midway Island required NFA.

In FY03, the installation completed the 5-year review report addressing BCT concerns. The installation commanding officer signed the 5-year review report in September 2003. The final 5-year review report required additional consultation and research into the project record to ensure appropriate resolution of BCT concerns. To streamline and simplify the review process, the sitewide proposed plan was split into two distinct categories: land use control sites and NFA sites. Midway Atoll is not on the NPL, therefore, the sitewide ROD document was changed to a sitewide decision document (DD). The installation began closeout by documenting remedies of 19 sites with a DD.

FY04 IRP Progress

The installation completed a sitewide DD that documented the remedies of 19 sites and completed the closeout for the installation. All cleanup efforts at this installation are completed and no more funding is required. This is the last narrative for this installation.

FY04 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

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

IRP

There are no IRP actions scheduled for FY05 or FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---------------------------------|
| FFID: | TN421382058200 | Funding to Date: | \$ 136.8 million |
| Size: | 22,357 acres | Estimated Cost to Completion (Completion Year): | \$ 75.8 million(FY 2017) |
| Mission: | Load, assemble, pack, ship, and demilitarize explosive ordnance | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2017 |
| HRS Score: | 58.15; placed on NPL in July 1987 | Five-Year Review Status: | Completed FY2001/Planned FY2005 |
| 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 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 (RAB). 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 a 5-year review in FY01.

Preliminary assessments (PAs) and site inspection (SI) activities conducted at Milan AAP in FY87 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 FY00 through FY03 is detailed below.

In FY00, the Army and regulators signed a ROD for construction of a groundwater treatment facility for the Western Boundary Area (OU 4 Region 1) of the installation. RDX-contaminated groundwater from sumps and ditches within Line X (OU 4 Region 1) had migrated from its source and extended more than 6,000 feet laterally within the City of Milan.

In FY01, the Army used an explanation of significant difference (ESD) to modify the existing ROD for OU 3 and OU 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 Z and H and Area M and N. The draft FS for overall groundwater contamination was approved. The Army submitted the draft ROD for OU 4 Regions 2 and 3 to the regulators. Remediation of the Y-103 rail classification yard was completed. The installation continued operation of the OU 1 and OU 3 groundwater treatment plants.

In FY03, the installation continued operation of the OU 1, OU 3, and OU 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.

FY04 IRP Progress

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 since it will address groundwater issues in the sitewide groundwater ROD. The installation continued operation of the OU 1, OU 3, and OU 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 cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the RODs and final RODs for OU 4 Regions 2 and 3. Technical issues delayed the issuance of a ROD for sitewide contaminated groundwater plumes and the composting of Line X. Contracting issues delayed the initiation

of additional groundwater studies at Lines C, D, Z, O, and the open burning grounds.

FY04 MMRP Progress

The installation completed a PA for the MMRP site and initiated the SI.

Plan of Action

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

IRP

- Perform a 5-year review of all remedial actions in FY05.
- Begin development of a conceptual site model for installationwide groundwater in FY05.
- Complete characterization of all explosive contaminated soil within the Northern Industrial Area in FY05.
- Implement pilot study within OU 5 to determine applicability for carbohydrate in situ treatment for soils and evaluate carbohydrates in situ effect on groundwater treatment system at Line O in FY05.
- Complete delineation study for all off-site groundwater plumes in FY05.
- Complete soil characterization and excavation for Line X in FY05.

MMRP

- Draft SI report in FY05.

| | | | |
|----------------------|--|--|--------------------------|
| FFID: | CA917002323800 | Media Affected: | Groundwater and soil |
| Size: | 3,097 acres | Funding to Date: | \$ 116.5 million |
| Mission: | Housed 7th Infantry Division (Light); supports the Defense Language Institute Foreign Language Center, currently at the Presidio of Monterey, California | Estimated Cost to Completion (Completion Year): | \$ 86.7 million(FY 2030) |
| HRS Score: | 42.24; placed on NPL in February 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2012/None |
| IAG Status: | Federal facility agreement signed in July 1990 | Five-Year Review Status: | Completed FY2003 |
| Contaminants: | VOCs, petroleum hydrocarbons, heavy metals, pesticides | | |



Progress To Date

Moffett Field Naval Air Station (NAS) housed the 7th Infantry Division (Light) and supports the Defense Language Institute Foreign Language Center. In July 1991, the BRAC Commission recommended closure of the installation. The installation was closed on July 1, 1994, and was transferred to NASA and the associated Moffett Community Housing (MCH) was transferred to the Army. The installation was placed on the NPL in February 1990 and a federal facility agreement (FFA) was signed in July 1990. Sites at the installation include landfills, underground storage tanks (USTs), a burn pit, ditches, holding ponds, wetland sediments, French drains, maintenance areas, and fuel spill sites. Contaminants include polychlorinated biphenyls (PCBs), petroleum products, DDT, chlorinated solvents, and heavy metals. The 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 at OU 1, Site 22, and two additional sites. The installation has completed closure of 35 petroleum sites. The cleanup progress at Moffett Field NAS for FY00 through FY03 is detailed below.

In FY00, the installation completed closure reports for numerous UST sites and the field investigation of the Northern Channel (Site 27). Monitoring of ecological areas continued. 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, Sites 1 and 2 to 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 feasibility study (FS) for Site 27 and the remedial action for Site 22 were completed. The HHRA at MCH was completed, although additional studies are needed to supplement HHRA. An additional seven petroleum sites were closed.

FY04 IRP Progress

The Hangar 1 TCRA was completed, and work started on the remedial investigation ((RI) and FS work plan for Hangar 1. The Site 27 PP was completed. Optimization of the Sites 26 and 28 pump and treat systems began. Air sampling was completed at MCH and a work plan drafted for the final phase of groundwater investigation. Closure letters for a petroleum site was received from the California Regional Water Quality Control Board. The installation continued the site management plan for delisting Moffett Field from the NPL and support of the NASA-Navy MOA. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

The RD for Site 27 was delayed pending regulatory approval of the draft ROD. A regulatory decision to prepare an RI report addendum delayed the FS for Site 25.

The installation continued facilitating the BCT and RAB meetings.

FY04 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 Navy work at MCH in FY05.
- Continue the site management plan for delisting Moffett Field from the NPL, continue support of the NASA-Navy MOA, continue facilitating the BCT and RAB meetings, and conduct a public site tour in FY05.
- Complete ROD for Site 27 in FY05-FY06.
- Finalize three petroleum site closures with regulatory agencies in FY05-FY06.
- Complete revised RI for Site 25 and the RI/FS work plan for Hangar 1 in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | WA09799F331700 | Funding to Date: | \$ 17.1 million |
| Size: | 9,607 acres | Estimated Cost to Completion (Completion Year): | \$ 1.5 million(FY 2006) |
| Mission: | Served as tactical air command, air transport, and strategic air command base; provided pilot training | IRP/MMRP Sites Final RIP/RC: | FY 2006/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 (USTs) and associated potentially contaminated soil; a trichloroethylene (TCE)-contaminated groundwater plume; an area potentially containing low-level radioactive waste; and two disposal areas potentially containing tetraethyl lead. The Army and the EPA signed an interagency agreement in March 1999 and EPA placed the property on the NPL in 1999. U.S. Army Corps of Engineers (USACE) established a Restoration Advisory Board (RAB) at this property.

USACE identified four projects at this property. The cleanup progress for Moses Lake for FY00 through FY03 is detailed below.

In FY00, EPA directed USACE to drill a new drinking water well for residents impacted by the TCE in the groundwater. USACE completed several interim remedial actions (IRAs), including UST closures at the former eight-bay hangar facility, disposal of more than 100 55-gallon drums, and disposal of over 18,000 gallons of TCE-contaminated water in tanks. The Army performed additional sampling for domestic water wells, increasing the number of homes requiring service on the bottled-water contract.

In FY01, USACE completed an 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, but there proved to be

several field sites requiring more investigation.

In FY03, USACE completed the Skyline Well Replacement Project and handed the well over to the owner. It 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.

FY04 IRP Progress

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 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.

RAB meetings were conducted on a quarterly basis.

FY04 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) work at this property.

Plan of Action

Plan of action items for Moses Lake Wellfield Contamination Site are grouped below according to program category.

IRP

- Complete NEI in FY05.
- Complete, review, and finalize draft surface soil OU FS in FY05.
- Complete draft groundwater OU FS in FY05.
- Continue long-term monitoring/whole-house filter program in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|---|--|--|
| FFID: | ID057212455700 | Estimated Cost to Completion (Completion Year): | \$ 7.1 million(FY 2012) |
| Size: | 6,000 acres | IRP/MMRP Sites Final RIP/RC: | FY 2005/None |
| Mission: | Provide composite combat air power worldwide | Five-Year Review Status: | Completed FY2001 and FY2002/Planned FY2006 |
| HRS Score: | NA | | |
| IAG Status: | Federal facility agreement signed in January 1992 | | |
| Contaminants: | VOCs, POLs, heavy metals | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 11.8 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. The installation completed 5-year reviews in FY01 and FY02. Environmental studies conducted since FY83 have identified 32 sites at Mountain Home AFB. 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 cleanup progress at Mountain Home AFB for FY00 through FY03 is detailed below.

In FY00, the installation continued to monitor regional groundwater and the perched water at Site ST-11. The installation updated the community relations plan and continued to pursue deletion of the installation from the NPL.

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 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 ST-11, deletion from the NPL will not be revisited until the next 5-year review.

In FY02, the installation installed five wells to assist in monitoring regional groundwater, and three additional wells with vapor ports to assist in monitoring perched groundwater and volatile organic compounds (VOCs) at Site ST-11. The 5-year review was completed and 17 sites that were recommended for additional institutional controls were sampled. The installation

began an SI for three AOCs to determine whether the AOCs qualify as sites. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

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 ST-13. Samples analyzed from two regional aquifer monitoring wells indicated isolated values for benzene and trichloroethylene (TCE), which exceeded maximum contaminant levels. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

The installation completed an interim remedial design and installed seven new wells at ST-11 and three wells into the deeper aquifer. The installation also continued remediation of ST-11 using the newly added wells, and continued to monitor volatilized 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 SD-24. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

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 FT-08, SD-27, and SS-29 in FY05.
- Continue to monitor wells for fuel and TCE vapors at eight sites in FY05-FY06.
- Conduct a scheduled 5-year review in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | SC457002482100 | Funding to Date: | \$ 51.1 million |
| Size: | 3,937 acres | Estimated Cost to Completion (Completion Year): | \$ 9.8 million(FY 2029) |
| Mission: | Housed tactical fighter wing | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2005 |
| HRS Score: | N/A | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Spent solvents, fuel, waste oil, VOCs, metals, asbestos, paints, POLs, thinners | | |
| 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 (FTAs), 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 in FY93. The installation also formed a Restoration Advisory Board in FY94 and the BRAC cleanup team updated the BRAC cleanup plan in FY96. The RCRA facility investigation work plan and fieldwork were completed for four areas. The cleanup progress at Myrtle Beach AFB for FY00 through FY03 is detailed below.

In FY00, the installation completed the review of interim corrective measure (ICM) construction reports for the old entomology shop, the new entomology shop, and the armament shop. The installation began a corrective measures study (CMS) for eight sites, ICM soil removal at FT11 (the weathering pit), natural attenuation (NA) at two FTAs, and a corrective action plan at the petroleum/oil/lubricants (POLs) site.

In FY01, the installation completed a pilot study and ICM at the vehicle maintenance area and revised the ICM at B575. CMSs for nine sites were completed, and CMSs for three sites were drafted. Statements of basis (SOBs) 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. An inventory for UXO was completed and no ordnance was found.

In FY02, remediation at four fuel sites, groundwater monitoring, and operation of existing systems continued. One pilot study was completed. Drafts were developed for five CMSs and five SOBs.

In FY03, the installation began investigation of a new groundwater site and initiated corrective measure implementations at four sites. Fourteen CMSs and SOBs 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. The Air Force reached a consent agreement with the State regarding land use control issues, which allowed the installation to proceed with postponed documents.

FY04 IRP Progress

The installation initiated remedial actions (RA) at one site. The installation completed four CMSs, SOBs and associated public comment period for three sites. The installation completed field investigations and issued a RCRA facility investigation for the POLs site. Regulatory agencies provided approval to shut down a pump and treat system. The installation reached site closure on a fuel contaminated site. The installation optimized remedial systems and eliminated or reduced the monitoring frequency of several monitoring wells. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

One SOB, four CMIs, and the remaining seven DDs were not completed due to delays associated with finalizing the selected remedy for the subject sites with the regulatory agencies. Therefore, the selected remedy RAs at two sites were also delayed. Technical issues delayed the operating properly and successfully (OP&S) determinations.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Obtain OP&S determinations at two sites in FY05.
- Initiate final RAs at three sites in FY05.
- Complete POLs site CMS in FY05.
- Complete three SOBs and seven DDs in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|-------------------------|----------------------------------|--|-------------------------|
| 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 FY2003 |
| 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. EPA signed a Record of Decision (ROD), and USACE conducted source removals and installed groundwater treatment systems. The cleanup progress at NPI for FY00 through FY03 is detailed below.

In FY00, the property continued monitoring and operating the soil vapor extraction (SVE) and groundwater systems. The Army issued the final payment under the 1996 grant agreement.

In FY01, the monitoring and operating of 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 continued to monitor and operate the SVE and groundwater treatment systems. USACE reviewed monitoring reports submitted to them. The property reviewed the use of NA in place of the present Plume 1/2 system. NA was eliminated as an option since contaminants of concern were still above action levels. USACE completed a 5-year review.

FY04 IRP Progress

USACE 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 has 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.

FY04 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) work at this property.

Plan of Action

Plan of action items for National Presto Industries are grouped below according to program category.

IRP

- Continue to monitor the groundwater in the three AOCs in FY05.
- Continue to operate the groundwater treatment and SVE systems as prescribed in the ROD in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | VA317002248200 | Funding to Date: | \$ 21.5 million |
| Size: | 2,147 acres | Estimated Cost to Completion (Completion Year): | \$ 25.8 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 2010/None |
| HRS Score: | 50; placed on NPL in May 1999 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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. The installation was placed on the NPL in FY99 because of the potential for contaminants in soil and groundwater to migrate to potential receptors. A Restoration Advisory Board (RAB) was established in 1994 and a community relations plan (CRP) was completed in FY02. The installation signed a federal facility agreement (FFA) in FY04. Community and RAB members attend regular meetings and tours of Installation Restoration Program (IRP) activities. The Navy, EPA and State have formed a partnership to address environmental cleanup at the facility and meet frequently to track progress.

One Record of Decision (ROD) was finalized, and over 100 sites were closed in FY04. The cleanup progress at Naval Amphibious Base Little Creek for FY00 through FY03 is detailed below.

In FY00, the installation completed a draft base background study and updated the site management plan. The installation continued ecological investigations at multiple sites, and long-term management at Sites 7, 9, and 10. It also prepared a draft FFA. The engineering evaluation and cost analysis (EE/CA) was completed for Solid Waste Management Unit (SWMU) 8, and the associated removal action work plan was finalized. The installation completed draft site investigation for SWMUs 7 and 8, a draft remedial investigation (RI) for Sites 9 and 10, and an RI for Site 12.

In FY01, the installation completed a draft work plan for the SWMU 3 RI 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 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 Oxygen Release Compound, and at Site 11 using cyclodextrin to significantly reduce groundwater contamination. It 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 H, I, J, and Site 14. The installation also completed a no further action closeout for Site 4.

FY04 IRP Progress

The installation signed an FFA and over 100 sites were closed out upon signature. The installation finalized a remedial design 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.

Regulatory issues delayed the final RI and IRA for Site 7.

FY04 MMRP Progress

The Navy has identified no MMRP sites at this installation.

Plan of Action

Plan of action items for Naval Amphibious Base Little Creek are grouped below according to program category.

IRP

- Complete the IRA for Sites 7 and 8 in FY05.
- Complete a proposed remedial action plan and ROD for Site 12 and SWMUs 7a and 8 in FY05.
- Initiate an FS for Site 11 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|---|--|--|
| 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): | \$ 6.1 million(FY 2014) |
| 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 Land 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. Congress authorized NASA to transfer the facility to Stanislaus County in FY99. Regulatory oversight agencies have concurred on no further action (NFA) status for eight Installation Restoration Program (IRP) sites in FY99. The cleanup progress at NALF Crows Landing for FY00 through FY03 is detailed below.

In FY00, management of the installation's environmental restoration program was transferred from Engineering Field Activity West to Southwest Division. Corrective actions at underground storage tank (UST) sites were implemented. Routine groundwater monitoring activities were also conducted, and additional chemicals were identified in the groundwater.

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 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 Site 17 administration area plume. 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. The installation completed closure reports for UST CL-40 and UST CL-7, 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-40 and UST CL-7. Approximately 19,000 tons of waste and construction debris were removed from IRP Site 11A (sewer systems) during a TCRA. A draft engineering evaluation/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 community relations program mailing list. The BCT meetings were conducted bimonthly.

FY04 IRP Progress

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 injected oxygen (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 began the investigation and response actions at Site 11A, but completion was delayed due to an obstruction on the property. The revised FSs for both Site 11 and Site 17 were delayed, as more evaluation of data is needed from the delayed removal action at Site 11 and investigation at Site 17.

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.

FY04 MMRP Progress

The Navy has performed no MMRP actions in FY04.

Plan of Action

Plan of action items for Naval Auxiliary Landing Field Crows Landing are grouped below according to program category.

IRP

- Complete removal action at Site 11 (disposal pits) in FY05.
- Continue groundwater extraction near the former dry well at the Administration Area Plume (Site 17) in FY05.
- Complete investigation of groundwater beneath adjacent property (Site 17) in FY05.
- Complete an update (addendum) to the CRP in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | HI917002438800 | Funding to Date: | \$ 20.0 million |
| Size: | 2,400 acres | Estimated Cost to Completion (Completion Year): | \$ 34.5 million(FY 2014) |
| 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 2014/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: | 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 (NTAMS), 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 five 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 FY00 through FY03 is detailed below.

In FY00, the installation completed removal actions at Sites 17, 18, and 20. Removal site evaluation fieldwork and reporting were initiated for a portion of Site 18. An engineering evaluation/cost analysis and an action memo were completed, and a removal action began for Sites 17, 18, and 20 to treat or dispose of contaminated soil excavated in the previous removal action. The installation completed tank removal and over-excavation at UST 5.

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.

FY04 IRP Progress

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.

Regulatory issues delayed the second round of groundwater sampling and draft RI report for Sites 6 and 24.

FY04 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 reports for verification sampling to confirm Eureka laboratory results at Sites 14 and 15 in FY05.
- Complete final RI reports for Sites 1, 2, 5, 6, 22, and 24 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--|
| FFID: | VA317002468500 | Funding to Date: | \$ 53.4 million |
| Size: | 2,677 acres | Estimated Cost to Completion (Completion Year): | \$ 13.5 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 FY2003 and FY2004/Planned FY2005 |
| 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 FY04 to the Naval District Washington, West Area, Dahlgren, Virginia 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. An information repository and an administrative record were established in FY91. The installation was placed 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. To date, the installation has completed 5-year reviews for Sites 2, 9, 10, 12, and 17.

The Naval District Washington, West Area, Dahlgren has identified 68 sites. The installation has completed approximately 16 Records of Decision (RODs) since the beginning of the environmental restoration process. The cleanup progress at Naval District Washington, West Area, Dahlgren for FY00 through FY03 is detailed below.

In FY00, the installation completed remedial investigation/feasibility studies (RI/FSs), proposed plans (PPs), and RODs for Sites 3/44 and 10. A remedial design (RD) was completed for Site 17. The air-sparging and soil vapor extraction system at Site 12 was recommended for shutdown because soil and groundwater contaminant concentrations met remediation goals.

In FY01, the installation completed RI/FSs, PPs, and RODs for Sites 36/49 and 46. An 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 long-term management (LTM) contract for Sites 9 and 17 was awarded and the work plans submitted.

In FY02, the installation completed an RI/FS, a PP, and a ROD for Site 6, and completed an RI for Site 55. Four Appendix B closeout sites were sampled and documents were finalized for NFA. RDs were completed for Sites 6 and 46. LTM work plans were finalized for Sites 9, 10 and 17. Interim RAs were completed 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 installation completed the 5-year review for Site 2. The installation completed the Site 46 RA and began on the Site 6 RA. The Site 37 RD began. 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.

FY04 IRP Progress

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 5-year review was completed for Sites 9, 10, 12 and 17. The installation completed the Site 6 RA and began construction on Site 47 interim RA (IRA). The Site 37 100% RD was submitted. The Magnus System TS continued at Site 12. Annual wetland monitoring reports were completed for Sites 9/58, 17, 25, 46 and 50. IRAs for Sites 43 and 52 were completed. The installation initiated the IRA for Site 61. Site Screenings for four Sites 14, 15, 38 and 57 were completed.

Weather and equipment problems delayed the completion of the IRA for Site 61.

FY04 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 comprehensive 5-year review for multiple sites in FY05.
- Complete an RD for one site in FY05.
- Complete RAs for two sites in FY05-FY06.
- Complete the FY04/FY05 Annual Wetland Monitoring Report for multiple sites in FY05-FY06.
- Complete two IRAs for two sites, and two PPs and RODs in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | | |
|--------------------|--|--|---|---|
| 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: | \$11.0 million | |
| HRS Score: | Not scored. Governor has requested listing on NPL. | Estimated Cost to Completion (Completion Year): | \$13.6 million(FY 2002) | |
| IAG Status: | Federal facility agreement drafted. | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2007 | |
| | | Five-Year Review Status: | This installation has not completed a 5-year review | |

Progress To Date

The 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 at Vieques include underground storage tanks (USTs), open burning/open detonation (OB/OD) and military munitions. In FY01, the installation completed the community relations work plan, draft technical review committee (TRC) community relations charter and site management plan. In FY03, the Governor of Puerto Rico requested EPA to list VNTR and NASD on the NPL. The NPL listing is currently under public comment period. The TRC was converted to a Restoration Advisory Board (RAB) in FY04. Quarterly RAB meetings are conducted at the facilities on Vieques to discuss the progress of activities and to hear community concerns.

The Navy has identified 17 potentially contaminated sites at NASD, including a 200-acre site with discarded military munitions. In addition, at VNTR the Navy has identified 12 RCRA sites and 62 potential Military Munitions Response Program (MMRP) sites. To date, the Navy has transferred 8,114 acres of NASD to the Department of Interior (DOI), the Municipality of Vieques, and the Puerto Rico Conservation Trust, 4,000 acres of which DOI owns, operates, and manages as a National Wildlife Refuge. The Navy has also transferred an additional 14,573 acres of VNTR to DOI to be operated and managed as a National Wildlife Refuge and Wilderness Area. The cleanup progress at the Naval Facilities on Vieques for FY00 through FY03 is detailed below.

In FY00, the Navy completed the Environmental Baseline Survey (EBS) and finding of suitability to transfer for 17 sites at NASD.

In FY01, the Navy completed the preliminary assessment/site investigation for 17 sites at NASD. The community relations work plan, draft TRC Community Relations Charter and site management plan were completed. The Navy also completed 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 draft no further action (NFA) document for nine of the 17 sites at NASD and the remedial investigation/feasibility study (RI/FS) at four sites at NASD. In addition, the Navy completed the RI/FS field investigation and innovative technology pilot test for petroleum removal at the former waste oil UST (Area of Concern E). The RCRA facility investigation work plans for 12 sites at VNTR were completed and received regulator approval. The Navy also completed the final baseline groundwater work plan and the draft community relations work plan for VNTR. Additionally, the Navy completed the EBS for VNTR. The Navy completed the preliminary range assessment and archive research at 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.

FY04 IRP Progress

The installation completed Phase I field work for the RI for 12 sites on VNTR. It also completed environmental RI/FS reports for four sites at former NASD, which are currently under review. The installation conducted RI/FS investigations for two additional sites at NASD. It also finalized the NFA document for nine sites on NASD, which is in review with the Puerto Rico Environmental Quality Board. The installation submitted an explosive safety report to the Department of Defense Explosive Safety Board for approval to remove ordnance items and complete the investigation.

The baseline investigation and reports for the groundwater and soil background for VNTR (per RCRA consent order) was delayed due to regulatory issues. The discovery of inert ordnance items delayed the RI/FS for Area of Concern R.

The TRC was converted to a RAB in August 2004.

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

FY04 MMRP Progress

The installation completed the draft RI report at OB/OD site [Solid Waste Management Unit (SWMU) 4] on NASD. Additionally, the installation completed the RCRA OB/OD closure work plan for regulatory review and comment on VNTR. The installation completed a draft final expanded range assessment and site inspection work plan, which is currently under regulatory review.

The federal facilities agreement with EPA, DOI, and the Puerto Rico Environmental Quality Board was delayed pending the finalization of the NPL listing. The non-time critical removal action at OB/OD site (SWMU 4) on NASD was delayed due to regulatory concerns with land use requirements through the comprehensive conservation plan.

Plan of Action

Plan of action for Naval Facilities on Vieques are grouped below according to program category.

IRP

- Complete engineering evaluation and cost analysis at four sites at NASD in FY05.
- Complete RIs at three sites at NASD in FY05.
- Conduct a Phase II RI for photo identified sites for VNTR in FY05.
- Finalize federal facilities agreement with EPA, DOI, and the Puerto Rico Environmental Quality Board in FY05.

MMRP

- Initiate MMRP interim removal action at SWMU 4 for NASD in FY05.
- Conduct MMRP site inspection investigations and expanded range assessment for VNTR in FY05.
- Conduct MMRP surface removal action at discreet sites at the live impact area and specific beaches and roads for VNTR in FY05.
- Prepare final closure plan for OB/OD Site for VNTR in FY05.

| | | | |
|------------------------|---|--|---|
| FFID: | CA917002756300 | Funding to Date: | \$ 25.7 million |
| Size: | 416 acres | Estimated Cost to Completion (Completion Year): | \$ 7.0 million(FY 2011) |
| Mission: | Supply and provide bulk storage of various grades of petroleum fuel product for fleet | IRP/MMRP Sites Final RIP/RC: | FY 2006/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, 12), consisting of 364 acres, were transferred to the City of Richmond in 2003. One Record of Decision (ROD) has been signed to date. The cleanup progress at NFD, Point Molate for FY00 through FY03 is detailed below.

In FY00, the BRAC cleanup team approved and signed a ROD for no further action for the Sandblast Grit Areas. The installation removed an additional 36,000 feet of fuel pipeline from the Shoreline/Drum Lot 1 Areas. It also completed and received concurrence on an engineering evaluation and cost analysis (EE/CA) for Site 1. Remedial investigation reports for the four sites were completed.

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 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.

FY04 IRP Progress

The installation completed the Site 3 treatment ponds removal and the Site 1 FS and proposed plan (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 cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Although initiated, technical issues delayed completion of the Site 3 and Site 4 FSs and PPs.

The BCT continued to partner and evaluate the environmental cleanup at the installation. The BCT also approved the environmental Master Schedule for the installation.

FY04 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 environmental and structural closure of the USTs, pipelines, and valve boxes in FY05.
- Complete the FSs and PPs for Sites 3 and 4 in FY05.
- Complete the ROD for Site 1 in FY05.
- Complete the groundwater BUE for the installation in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

FFID: WA017002756800
Size: 2,716 acres
Mission: Receive, store, maintain, and issue ordnance
HRS Score: 50.00; placed on NPL in May 1994
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: \$ 9.1 million

Estimated Cost to Completion (Completion Year): \$ 2.1 million(FY 2031)
IRP/MMRP Sites Final RIP/RC: FY 2001/FY 2011
Five-Year Review Status: Completed FY2000 and FY2001 - remedy remains protective



Progress To Date

The Naval Magazine Indian Island's history includes receiving, storing, maintaining, and issuing ordnance. The primary sources of contamination at the installation are landfills and 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. The installation was placed on the NPL in May 1994. The installation's technical review committee was converted to a Restoration Advisory Board in FY95. Naval Magazine Indian Island signed a federal facility agreement in August 1996. The installation conducted 5-year reviews in FY00 and FY01, and no deficiencies were identified.

Since FY84, investigations at this installation have identified 18 sites. A Record of Decision was signed in August 1995. The cleanup progress at Naval Magazine Indian Island for FY00 through FY03 is detailed below.

In FY00, the installation completed site investigations at Sites 33 and 36. An engineering evaluation and cost analysis (EE/CA) and an action memorandum were prepared for a removal action at Site 36. The installation completed a 5-year review. The installation prepared a draft closeout report, and continued discussions with EPA concerning deleting the installation from the NPL. The installation placed institutional controls on Sites 10 and 36 to regulate site access and usage. Seventeen resource protection wells were closed. Residue from the burning of incendiary bombs at Site 11 was discovered during well-closure activities.

In FY01, the installation completed a removal action for petroleum and polycyclic aromatic hydrocarbon-contaminated soil at Site 36. It completed a removal action and EE/CA for lead-contaminated soil at Site 33. The State of Washington's Department of Ecology determined that Sites 33 and 36 require no further action. Long-term operations and maintenance (LTOM) at Site 10 continued with groundwater sampling, landfill cap, and shoreline maintenance activities. The first 5-year review was completed with no deficiencies identified.

In FY02, the installation continued LTOM at Site 10 (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 the LTOM at the north-end landfill (Site 10). In addition, the installation conducted extensive repairs to the landfill's shoreline protection system.

FY04 IRP Progress

The installation continued LTOM at the North-end Landfill (Site 10). It also initiated the second 5-year review in August. Navy and EPA project managers are taking steps to delist the installation from the NPL in FY05.

FY04 MMRP Progress

The installation completed an underwater investigation at Crane Point (Site EO101) by Explosive Ordnance Disposal Unit 11 (EODMU) - Detachment Bangor. The investigation was completed as an element of ongoing training exercises by EODMU 11. Washington State Department of Ecology has agreed that the site requires no further action (NFA) and is preparing an NFA letter for Crane Point.

Plan of Action

Plan of action items for Naval Magazine Indian Island are grouped below according to program category.

IRP

- Continue LTOM at the north-end landfill (Site 10) in FY05-FY06.
- Prepare and sign an explanation of significant differences to provide detailed information regarding institutional controls at Site 10 - the Northend Landfill in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|---|-------------------------------------|----------------------------------|
| FFID: | RI117002424300 | Estimated Cost to Completion | \$ 52.4 million(FY 2032) |
| Size: | 1,400 acres | (Completion Year): | |
| Mission: | Provide logistical support and serve as a training center | IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2014 |
| HRS Score: | 32.25; placed on NPL in November 1989 | Five-Year Review Status: | Completed FY1999/Underway FY2004 |
| 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: | \$ 83.9 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 (POLs) 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 a 5-year review in FY99.

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 FY00 through FY03 is detailed below.

In FY00, the installation completed the remedial design and initiated a Phase I remedial action (RA) for the Site 1 offshore area. Fieldwork for the Site 17 study area screening evaluation (SASE) was completed. The RA at Site 2 was completed.

In FY01, the installation finalized reports for the Site 17 SASE and Site 2 closure. The remedial investigation (RI) was completed and the feasibility study (FS) was started for Site 9. The Phase I 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.

FY04 IRP Progress

The installation performed a site investigation (SI) at Site 4. For Site 8, the installation prepared the draft and draft final study area screening assessment 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 study area screening assessment was prepared. A 5-year review began. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

The RAB met nine times, including a bus tour of the Installation Restoration Program (IRP) sites.

FY04 MMRP Progress

The installation prepared the draft and draft final PA for the Carr Point Shooting Range. The draft final report recommends no further action (NFA).

Plan of Action

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

IRP

- Complete Site 12 and Site 13 SI in FY05.
- Initiate Site 17 RI in FY05.
- Initiate second phase of soil removal at Site 9 in FY05.
- Initiate Site 20 study area screening assessment in FY05.

MMRP

- Close out Carr Point shooting range, pursuant upon stakeholder approval of NFA recommendation included in draft final PA in FY05.

| | | | |
|------------------------|--|--|---|
| FFID: | WA09799F345500 | Funding to Date: | \$ 0.3 million |
| Size: | 191 acres | Estimated Cost to Completion (Completion Year): | \$ 0.1 million(FY 2007) |
| Mission: | Served as shipbuilding facility and reserve shipyard | IRP/MMRP Sites Final RIP/RC: | FY 2007/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 former 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, 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 8 acres, and the remaining property was conveyed to the Port of Tacoma in January 1960.

The cleanup progress for Naval Station Todd-Tacoma for FY00 through FY03 is detailed below.

In FY00, U.S. Army Corps of Engineers (USACE) completed the site ownership/operational history, and initiated preliminary discussions with other potentially responsible parties (PRPs), regulators, and stakeholders to apportion liability for addressing contamination and natural resources injuries.

In FY01, the need for additional field data to confirm or counter allegations of liability was reviewed. Discussions continued with other PRPs, regulators, and stakeholders. USACE, Seattle District, 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 consent decree was signed by a U.S. District Judge; the consent decree included DoD and other Federal agencies. USACE continued to assist the Office of Counsel and DOJ with settlement negotiations.

FY04 IRP Progress

USACE continued to assist with ongoing negotiations.

FY04 MMRP Progress

USACE has identified no Military Munitions Response Program (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 with ongoing negotiations in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|---|-------------------------------------|--------------------------|
| FFID: | NE79799F041800 | Estimated Cost to Completion | \$ 31.9 million(FY 2032) |
| Size: | 17,214 acres | (Completion Year): | |
| Mission: | Performed ordnance storage and manufacturing activities | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2001 |
| HRS Score: | 31.94; placed on NPL in August 1990 | Five-Year Review Status: | Underway FY2004 |
| IAG Status: | IAG signed in September 1991 | | |
| Contaminants: | Explosives, VOCs, TCE, PCBs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 77.2 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 1990 and EPA and the Army signed an interagency agreement in 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 conducted a 5-year review of the ordnance and explosives engineering evaluation and cost analysis (EE/CA) removal action.

To date, USACE has signed a Record of Decision (ROD) for Operable Unit (OU) 1 and incinerated over 16,000 tons of contaminated soil at the site. The cleanup progress at NOP for FY00 through FY03 is detailed below.

In FY00, USACE initiated OU 2 remedial action (RA) construction of containment wells and a treatment plant. A pilot study was conducted to investigate the effectiveness of groundwater circulation wells (GCWs). Regulators approved the draft-final OU 3 remedial investigation addendum report and revised risk assessment. USACE submitted the draft OU 3 feasibility study (FS) report to regulators.

In FY01, the OU 2 groundwater RA construction progressed. The groundwater monitoring program continued, completing 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

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 FS report. USACE submitted the draft OU 3 proposed plan (PP) 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 Region 7. 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 ordnance and explosives engineering evaluation and cost analysis (EE/CA) removal action.

In FY03, USACE performed further investigation of the recently discovered trichloroethylene (TCE) groundwater contamination plume south of Load Line No. 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 the EPA regarding the selected location for their new municipal water well field. The 5-year review of the munitions and explosives of concern (MEC) EE/CA removal action plan was under review for approval.

FY04 IRP Progress

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

A pre-design investigation was conducted in the vicinity of the proposed monitoring wells; however, regulatory agencies requested further data to verify placement, which delayed the construction of the wells.

NOP continued to hold quarterly RAB meetings.

FY04 MMRP Progress

The 5-year review of the MEC EE/CA removal action plan was approved.

Plan of Action

Plan of action items for Nebraska Ordnance Plant are grouped below according to program category.

IRP

- Continue negotiations or litigation with PRPs in FY05.
- Implement the remaining RA for OU 2 in FY05.
- Begin implementation of the focused extraction portion of the OU 2 ROD in FY05.
- Issue the PP and ROD for OU 3 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | NC49799F483500 | Funding to Date: | \$ 1.9 million |
| Size: | 4 acres | Estimated Cost to Completion (Completion Year): | \$ 0.0 million(FY 2005) |
| Mission: | Served as World War II bomber command and Vietnam-era aerospace defense command | IRP/MMRP Sites Final RIP/RC: | FY 2005/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. 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 FY00 through FY03 is detailed below.

In FY00, the remedial design (RD) was revised and finalized.

In FY01, EPA approved the air sparging (AS) ROD amendment. The PRPs completed the 60 percent RD document, and submitted the 90 percent RD document for the use of AS 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 RD and final RD for the use of AS were both approved. USACE conducted a public comment meeting.

In FY03, a contractor installed the AS system on behalf of the PRP group.

FY04 IRP Progress

Regulatory issues delayed settlement negotiations between the PRPs and DOJ, which delayed project closeout.

FY04 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) work at this property.

Plan of Action

Plan of action items for New Hanover County Airport are grouped below according to program category.

IRP

- Complete settlement negotiations between the PRPs and DOJ in FY05.
- Closeout project following settlement in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|----------------------|---|--|---|
| FFID: | CT117002202000 | Media Affected: | Groundwater, surface water, sediment, land soil |
| Size: | 547 acres | Funding to Date: | \$ 57.6 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): | \$ 23.1 million(FY 2020) |
| 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 FY2001 |
| 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 installation was placed 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 two 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 Site 4 and Site 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 FY00 through FY03 is detailed below.

In FY00, the installation completed the feasibility study (FS), PRAP, and ROD for Site 20. A draft final FS was completed for the lower base sites. Remedial design (RD) and remedial action (RA) at Site 3 and RD at Site 8 were completed. Fieldwork was completed for the basewide groundwater OU remedial investigation (RI).

In FY01, the RAs at Sites 8 and 20 were completed. Groundwater monitoring continued at Sites 2 and 6. The RI for the basewide groundwater OU was completed. The 5-year review was completed as planned. The draft FS was completed for the lower base.

In FY02, groundwater monitoring at Sites 2, 6, and 8 continued. 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. This data will be included in the FS for

the lower base sites. The installation completed the FS for the basewide groundwater OU.

FY04 IRP Progress

The installation completed the PRAP and ROD for the basewide groundwater OU. Additional investigation requirements delayed the completion of the Thames River Study and lower base FS.

FY04 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 RD and RA for basewide groundwater OU in FY05.
- Complete Thames River Study and FS for lower base sites in FY05.
- Complete PRAP and ROD for lower base sites in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | OH557002465000 | Funding to Date: | \$ 5.7 million |
| Size: | 70 acres | Estimated Cost to Completion (Completion Year): | \$ 0.3 million(FY 2006) |
| 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: | Planned FY2005 |
| 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. An environmental baseline survey was completed in June 1994. In FY94, the installation formed a BRAC cleanup team (BCT) and a Restoration Advisory Board to support cleanup efforts. The base closed on September 30, 1996.

Through investigations, the installation has identified seven sites. No further action decision documents (DDs) have been prepared 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 the Boeing Corporation and other contractors. In FY03, an additional 13 acres were transferred. The cleanup progress at Newark AFB from FY00 through FY03 is detailed below.

In FY00, three drinking water wells were closed, and Stage I of the Landfill 02 (LF02) remedial investigation (RI) was completed. The feasibility study (FS) for the hazardous waste storage (FF87) pump and treat system was completed, and the original remedial action (RA) construction project was awarded. The BCT reviewed draft plans and the draft technical memorandum for Stage I of the LF02 RI.

In FY01, enhanced in situ bioremediation was initiated as the RA at FF87. FF87 later attained remedy-in-place (RIP) status.

In FY02, a focused supplementary RI concluded that bis-dichloroethylether (BCEE) in groundwater was due to an up-gradient, off-site source. An FS recommended institutional controls as the RA for BCEE. A DD was signed and the last RIP (LRIP) for LF02 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 LF02, totaling 13 acres, to the Licking County Regional Airport Authority. An amended post closure plan for FF87 and the hazardous waste storage area was under regulatory review. No Military Munitions Response Program (MMRP) sites were identified or reported.

FY04 IRP Progress

The amended post closure plan (APCP) for FF87 was completed. Contaminant concentrations dramatically decreased at MW-87-1A.

Technical issues delayed the operating properly and successfully (OP&S) determination for FF87. The remaining three-quarter acre parcel comprising FF87 was not transferred to the Newark-Licking County Port Authority due to the failure to achieve OP&S.

FY04 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

- Modify the APCP for FF87 in FY05.
- Close obsolete groundwater monitoring wells at FF87 and at previously transferred parcels in FY05.
- Complete the first 5-year review in FY05.
- Complete OP&S documents and obtain an OP&S approval letter for FF87 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | VA317002741400 | Funding to Date: | \$ 88.8 million |
| Size: | 4,631 acres | Estimated Cost to Completion (Completion Year): | \$ 28.3 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: | The installation has not completed a 5-year review. |
| 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 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 Sites 6 and 2. The cleanup progress at Norfolk Naval Base for FY00 through FY03 is detailed below.

In FY00, the installation completed an interim remedial action (RA) for Site 5. It also completed an RA (landfill cap) at Site 6. Closeout reports were signed for 10 SWMUs.

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 (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 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.

FY04 IRP Progress

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 RI for Site 18 was not completed; the installation initiated a final expanded site investigation instead.

FY04 MMRP Progress

The Navy identified no MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete the final RI for SWMU 14 in FY05.
- Complete an NFA PRAP and ROD for SWMUs 12 and 16 in FY05.
- Complete the first phase of the RI for Site 23 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|--|--|--|
| 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: | \$ 20.3 million |
| HRS Score: | 50.0; placed on NPL in July 1999 | Estimated Cost to Completion (Completion Year): | \$ 10.2 million(FY 2016) |
| 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). An 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. The number of sites was reduced to 163 in FY03; the discrepancy in number of sites previously reported is the result of inconsistent numbering and nomenclature in previous documentation. The cleanup progress at NNSY for FY01 through FY03 is detailed below.

In FY01, the installation completed the removal action 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 for Site 17 was completed. The installation completed the St. Helena Annex expanded site investigation, which allowed the property to be

exceeded. The installation completed remedial investigations 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 (seven sites which will require a Record of Decision (ROD), five site screening areas, five preliminary screening areas, and 146 no further action sites). The installation completed the JARA to address cross-boundary contamination from Norfolk NSY Site 9; approximately 44,000 tons of calcium hydroxide and other debris was removed and the site was restored to create 1.5 acres of engineered tidal wetlands.

FY04 IRP Progress

The installation finalized the FFA. The Navy completed the engineering evaluation and cost analysis and removal action designs for OUs 1 and 2. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

The non-time critical removal action at OU 1 was initiated, however technical issues delayed completion. The Site 17 proposed plan (PP) and ROD were delayed due to proposed land use changes by the installation.

FY04 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

- Develop and complete the PP and ROD for Site 17 in FY05.
- Complete the removal action at OU 1 in FY05.
- Develop and complete the PP and ROD for OU 1 in FY05.
- Initiate and complete the Phase I removal action at OU 2 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | CA957002434500 | Funding to Date: | \$ 117.3 million |
| Size: | 2,221 acres | Estimated Cost to Completion (Completion Year): | \$ 18.3 million(FY 2012) |
| Mission: | Supported C-141 airlift operations | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2005 |
| HRS Score: | 39.65; placed on NPL in July 1987 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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 and BRAC cleanup team (BCT) in FY94.

To date, a Record of Decision (ROD) was signed for the Central Base Area (CBA) Operable Unit (OU) and a closure report for Site 5 was completed. The cleanup progress at Norton AFB for FY00 through FY03 is detailed below.

In FY00, removals of radium paint residue inside Building 752 and the exterior sewer line were completed. A closure plan was submitted for the industrial waste line (IWL). The CBA base boundary groundwater extraction and treatment system was placed on standby after reducing TCE below the maximum cleanup level of five micrograms/liter.

In FY01, Site 10 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 data were incorporated into the basewide OU feasibility study (FS). The basewide OU FS was resubmitted 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. Work continued on efforts to close Air Combat Camera Services (ACCS), the industrial wastewater treatment plant (IWTP), and IWL RCRA sites. The annual public meeting was held.

In FY02, the CBA OU RA systems completed active operations and were shut down. LTM of groundwater and O&M of the Site

2 landfill RA continued. RA planning for Site 10 was initiated as well as a biological opinion project description detailing endangered and threatened species. A removal action work plan was submitted for Building 752. An annual public meeting was held resulting in positive feedback from both the public and regulatory community participation specialists.

In FY03, the installation closed the ACCS and initiated closure of the IWL. The final basewide FS was approved and the interior RA for Building 752 was completed.

FY04 IRP Progress

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 on Site 10 and the Building 752 exterior. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

With agreement from the regulatory agencies, the completion of the 5-year review was postponed pending finalization of the basewide ROD.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Complete 5-year review and RCRA closure documentation in FY05.
- Finalize the basewide ROD and RA completion reports in FY05.
- Decommission groundwater pump-and-treat systems in FY05.

- Submit addendum to the IWTP clean closure certification report in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|-------------------------|---|--|---|
| FFID: | CA921352066100 | Estimated Cost to Completion (Completion Year): | \$ 7.4 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: | The installation has not completed a 5-year review. |
| HRS Score: | N/A | | |
| IAG Status: | None | | |
| Contaminants: | POL, TCE, solvents, lead, PCBs | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 33.6 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 384 acres. The cleanup progress at Oakland Army Base for FY00 through FY03 is detailed below.

In FY00, the local reuse authority (LRA) asked the Army to pursue a proposed finding of suitability for early transfer (FOSET) for the property.

In FY01, the installation completed UST removals and closure reports. The installation removed an abandoned pre-Army oil pipe at Operable Unit 1 (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, the state regulatory agency agreed on the land use controls (LUCs) necessary to support the FOSET. The LUCs will be included in the transfer documents. 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 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 Highways 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 MMRP sites at this installation.

In FY03, the installation initiated groundwater monitoring and completed the FOSET. The installation programmed the Parcel 1 investigation funding and cleanup funding for FY03 and FY05 respectively. It also initiated 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.

FY04 IRP Progress

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.

Regulatory issues delayed the Army's negotiations with the State on OU 2 contamination actions. Regulatory issues delayed completion of the RI and the initiations of the FS at Parcel 1.

FY04 MMRP Progress

The Army has identified no Military Munitions Response Program (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 the Parcel 1 FS and start contracting actions for the remedial design/RA at Parcel 1 in FY05.
- Negotiate with regulators on RAs at OU 2 in accord with the LRA in FY05.
- Continue oversight of the LRA RAs in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|--|--|--|
| FFID: | WA09799F832600 | Contaminants: | PCBs, heavy metals, petroleum hydrocarbons, ins 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: | \$ 11.9 million |
| HRS Score: | 50.00; placed on NPL in May 1994 | Estimated Cost to Completion (Completion Year): | \$ 0.3 million(FY 2004) |
| IAG Status: | IAG signed in July 1997 | IRP/MMRP Sites Final RIP/RC: | FY 2004/None |
| | | Five-Year Review Status: | 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 in a landfill originating from the Annex and the Puget Sound Naval Shipyard. 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, including heavy metals, polychlorinated biphenyls (PCBs), petroleum hydrocarbons, dioxins and furans, and asbestos have been detected in soil at the landfill, at the fire training area, and in surface water and sediment at the property. 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 USACE, Huntsville Division, determined that the area was not accessible to the general public and thus the area was considered for no further action. The U.S. Army Corps of Engineers (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.

The cleanup progress at the Old Navy Dump/Manchester Annex for FY00 through FY03 is detailed below.

In FY00, USACE completed Phase I of remedial action (RA) construction, followed by the commencement of Phase II RA construction. The Old Navy Dump/Manchester Annex engaged in a continuing partnering relationship with EPA and the Washington Department of Ecology, as well as with the current federal property owners.

In FY01, USACE revised the RA schedule and budget.

In FY02, USACE completed the Phase II RA construction. USACE also initiated long-term management (LTM) of the landfill cover that will extend through FY05.

In FY03, USACE completed the institutional control plan. USACE continued LTM for inspection and maintenance of the landfill cover.

FY04 IRP Progress

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.

FY04 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) work at this property.

Plan of Action

Plan of action items for Old Navy Dump/Manchester Annex are grouped below according to program category.

IRP

- Complete shellfish tissue and sediment study to determine the health of the bivalve population in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|---|--|---|
| FFID: | WV39799F346200 | Estimated Cost to Completion (Completion Year): | \$ 0.0 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, the U.S. Environmental Protection Agency (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 (RI/FS) for OU1 was completed in early FY88. The Record of Decision (ROD) for OU1, signed in FY89, required excavation of soil contaminated with polyaromatic hydrocarbon compounds and treatment in a bioremediation bed. 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 OU1, 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 OU2 and received EPA concurrence on completion. To improve site management at OU1, the PRP group submitted a focused feasibility study (FFS) to EPA for the OU1 remedy. In August 1998, after state concurrence, EPA approved the remedy proposed for OU1 in the FFS. EPA issued a new ROD for OU1 in FY99, superseding the ROD signed in 1989.

The cleanup progress for Ordnance Works Disposal Area for FY00 through FY03 is detailed below.

In FY00, one of the PRPs, on behalf of the PRP group, initiated the remedial design as outlined in the ROD for OU 1 (off-site thermal treatment and on-site landfill capping). Development of a consent decree began.

In FY01, the PRP group and the Department of Justice initiated review of the consent decree. The estimated cost of the final remedial action was \$7.8 million. The anticipated USACE share was 31 percent of the cost, paid from the judgment fund (approximately \$2.7 million). 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 polyaromatic hydrocarbons (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 excavation 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 \$1.1 million cost savings. The PRPs completed investigation of the oil following EPA approval of the work plan. Legal issues delayed the signing of the consent decree in FY03. DuPont lost its Court of Federal Claims indemnification case on November 13, 2002 (No. 99-101 C). 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 "RD/RA" model.

FY04 IRP Progress

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 United States Supreme Court. The Solicitor General of the United States declined to pursue a writ to the Supreme Court.

FY04 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) work at this property.

Plan of Action

Plan of action items for Ordnance Works Disposal Areas are grouped below according to program category.

IRP

- Continue negotiations for the consent decree in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | FL417002473600 | Funding to Date: | \$ 32.0 million |
| Size: | 2,050 acres | Estimated Cost to Completion (Completion Year): | \$ 8.8 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 FY2001 |
| 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 Naval Training Center for FY00 through FY03 is detailed below.

In FY00, the installation completed an economic development conveyance of 1,425 acres to the City of Orlando and the Federal Aviation Administration received 83.3 acres. Orlando NTC finalized decision documents (DDs) for seven AOCs and issued an interim ROD for Operable Unit (OU) 3.

In FY01, the installation completed final 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 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.

FY04 IRP Progress

The installation continued LTM at SA 17, SA 36, SA 39, SA 52, OU 1, and operation and management (O&M)/LTM at OU 2, OU 3, and OU 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, SA 2, SA 17, and SA 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. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

FY04 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

- Continue LTM/O&M at OU 1, OU 2, OU 3, OU 4, SA 36, SA 39, SA 17, and SA 52 in FY05.
- Complete transfer of the majority of remaining property via covenant deferral in FY05.
- Continue IRAs at OU 2, OU 3, OU 4, SA2, SA 36, and SA 39 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|--|-------------------------------------|---|
| 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. 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 Texas Tech University. DOE is solely investigating sites on their property. EPA placed the property on the NPL in May 1994. U.S. Army Corps of Engineers (USACE) established an electronic administrative record for the Texas Tech FUDS in FY03.

A preliminary assessment and site inspection in FY90 identified nine areas of emphasis for investigation. The cleanup progress for Pantex Plant for FY00 through FY03 is detailed below.

In FY00, USACE conducted groundwater sampling that supported the results from the past data. USACE met with the Texas Natural Resource Conservation Commission (TNRCC) and recommended continued monitoring of groundwater and additional wells.

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 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. Texas Tech University, 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. USACE will summarize investigation results in a remedial investigation (RI) report. This RI report is subject to regulatory concurrence. 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 Texas Tech FUDS. USACE determined the extent of explosives contamination in soil at Zone 9.

FY04 IRP Progress

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 Texas Tech University. PRP discussions with Texas Tech University and DOE continued. The installation prepared for an RI report and feasibility study for cleanup of all DoD responsible AOCs.

FY04 MMRP Progress

No Military Munitions Response Program (MMRP) work was performed at this property in FY04.

Plan of Action

Plan of action items for Pantex Plant are grouped below according to program category.

IRP

- Continue preparation and submittal of the draft and final RI report for DoD investigations in FY05.
- Prepare plans for recommended removal actions and remediation in FY05.
- Present investigation results to the TCEQ for all AOCs prior to submittal of RI report in FY05.
- Continue PRP discussion with the TCEQ, DOE and Texas Tech University in FY05.
- Perform additional site investigations to

fill any data gaps identified during RI review in FY05.

MMRP

- Conduct additional investigations and engineering evaluation and cost analysis to address the remaining MEC in FY05.

| | | | |
|------------------------|---|--|---|
| FFID: | SC417302276300 | Funding to Date: | \$ 15.8 million |
| Size: | 8,043 acres | Estimated Cost to Completion (Completion Year): | \$ 19.3 million(FY 2014) |
| Mission: | Receive, recruit, and combat-train enlisted personnel upon their enlistment in the Marine Corps | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2014 |
| HRS Score: | 50.00; placed on NPL in December 1994 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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 FY00 through FY03 is detailed below.

In FY00, the installation signed an interim ROD for Site 3 and a draft ROD for no action was submitted to regulators for Site 2. The installation initiated negotiations on the federal facility agreement (FFA) after the Navy drafted a proposed FFA based on existing agreements at other Marine bases. The remedial investigation/feasibility study (RI/FS) was completed at Site 3. Parris Island Recruit Depot submitted a draft RI report for Site 21. The contamination assessments at the gas station and Building 4022 was completed. The installation developed and approved the RI work plan for Site 45.

In FY01, the installation completed construction of the landfill cap at Site 3 and submitted the interim remedial action/corrective action report. The RI for Site 1 was completed, and the FS 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 an 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.

FY04 IRP Progress

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

Regulatory issues delayed the FS, and consequently, the ROD for SWMU 12.

FY04 MMRP Progress

The installation removed approximately 10,000 rounds of small arms munitions found during construction at an active rifle range.

Plan of Action

Plan of action items for Parris Island Marine Corps Recruit Depot are grouped below according to program category.

IRP

- Complete PP and issue a ROD for SWMU 12 in FY05.
- Issue fixed-price environmental multi-award contract for CAP at SWMU 12 in FY05.
- Complete Site 1 long-term maintenance work plan and continue monitoring at Sites 1, 3, and 45 in FY05.
- Implement a CAP at the Depot gas station and continue monitoring AVGAS pipeline and Building 850 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|---|-------------------------------------|-----------------------------|
| FFID: | MD317002453600 | Estimated Cost to Completion | \$ 45.7 million(FY 2013) |
| Size: | 6,800 acres | (Completion Year): | |
| Mission: | Test and evaluate naval aircraft systems | IRP/MMRP Sites Final RIP/RC: | FY 2012/None |
| HRS Score: | 36.87; placed on NPL in May 1994 | Five-Year Review Status: | Completed FY2001 and FY2004 |
| IAG Status: | None | | |
| Contaminants: | Heavy metals, pesticides, organics, POLs, solvents, UXO | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 46.5 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 (last update FY01). 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 FY00 through FY03 is detailed below.

In FY00, the installation completed a remedial action (RA) for Site 6. It also completed a remedial design (RD), a proposed plan (PP), and a ROD for Sites 1 and 12. Long-term management (LTM) began at Site 11 and partnering efforts and updates of the installation's Web page continued.

In FY01, the installation converted its administrative record to CD-ROM for Navy personnel, completed an RA at Sites 1 and 12, and began the LTM phase at OU 1. The installation completed the PP 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

Navy

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.

FY04 IRP Progress

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

The IRAs for Sites 4/5 were delayed in order to address incidental munitions and explosives of concern. Regulatory issues delayed IRA actions for Sites 48, 49, and 50. Two planned RI reports and one FS report could not be completed due to time constraints in achieving other goals.

FY04 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 FS, proposed remedial action plan/ROD, RD and RA for Sites 12 OU 2, Rifle Range Landfill in FY05.
- Complete 4 RI/FS documents in FY05.
- Complete 8 desktop evaluations in FY05.
- Complete RI for Sites 4 and 5 for areas cleaned by IRA in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.



| | |
|------------------------|--|
| FFID: | HI917002434200, HI917002477900, HI917002434100, HI917002434000, HI917002433900, and HI917002433400 |
| Size: | 2,162 acres |
| Mission: | Provide primary fleet support in the Pearl Harbor area |
| HRS Score: | 70.82; placed on NPL in October 1992 |
| IAG Status: | Federal facility agreement signed in March 1994 |
| Contaminants: | VOCs, SVOCs, heavy metals, PCBs, pesticides, petroleum, hydrocarbons, solvents |
| Media Affected: | Groundwater and soil |

| | |
|--|---|
| Funding to Date: | \$ 153.9 million |
| Estimated Cost to Completion (Completion Year): | \$ 131.9 million(FY 2018) |
| IRP/MMRP Sites Final RIP/RC: | FY 2035/None |
| Five-Year Review Status: | The installation has not completed a 5-year review. |

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 (ISMF). 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 relations plan was completed in FY92 and updated in FY95. 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 FY00 through FY03 is detailed below.

In FY00, the installation completed the Waipio Peninsula, West Loch, Pearl City Peninsula, ISMF, and Bishop Point site summary reports (SSRs). The installation finalized engineering evaluation and cost analysis (EE/CA), action memorandum (AM), and decision documents (DDs) for removal actions for Sites 25 and 29. It also finalized an EE/CA, an AM, and draft DDs for Site 45. A removal action under the EPA Superfund Innovative Technology Evaluation program continued at Site 10. Remedial action operations (RA-O) continued for Sites 36, 37, and 46. The installation completed a time-critical removal action at Site 41.

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 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 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. It completed the removal action and remediation verification reports (RVRs) for Site 25 and 45, the RI/FS for NS Sites 51-57 and the draft final RI/FS for NS Site 31, and initiated removal actions for NS Sites 51 and 53-57. 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 53-57, 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.

FY04 IRP Progress

The installation completed removal actions for NS Sites 51,

53-57 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 Site SWMU 6. It also 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. 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 RVR and proposed plan (PP) for NSY Site 41 and the RVR for Building 49. The installation initiated the RVR for Site 51, but a potential groundwater issue associated with the AVGAS system delayed completion. Additional metal contamination in the soil delayed the RVR for Sites 53-57.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete removal action report for NS Site 35 and initiate the EE/CA for FISC Site 26 in FY05.
- Complete SI for NSY SWMU 44 and the RVR and PP for NSY Site 41 in FY05-FY06.
- Complete RSE at PWC SWMUs 10 and 13 and RSE for PWC Sites 2, 25 and 48 in FY05-FY06.
- Initiate SI for NSY Site 49 and SWMU 84 and a removal action for NSY SWMU 44 in FY05-FY06.
- Complete the RVR for NS Sites 51 and 53-57 in FY05 and PWC Site 34 in FY06.

MMRP

- Initiate preliminary assessment for NAVMAG UXO 7 in FY06.

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|------------------------|---|--|-----------------------------|
| FFID: | NH157002484700 | Funding to Date: | \$ 156.2 million |
| Size: | 4,255 acres | Estimated Cost to Completion (Completion Year): | \$ 44.4 million(FY 2046) |
| Mission: | Served as Strategic Air Command bomber and tanker base | IRP/MMRP Sites Final RIP/RC: | FY 2000/FY 2005 |
| HRS Score: | 39.42; placed on NPL in February 1990 | Five-Year Review Status: | Completed FY2000 and FY2004 |
| 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. 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 at four sites, soil removal at three sites, and test pit operations at two sites. The installation formed a BRAC cleanup team in FY93 and a Restoration Advisory Board in FY95. The installation completed 5-year reviews in FY00 and FY04.

To date, six Records of Decision (RODs) have been signed, as well as a final ROD for the Brooks and Ditches Operable Unit. The cleanup progress at Pease AFB for FY00 through FY03 is detailed below.

In FY00, the installation completed the remedial action (RA) decision document and finished the last RA with construction of a permeable reactive wall at Site 49. Operating properly and successfully (OP&S) documentation was completed for five sites. The findings of suitability to transfer (FOSTs) for the Old Stone Schoolhouse and golf course properties were completed, and the properties were transferred. A 5-year review was completed for all sites, and the report gained regulatory approval.

In FY01, the installation drafted a land use control/institutional control management plan (ICMP). FOSTs were drafted for all parcels not requiring OP&S determinations. Remedial system operation and monitoring continued successfully. The monitoring and evaluation of Site 49 proceeded as planned.

In FY02, the design was initiated for the Zone 3 remedy change, and coordination with local water suppliers was underway. RA system operation, monitoring, long-term management (LTM), and trend analysis continued. A proposed plan was completed and a ROD amendment was drafted for Zone 3.

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.

FY04 IRP Progress

The installation constructed the wellhead protection system for the Haven Well and 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 OP&S demonstration was accepted by EPA for Site 73 and OP&S documentation was drafted for the remaining Zone 3 actions. The installation completed the second 5-year review.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Sites (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Develop RA plan in accordance with New Hampshire requirements for flightline sites in FY05.
- Continue operation, monitoring and optimization efforts for all sites in FY05.
- Complete OP&S demonstration for remaining Zone 3 parcels in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|------------------------|---|--|--------------------------|
| FFID: | FL417002461000 | Funding to Date: | \$ 62.7 million |
| Size: | 5,874 acres | Estimated Cost to Completion (Completion Year): | \$ 51.3 million(FY 2041) |
| Mission: | Serve as a flight training center | IRP/MMRP Sites Final RIP/RC: | FY 2013/None |
| HRS Score: | 42.40; placed on NPL in December 1989 | Five-Year Review Status: | Completed FY2003 |
| IAG Status: | Federal facility agreement signed in October 1990 | | |
| Contaminants: | Ammonia, asbestos, benzene, cyanide, heavy metals, paints, PCBs, pesticides, phenols, plating wastes, chlorinated and nonchlorinated solvents | | |
| 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, one 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 FY00 through FY03 is detailed below.

In FY00, the installation obtained concurrence on RODs for Sites 15 and 42 and initiated annual groundwater monitoring at Site 1. The installation submitted a characterization report for Site 43 and feasibility studies for Sites 11, 12, 25, 26, 27, and 30 to regulators for concurrence, and completed site assessment reports (SARs) for UST Sites 14 and 23.

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 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.

FY04 IRP Progress

Pensacola NAS continued groundwater monitoring at SWMU 1, and completed RAPs for UST Sites 20 and 24. The IRA was completed.

Regulatory and weather related issues delayed the NFA ROD for Sites 02 [Operable Unit (OU) 03] and 40 (OU 15). The necessity for an IRA delayed the ROD with land use controls (LUCs) for Sites 8 and 24 (OU 13).

FY04 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 Sites 02 (OU 03) and 40 (OU 15) in FY05.
- Finalize the ROD with LUCs for Sites 8 and 24 (OU 13) in FY05.
- Initiate the remedial investigation at Sites 44, 45, and 46 in FY05.
- Implement the optimization fieldwork at Site 01 (OU 01) in FY05.

- Continue groundwater monitoring at SWMU 1 and implement clean-up at USTs 15 and 21 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | PA317002775600, PA317002219800, and PA317002241800 | Funding to Date: | \$ 20.4 million |
| Size: | 1,494 acres | Estimated Cost to Completion (Completion Year): | \$ 0.7 million(FY 2001) |
| 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 2001/None |
| HRS Score: | N/A | Five-Year Review Status: | Completed FY2004 |
| 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. In July 1991, it 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. The installation has also transferred 1,218 acres of property. The cleanup progress at Philadelphia Naval Complex for FY00 through FY03 is detailed below.

In FY00, the installation initiated long-term management (LTM) at Sites 4 and 5 and transferred 1,218 acres.

In FY01, the installation continued 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.

FY04 IRP Progress

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.

FY04 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

- Complete LTM at Sites 4 and 5 pending regulatory approval in FY05.
- Continue LTM at Sites 4 and 5 in the event that a decision to cease LTM is not completed with the regulators in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|----------------------------------|
| FFID: | NY257002477400 | Funding to Date: | \$ 55.7 million |
| Size: | 3,447 acres | Estimated Cost to Completion (Completion Year): | \$ 22.8 million(FY 2084) |
| Mission: | Former bomber and tanker aircraft operations | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2005 |
| HRS Score: | 30.34; placed on NPL in November 1989 | Five-Year Review Status: | Completed FY1999/Underway FY2004 |
| 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 (EIS) and a comprehensive land reuse plan were completed, and a community relations plan was drafted. In FY97, the BRAC cleanup plan and environmental baseline survey were updated. A 5-year review was completed in FY99.

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 14 sites to date. The cleanup progress at Plattsburgh AFB for FY00 through FY03 is detailed below.

In FY00, RODs were signed for three sites. An environmental assessment was performed as a supplement to the 1995 EIS to evaluate alternate land uses. A cold war resources survey and a programmatic agreement with the New York State Historic Preservation Office for the preservation and transfer of historic property were completed.

In FY01, RODs were signed for two sites. An evaluation of miscellaneous environmental factors was completed, and recommended actions for closeout were initiated. A draft cultural resources management plan, an interactive cultural resources Web site, and recordation of a historic cold war building were completed.

In FY02, the cultural resources management plan was completed, and the interactive cultural resources Web site and historic cold war buildings recordation data were submitted for approval. A no further action (NFA) ROD was finalized for one

site. Progress for these sites 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) to facilitate construction of the remedy. Construction of the final physical remedy for the FTA was initiated.

FY04 IRP Progress

Construction of the remedy for the former FTA was partially completed and brought into operation. The installation completed a preliminary assessment and site investigation (SI) at the former Weapons Storage Area. NFA was recommended and a document was completed. NFA decision documents were also completed for two other SI sites. The second 5-year review was initiated. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Performance and funding issues delayed the construction of the remaining FTA components. RODs at three sites were delayed due to State concerns.

The RAB conducted a tour of the remedial action construction.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified 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 at three sites in FY05.
- Complete construction of the remedy for the former FTA in FY05.
- Finalize RODs at two sites in FY06.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | |
|-------------------------|---|
| FFID: | ME117002201900 |
| Size: | 278 acres |
| Mission: | Maintain, repair, and overhaul nuclear submarines |
| HRS Score: | 67.70; placed on NPL in May 1994 |
| IAG Status: | Federal facility agreement signed in 1999 |
| Contaminants: | Heavy metals, PCBs, pesticides, VOCs |
| Media Affected: | Groundwater, surface water, sediment, soil |
| Funding to Date: | \$ 48.6 million |

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|--|---|
| Estimated Cost to Completion (Completion Year): | \$ 35.3 million(FY 2016) |
| IRP/MMRP Sites Final RIP/RC: | FY 2013/FY 2013 |
| Five-Year Review Status: | The installation has not completed a 5-year review. |



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 FY00 through FY03 is detailed below.

In FY00, the installation completed the ecological risk assessment. It also completed a site screening report for three sites. The installation completed supplemental remedial investigation (RI) reports for two sites and a risk assessment for operable unit (OU) 3 (Sites 8, 9, and 11). Portsmouth NSY completed two removal actions: one at Site 6 to stabilize the slope, and another at Site 9 for eight mercury burial vaults.

In FY01, the installation completed the feasibility study, the proposed plan, and the ROD for 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 RI work plan for Site 32. A site visit for the PA was performed.

FY04 IRP Progress

Portsmouth NSY completed the Phase I RI data package for Site 32 as well as the EE/CA for Site 30. The installation also started the Site 10 workplan 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. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation.

Plan of Action

Plan of action items for Portsmouth Naval Shipyard are grouped below according to program category.

IRP

- Complete the RA for OU 3 in FY05.
- Complete Site 10 fieldwork in FY05.
- Initiate OU 2 feasibility study in FY05.
- Continue interim offshore monitoring for OU 4 in FY05 and FY06.

MMRP

- Submit PA for MMRP in FY05

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|------------------------|--|--|---|
| FFID: | CO821382072500 | Funding to Date: | \$ 118.2 million |
| Size: | 23,121 acres | Estimated Cost to Completion (Completion Year): | \$ 74.6 million(FY 2042) |
| Mission: | Store chemical munitions, plan for future closure. | IRP/MMRP Sites Final RIP/RC: | FY 2012/FY 2013 |
| 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, SVOCs, pesticides, explosives, PCBs, UXO | | |
| Media Affected: | Groundwater and soil | | |



Progress To Date

In December 1988, the BRAC Commission recommended realignment of the Pueblo Depot Activity, primarily because of chemical demilitarization. In October 1996, the Army placed Pueblo Depot Activity under the Chemical and Biological Defense Command and changed its name to Pueblo Chemical Depot. Contaminated sites include a landfill, open burning and detonation grounds, an ordnance and explosives waste area, 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 (LRA), 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 FY00 through FY03 is detailed below.

In FY00, the Army approved a work plan to implement the CM1 Hot Spot [Solid Waste Management Unit 58 (SWMU 58)] corrective measure and a sheet pile barrier along with the installation of extraction wells. The installation submitted the RCRA facility investigation work plan for Mercury Storage Building 543 (SWMU 56) to the state. The LRA updated the reuse development plan to reflect current and future reuse and cleanup requirements.

In FY01, the Army completed design and construction of an explosives/nitrate groundwater treatment system for 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 depot-wide 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, but uncertainties regarding UXO clearance requirements and chemical demilitarization restrictions prevented further progress. 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 designated 14 sites at the installation as Military Munitions Response Program (MMRP) sites as a result of the CTT Range Site Inventory Program and approved three other sites for NFA for UXO clearance.

FY04 IRP Progress

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

Regulatory issues delayed state approval for NFA for SWMUs 22, 24, and 44.

The installation partnered with state regulators to significantly reduce annual sitewide groundwater monitoring costs.

FY04 MMRP Progress

The installation coordinated with the state to review the UXO management plan.

Plan of Action

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

IRP

- Complete in situ groundwater treatment pilot studies at SWMUs 28, 36, and 58 in FY05.
- Complete the corrective measures study for all four South Central Terrace Area SWMUs, based on the resolution of covenant issues, in FY05.
- Complete four in situ pilot studies for the SWMU 17 groundwater plume in FY05.
- Receive state NFA approval on three additional sites, based on the resolution of covenant issues, in FY05.

MMRP

- Complete the conceptual model for SWMU 34 in FY05-FY06.

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 only, IAG 1998

Contaminants: Heavy metals, VOCs, POLs, grit, paint, solvents, construction debris, acids, silver nitrate, ordnance compounds land items
Media Affected: Groundwater, surface water, sediment, soil
Funding to Date: \$ 164.1 million
Estimated Cost to Completion (Completion Year): \$ 71.9 million(FY 2031)
IRP/MMRP Sites Final RIP/RC: FY 2015/FY 2013
Five-Year Review Status: Completed FY2002



Progress To Date

Most of the Bremerton Naval Complex (BNC), which includes the Puget Sound Naval Shipyard, is built on contaminated fill material. Metals and petroleum/oil/lubricants (POLs) are the primary contaminants. The main sources of contamination are past operations, such as cleaning and demilitarization of ordnance, and ship construction, maintenance, and demolition. An initial assessment study (IAS) identified six potentially contaminated sites at BNC. The BNC supplemental preliminary assessment identified five other potentially contaminated sites. An IAS for the Jackson Park Housing Complex (JPHC) identified eight sites. JPHC and BNC formed technical review committees in FY91 and FY92, respectively. Both were converted to Restoration Advisory Boards in FY94. The installations were placed on the NPL in May 1994. An interagency agreement (IAG) was signed for BNC in 1998, and another is being negotiated for JPHC. In FY02, BNC completed 5-year reviews for all sites.

To date, 37 sites have been identified at these installations. BNC completed Records of Decision (RODs) for Operable Unit A (OU A), OU B Marine, OU B Terrestrial and OU Naval Supply Center (NSC). JPHC completed a ROD for OU 1. The cleanup progress at BNC and JPHC for FY00 through FY03 is detailed below.

In FY00, BNC completed the proposed plan (PP), ROD, and remedial design (RD) for the remedial action (RA) at OU B Marine and began the removal and containment of contaminated marine sediment. The installation completed the ROD and RD for JPHC OU 1 and began the RA. The benzene investigation at JPHC Site 110 was completed. JPHC began a removal action for underwater ordnance at OU 3.

In FY01, the BNC OU B Terrestrial remedial investigation (RI) was completed and the feasibility study (FS) continued. The JPHC continued the 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 PP for OU B Terrestrial. It also initiated the OU B Terrestrial ROD negotiations and the RD. The facility wide petroleum management plan was completed. The facility completed the draft 5-year review report. The JPHC completed the RA for OU 1. The Navy completed an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

In FY03, Engineering Field Activities Northwest (EFANW) completed negotiations with regulatory and resources agencies regarding the OU B Marine RA-O monitoring plan and initiated biological and sediment monitoring. EFANW also negotiated the OU B Marine response action characterization requirements and completed characterization of impacted sediment. In addition, it completed the remedy selection and draft final ROD for OU B Terrestrial. EFANW also completed RD for the OU B Terrestrial remedial construction components of the remedy and initiated removal actions under removal action authority. Additionally, EFANW initiated the long-term monitoring plan for OU B Terrestrial and a focused RI/FS and capping removal action for OU D. EFANW continued monitoring and remedy inspection at OU A, OU NSC and OU C, and initiated remedy maintenance at OU A. At JBHC, the ROD requiring long-term monitoring at OU 1 continued. EFANW submitted to regulators the OU 2 draft no further action PP. EFANW completed the OU 3 Marine preliminary assessment and site investigation. Development of data quality objectives and research for underwater investigative technology for the OU 3 Marine RI continued. EFANW initiated the OU 3 Terrestrial RI and completed approximately 30 percent of the Phase I field work.

FY04 IRP Progress

EFANW completed the OU D focused RI/FS and a capping removal action. EFANW completed the OU B Terrestrial ROD and construction of the pavement cap and shoreline stabilization remedy components. EFANW finalized the OU B Terrestrial monitoring plan and well installation. EFANW issued an explanation of significant differences and completed the response action at OU B Marine. EFANW conducted ROD required monitoring for BNC OU A, OU B Marine, OU C, OU NSC and JPHC OU 1. EFANW continued discussions with the regulators regarding the JPHC OU 2 PP.

FY04 MMRP Progress

EFANW completed field work for Phase I of the OU 3 Terrestrial RI. EFANW also complete side scan sonar and bathymetric survey for JPHC OU 3 Marine.

Plan of Action

Plan of action items for Puget Sound Naval Shipyard are grouped below according to program category.

IRP

- Complete OU B Terrestrial remedial construction in FY05.
- Complete OU D ROD in FY05.
- Complete OU B Marine RA-O sampling in FY05.
- Complete OU D RD in FY06.

MMRP

- Complete JPHC OU 3 Terrestrial Phase II RI field work in FY05.
- Complete JPHC OU 3 Terrestrial RI report in FY06.

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|------------------------|--|--|---|
| FFID: | TX621382073800 | Funding to Date: | \$ 34.5 million |
| Size: | 19,113 acres | Estimated Cost to Completion (Completion Year): | \$ 52.5 million(FY 2017) |
| Mission: | Provide maintenance for light combat vehicles, support rubber production, store ammunition, and conduct training | IRP/MMRP Sites Final RIP/RC: | FY 2009/FY 2017 |
| 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 Local Redevelopment Authority (RRLRA). In FY96, the installation formed a Restoration Advisory Board (RAB) 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.

Over the years, 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 RRLRA. The cleanup progress at Red River Army Depot for FY00 through FY03 is detailed below.

In FY00, the installation worked with the Waterways Experiment Station to prepare a groundwater model of the WIA area to support cleanup decisions. The installation completed all CERFA-uncontaminated acreage determinations with regulatory approval. The installation also provided a training session for the RAB on bioremediation and wetlands.

In FY01, the Army updated the BCP and transferred acreage to the RRLRA. 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.

FY04 IRP Progress

The installation completed a pilot study to determine the treatability of TCE in the groundwater, which determined that treatment of DNAPL is not feasible using the current 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 anticipates 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 installation water treatment plant.

FY04 MMRP Progress

The Army has identified no MMRP sites on the BRAC portion of this installation.

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 and the X-1 Sewer Treatment Plant in FY05-FY06.
- Complete and implement the response action plan for the WIA and the X-1 Sewer Treatment Plant in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | AL421382074200 | Funding to Date: | \$ 122.2 million |
| Size: | 38,300 acres | Estimated Cost to Completion (Completion Year): | \$ 280.7 million(FY 2039) |
| 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: | The installation has not completed a 5-year review. |
| 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, which is the responsibility of NASA. The installation completed six interim Records of Decisions (RODs) and three final RODs, including one in FY04. Cleanup progress at RSA for FY00 through FY03 is detailed below.

In FY00, the installation began operating the remediation system at the former RSA rocket Engine Facility North Plant, and completed 14 site investigations, 7 remedial investigations (RIs), 4 decision documents, and 4 proposed plans (PPs). The installation also continued to participate in the Alabama Partnering Initiative.

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 5 (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 twenty-two Military Munitions Response Program (MMRP) sites.

In FY03, the installation prepared RI/feasibility study (FS) reports for two sites and a draft PP 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 the 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.

FY04 IRP Progress

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

Funding and technical issues delayed completion of the nine remaining planned RI/FSs reports.

FY04 MMRP Progress

The Army determined that the active/inactive range inventory and CTT inventory for RSA was incorrect and is in the process of updating them with correct information.

Plan of Action

Plan of action items for Redstone Arsenal are grouped below according to program category.

IRP

- Complete the RI/FS reports for RSA-011, -057, -087, and -098 in FY05.
- Complete federal facilities agreement negotiations in FY05.
- Complete the preliminary site assessment report of findings for RSA-145, -146, -147, and -149 in FY05.

MMRP

- Correct the active/inactive and the CTT range inventories in FY05-FY06.
- Initiate the SI in FY06.

| | | | |
|------------------------|---|--|--------------------------|
| FFID: | TX657152409100 | Funding to Date: | \$ 99.8 million |
| Size: | 2,987 acres | Estimated Cost to Completion (Completion Year): | \$ 30.6 million(FY 2034) |
| Mission: | Conducted pilot training | IRP/MMRP Sites Final RIP/RC: | FY 1999/FY 2005 |
| HRS Score: | N/A | Five-Year Review Status: | Planned FY2006 |
| 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 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 FY00 through FY03 is detailed below.

In FY00, work toward an operating properly and successfully (OP&S) determination continued with the installation of four more wells on the property. Two findings of suitability to transfer (FOSTs) were completed for a total of 735 acres.

In FY01, the installation transferred 1,800 acres of property to the Lubbock Reese Reuse Authority. The BCT developed the criteria for documenting an OP&S determination for a corrective action system. The BCT reviewed and approved the FOST for the transfer of the Airfields and Hurlwood Area. Data collection for OP&S determinations at three sites requiring long-term corrective action was completed, and report preparation began. Data collection continued to support the OP&S determination for the fourth site that requires long-term corrective action. Groundwater treatment and monitoring also continued.

In FY02, the installation installed four additional corrective action wells in the Tower Area plume. Operation of the groundwater treatment system continued, as did long-term groundwater monitoring. A request for funding was initiated to expand the system due to possible contaminant expansion.

In FY03, the installation transferred 70 acres.

FY04 IRP Progress

The installation transferred 144 acres and obtained EPA approval of OP&S for two of three sites. The installation also completed the installation of additional monitoring wells and corrective action wells for the Tower Area plume. Groundwater data are currently being collected to support the OP&S determination for the Tower Area. A guaranteed fixed price remediation (GFPR) with insurance contract was issued to complete cleanup at Reese. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

The 5-year review was postponed to FY06 as part of the GFPR contract strategy. The Tower Area OP&S approval was delayed due to technical issues. Regulatory issues delayed the OP&S determination and property transfer.

FY04 MMRP Progress

The Air Force conducted an inventory of Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Obtain OP&S for third site in FY05.
- Conduct GFPR contracting strategy pilot studies to test possible enhancement of remedies in Tower Area and Southwest Landfill plume in FY05.
- Continue to transfer property in FY05.
- Conduct 5-year review in FY06.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | |
|-------------------------|---|
| 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: | \$ 10.6 million |

| | |
|--|---|
| Estimated Cost to Completion (Completion Year): | \$ 5.0 million(FY 2028) |
| IRP/MMRP Sites Final RIP/RC: | FY 2004/None |
| Five-Year Review Status: | The installation has not completed a 5-year review. |



Progress To Date

Environmental studies at this installation began in FY82. In July 1991, the BRAC Commission recommended closure of Richards-Gebaur Air Reserve Station (ARS), transfer of the 442nd Tactical Fighter Wing to Whiteman Air Force Base (AFB), and transfer of the 36th Aeromedical Evacuation Squadron and the 77th and 78th Aerial Port Squadrons to Peterson AFB. 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 February 1994, but initiated procedures to adjourn the RAB in FY03.

The basewide evaluation and consolidation study, completed in FY99, identified 23 sites. Of the 23 sites, three sites required no further response action planned (NFRAP) decision documents, 16 sites required remedial investigations (RIs), and the remaining four sites, as well as six subsequently identified sites, required closure under Missouri RCRA-C UST regulations. The installation completed Records of Decision (RODs) for Operable Unit (OU) 1 and OU 2 in FY04. The NFRAP for Site ST-007 was also completed. The cleanup progress at Richards-Gebaur ARS for FY00 through FY03 is detailed below.

In FY00, the installation's RI fieldwork was completed. A feasibility study (FS) was initiated to address contaminated groundwater. Closure approval was received for eight UST sites, and closure reports for the industrial waste line and the fuel hydrant line were initiated. Investigation fieldwork was completed for all remaining compliance sites referenced in the EBS, and remedial action (RA) to remove contaminated soil from sites identified in that investigation was initiated. RI results for the 15 sites slated for closure indicated that six sites could be closed. No further action reports were initiated.

In FY01, the installation submitted an RI report and received regulator 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 initiated. A finding of suitability to transfer (FOST) was

completed, and all qualified property was deeded as environmental actions were completed.

In FY02, a supplemental RI report for two new sites found as a result of the EBS investigation was submitted for regulatory approval. An EE/CA was approved and RAs were completed to address contaminated soil sites. An inspection report and an RA for EBS sites were completed. A FOST for Parcels K and L, and a draft 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 installation completed the draft ROD for OU 1 and OU 2 and submitted the ROD 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. The installation also completed NFRAP documents for Sites Area of Concern-001 (AOC-001), AOC-002, OT-010, and ST-007, which achieved residential soil remediation goals. The NFRAPs for Sites AOC-001, AOC-002, and OT-010 were signed. The installation completed a PP and presented it to the community. No Military Munitions Restoration Program (MMRP) sites were identified or reported.

FY04 IRP Progress

The installation completed and signed RODs for OU 1 and OU 2. The installation completed and signed the NFRAP for Site ST-007. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the long-term management and the land use control (LUC) management plans, the FOST, and the transfer of all remaining property.

The RAB adjourned after the RAB members unanimously agreed that their mission had been completed.

FY04 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

- Complete remaining property transfers in FY05.
- Complete LUC and groundwater monitoring plan in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | OH557002454400 | Funding to Date: | \$ 25.0 million |
| Size: | 2,076 acres | Estimated Cost to Completion (Completion Year): | \$ 3.7 million(FY 2031) |
| 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: | Planned FY2005 |
| 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 recommended for listing on the NPL because of the potential effects of contamination on underlying groundwater. 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. No further RA planned documents were signed for 16 Installation Restoration Program (IRP) sites and three areas of concern (AOCs). Seven other IRP sites were closed with regulatory concurrence.

To date, a Record of Decision has been signed. The Air Force has transferred approximately 310 acres to the local reuse authority (LRA). The cleanup progress at Rickenbacker ANG Base for FY00 through FY03 is detailed below.

In FY00, RA plans and RA construction were completed for five IRP sites, and monitored natural attenuation (MNA) began. Three IRP sites were closed. The ANG accepted responsibility for six IRP sites and one AOC. Petroleum-contaminated soil was removed at Facility 544, Pumphouses 898 and 899, and Segment G of the 1942 fuel line. Groundwater treatment systems were installed at Pumphouse 899 and Segment G of the 1942 fuel line. Response complete status was achieved for IRP Site 45.

In FY01, the final scientific management decision point paper was published and the decision document was signed for IRP Sites 25 and 27. The Site 1 conditional regulatory approval of soil cleanup levels and groundwater treatment was obtained and soil removal and groundwater treatment were completed. RA operation (RA-O) groundwater treatment at two petroleum-contaminated sites and RA-O MNA at five IRP sites were conducted. Additional soil was removed at Site 42.

In FY02, the amended Site 1 closure and post closure plan was approved. The draft of the final land use control (LUC) and institutional control (IC) layering strategy plan was updated per recent guidance, 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. No Military Munitions Response Program (MMRP) sites were identified or reported.

FY04 IRP Progress

The installation completed the 2-year report for IRP Sites 2, 21, 41, 42, and 43, 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 substituted 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 began. The Air Force Real Property Agency closed the Rickenbacker ANG operating location. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the operating properly and successfully (OP&S) documents and transfer of IRP Sites 2, 21, 42, 43, and the 47-acre parcel to the LRA.

FY04 MMRP Progress

The Air Force 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

- Complete OP&S documents and obtain approval letter for IRP Sites 2, 21, 42, and 43 in FY05.
- Complete transfer of Parcels D3.A , D3.E, and D3.K to the LRA, transfer 2.65 acres

comprising Parcels B1 and D3.E, Sites 25 and 43, and adjacent land to the Army Guard, and close Site 43 in FY05.

- Complete the first 5-year review in FY05.
- Implement RPO recommendations in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|--|--|--------------------------|
| FFID: | CA921382075900 | Estimated Cost to Completion (Completion Year): | \$ 5.1 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 FY2001/Planned |
| 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: | \$ 53.7 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 1990. EPA and the Army signed an interagency agreement in 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 (RA) 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 FY00 through FY03 is detailed below.

In FY00, the installation closed out the RAs. Further optimization of the groundwater treatment system (GWTS) with innovative technologies eliminated 50 percent of the operating cost, or \$600,000. The installation also developed and implemented a computer-based system to transfer all documents to compact disc.

In FY01, the State of California approved the discharge of higher nitrates levels. The installation continued 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 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).

FY04 IRP Progress

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

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Initiate optimization efforts for the extraction scenario from off-site wells in FY05.
- Complete the in situ chromium treatment pilot test in the primary source area in FY05.
- Initiate field-testing of the in situ cyanide destruction technology in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---------------------------|
| FFID: | GA457172433000 | Funding to Date: | \$ 151.0 million |
| Size: | 8,855 acres | Estimated Cost to Completion (Completion Year): | \$ 129.2 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 were completed in FY04. The cleanup progress at Robins AFB for FY00 through FY03 is detailed below.

In FY00, the installation completed the site inspection for SS40. It also completed RCRA facility investigations (RFIs) for Landfill 001 (LF001), LF002, OT020, OT022, OT023, OT038, OT041, and SS039; a corrective action plan (CAP) for SS039; and remedial action (RA) construction for LF003 and OT017. The installation continued final RA operations at SS010 and OT029. RFIs for DC034, SS035, and SS036 also continued, as did CAPs for LF001, LF002, OT023, OT037, OT038, OT041, SS035, SS036, SS040, and SS042. The installation closed FT005, FT007, FT008, and ST033. The interim measure at LF004 and OT020 and basewide groundwater sampling continued. The proposed plan (PP) for OU 1 and OU 3 was completed.

In FY01, the CAPs for LF001, LF002, and SS035 were completed. The RA was installed for OT038 and SS039, and final approval was obtained for site closure of SS009.

In FY02, the installation completed CAPs for Sites OT020, OT023, OT037, OT041, and closure for Sites OT022, SS035, SS036, OT038, and SS010. RAs were installed for Sites OT037 and OT041. A feasibility study for OU 2 at LF004 was completed. Based on negotiations with the regulators, no RA was required for Site SS036, and the site was closed. The study phases were completed for Sites LF004, OT020, OT023, OT037, OT041, and SS036. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified

at this installation.

In FY03, the installation completed the PP and remedial design for OU 2 at LF004; however, a ROD was not necessary since the remediation will be completed under RCRA. The installation completed the CAP for SS040 and installed RAs for OT020 and SS040. A 5-year performance-based contract was awarded to perform the CAP for DC34 and remediate the site until no further action is necessary. Operations and maintenance (O&M) activities continued at 12 environmental restoration sites. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

The installation completed the RA for OT023 and began the RA for OU 2 at LF004. The installation also completed the ROD for OU 1 and OU 3 at LF004. In addition, Robins AFB began the installation of the RA at DC034. The draft CAP for DC034 was prepared and submitted for regulatory review. The installation completed RAs at OT029 and SS042 and the sites achieved response complete (RC) status. Area of Concern 15 and RW015 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.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

Plan of Action

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

IRP

- Complete RA for OU 2 in FY05.
- Complete CAP and installation of RA for DC034 in FY05.

- Obtain site closure for SS042 in FY05.
- Perform O&M activities at nine sites in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---------------------------|
| FFID: | CO821382076900 | Funding to Date: | \$ 1,340.8 million |
| Size: | 17,228 acres | Estimated Cost to Completion (Completion Year): | \$ 581.6 million(FY 2033) |
| Mission: | Manufactured and stored chemical munitions | IRP/MMRP Sites Final RIP/RC: | FY 2012/None |
| HRS Score: | 58.15; placed on NPL in July 1987 | Five-Year Review Status: | Completed FY2001/ Planned |
| IAG Status: | IAG and federal facility agreement signed in 1989 | | |
| 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 1980s. Contaminated sites included liquid waste in unlined and lined lagoons and basins, open burning and detonation areas, and landfills that received both liquid and solid wastes. Primary contaminants of concern are compounds used for chemical weapons material 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 1987, the 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 report covering both OUs was completed in FY01. In FY03, EPA delisted 957 acres from the NPL.

Environmental studies have identified 209 sites 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. The Army has installed five groundwater extraction and treatment systems on-post and one off-post. The cleanup progress at RMA for FY00 through FY03 is detailed below.

In FY00, the Army completed the remedial action (RA) for the post-ROD removal actions for structures. The Army also completed RAs for four Phase I projects and the confined flow system well closure project. RDs were also completed for the four remaining Phase I projects, one Phase II project, and one Phase III project. The Army completed treatability studies for two Phase II projects.

In FY01, the Army completed RAs for two Phase I projects. RDs for three Phase II projects and one Phase III project were

also completed. As part of RA activities for one of the Phase I projects, 10 M139 bomblets containing the chemical agent Sarin (GB) were discovered. The Army destroyed the bomblets using the Explosive Destruction System. The Army completed the first CERCLA 5-year review report, which covered both OUs.

In FY02, the installation completed the RD of the last disposal facility (landfill) and one Phase III project. The Army awarded RA contracts for one Phase II and one Phase III project. The RAs for one Phase I project and two Phase II projects were completed. The Army continued implementation of all installationwide programs and the operation and maintenance of groundwater treatment systems. The notice of intent to delist approximately 940 acres from the NPL was published in the Federal Register by the EPA. 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 one Phase III project and one Phase IV project. The installation completed the RA for one Phase I project and three Phase III projects. The Army awarded RA contracts for two Phase I projects, one Phase II project, three Phase III projects and one Phase IV project. The Army continued to implement installationwide programs and operate groundwater treatment systems. Of the 957 acres actually deleted from the NPL, 929 were transferred to the General Services Administration 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 three closed military ranges totaling 459 acres. None of the sites were found to be eligible for the Military Munitions Response Program (MMRP).

FY04 IRP Progress

The Army began construction of the South Plants cover and the Enhanced Hazardous Waste Landfill (HWL). 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. The installation completed one Phase I RA (Existing Sanitary Landfill Remediation) and one Phase II RA

(Hex Pit Soil Remediation). The General Services Administration completed the sale of the Western Tier Parcel. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed one Phase I RA, one Phase II, and one Phase III RA.

FY04 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 RD for two Phase III projects (the Shell Disposal Trenches remediation cover and the North Plants soil remediation) in FY05.
- Award RA for one Phase III project (Shell Disposal Trenches remediation) and one Phase IV project (Basin F Wastepile remediation) in FY05.
- Complete RA for one Phase I project (Munitions Testing soil remediation) in FY05.
- Begin the RD for two Phase IV projects (former Basin F Principal Threat soil remediation and Section 36 Lime Basins soil remediation) in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---------------------------|
| FFID: | CA921382078000 | Funding to Date: | \$ 62.5 million |
| Size: | 485 acres | Estimated Cost to Completion (Completion Year): | \$ 7.2 million(FY 2012) |
| 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 FY2001/ Planned |
| IAG Status: | IAG signed in 1988 | | |
| 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 1988, 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 (RAB) in FY94. The Army closed the installation in March 1995. The installation completed a 5-year review in FY01.

To date, all but 49 acres have 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 FY00 through FY03 is detailed below.

In FY00, the installation submitted the finding of suitability to transfer (FOST), BRAC disposal support package, and covenant package for the final parcel to the regulators. The Army discontinued treatment of discharged groundwater at both the groundwater treatment plant and Parking Lot 3 due to diminished levels of trichloroethylene (TCE) contamination. The transfer of the first of the final three parcels was completed. The City of Sacramento received 16.9 acres in the transfer.

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 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.

FY04 IRP Progress

The installation completed the fate-and-transport phase of groundwater modeling. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed completion of the groundwater treatment plant optimization evaluation. The Army approved the FOST for Parcel 2B; however, the deed negotiations went past the end of the fiscal year, delaying the transfer of this property to FY05.

FY04 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 the Parcel 2B transfer in FY05.
- Finalize the optimization evaluation of the groundwater treatment system in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| 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 on December 15, 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 mid-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 FY00 through FY03 is detailed below.

In FY00, USACE completed the investigation of the upper portion of Parcel 1 of the former engineering depot.

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.

FY04 IRP Progress

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.

FY04 MMRP Progress

USACE has identified no Military Munitions Response Program (MMRP) work at this property.

Plan of Action

Plan of action items for San Bernardino Engineering Depot are grouped below according to program category.

IRP

- Issue consent decree in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | CA917002320200 | Funding to Date: | \$ 34.8 million |
| Size: | 541 acres | Estimated Cost to Completion (Completion Year): | \$ 1.7 million(FY 2007) |
| Mission: | Provided recruit training for enlisted personnel and specialized training for officers and enlisted personnel | IRP/MMRP Sites Final RIP/RC: | FY 2005/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: five sites are being addressed under CERCLA; seven 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 FY00 through FY03 is detailed below.

In FY00, the installation completed its asbestos removal efforts and the engineering evaluation and cost analysis for the Site 1 landfill. A business plan was completed.

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 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. No MMRP sites were identified at this installation.

In FY03, the installation initiated a preliminary assessment for Site 101.

FY04 IRP Progress

The installation completed the RI for the Boat Channel (Site 12). 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.

FY04 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 an early transfer with the City of San Diego in FY05.
- Conduct an RI addendum and a finding of suitability for early transfer for Site 12 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | IL59799F221600 | Funding to Date: | \$ 1.5 million |
| Size: | 43,000 acres | Estimated Cost to Completion (Completion Year): | \$ 13.4 million(FY 2043) |
| Mission: | Manufacture and load ordnance for shipping | IRP/MMRP Sites Final RIP/RC: | FY 2022/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. These areas were grouped 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 1987. The Army and EPA signed an interagency agreement in 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 at the EMMA OU began in FY98 and was completed in FY01, concluding all Military Munitions Response Program (MMRP) work. The USFWS established a technical working group (TWG) in FY00. 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 FY00 through FY03 is detailed below.

In FY00, USFWS established a TWG consisting of USFWS, EPA, Illinois Environmental Protection Agency (IEPA), and USACE to continue working together on Crab Orchard.

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 monitoring. USACE 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.

FY04 IRP Progress

USACE continued long-term management by performing two rounds of ground water monitoring in the EMMA OU and reported the results to EPA, IEPA, and USFWS. USACE also reviewed the draft propertywide USFWS LUC plan. In addition, the former Illinois Ordnance Plant developed an electronic administration record file for the EMMA OU and provided electronic copies to EPA, IEPA, and USFWS.

Manpower constraints delayed the inventory project report (INPR) revision for a potentially responsible party (PRP) project.

The TWG continued to hold meetings about PRP sites.

FY04 MMRP Progress

No MMRP work was performed at this property in FY04.

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 long-term management at the EMMA OU in FY05.
- Provide input and review comments on the LUC Plan to USFWS in FY05.
- Continue participation in TWG meetings in FY05.
- Complete the PRP INPR revision in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | IL521382080300 | Funding to Date: | \$ 96.0 million |
| Size: | 13,062 acres | Estimated Cost to Completion (Completion Year): | \$ 100.8 million(FY 2036) |
| Mission: | Receive, store, and demilitarize ammunition; manufacture ammunition-specific equipment | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2014 |
| 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 1989 | | |
| Contaminants: | Explosives, metals, solvents, POLs, VOCs | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

The installation began operation in 1917 as the Savanna Proving Grounds. During the 1920s, the mission changed to include storage, receipt, issuance, demilitarization, and renovation of ammunition. 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), and in FY97, the installation completed a BRAC cleanup plan.

To date, one Record of Decision has been signed and the installation has transferred approximately 3,600 acres of land. The cleanup progress at Savanna Army Depot for FY00 through FY03 is detailed below.

In FY00, the installation completed fieldwork at the open burning grounds (OBG). The Army formed a Strategic Management, Analysis, Requirements, and Technology (SMART) team at Savanna to address ordnance and explosives hazards at the installation. The team comprises senior-level officials from the Army, EPA, Illinois Environmental Protection Agency, and the U.S. Fish and Wildlife Service (USFWS). The SMART team worked successfully to resolve unexploded ordnance (UXO) issues, including redefining the 1917-1918 range fire fans as being nearly 50 percent smaller in acreage than previously documented in the archive search report. This will open the way for public access to the installation's backwaters and expedite the transfer of property to the USFWS. With agreement on smaller fans, the installation installed a buoy/barrier system in the backwaters of the Mississippi River and on open parts of Army owned land. The public can now use it for boating and fishing.

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 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 planned three 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 Old Burning Grounds (Sites 13 and 14) ERA and submitted it for review. The Army initiated an inventory of closed, transferred, and transferring ranges and sites with UXO, 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 USFWS and 221 acres to the local redevelopment authority (LRA). Both transfers were preceded by completion of memoranda 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.

FY04 IRP Progress

The installation completed Phase I of the MEC investigations on the Small Arms area behind Buildings 134/140, the Zone F area, the River Road strip, the Primm's Pond area, and the 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 cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Weather delayed work on the OBG kick-out area.

The installation continued partnering with the Savanna BCT, the SMART Team, and the RAB to expedite cleanup and land transfers.

FY04 MMRP Progress

Weather delayed the completion of the Zone L Phase III project.

Plan of Action

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

IRP

- Complete RI reports for three major areas of the Depot in FY05.
- Award performance based contract for 11 sites in FY05.
- Complete the RD and initiate the removal of explosives contaminated buildings in the Washout and Plant area in FY05.
- Complete FOSTs/ECOPs for transfer of 200 acres in FY05.

MMRP

- Complete Phase III of Zone L project in FY05.
- Complete MEC investigation of the Old Burning Grounds and include data in the RI/feasibility study report in FY05.
- Complete Phase II MEC follow-on investigation of Zone F, the River Road Strip, Primm's Pond area and the E-area in FY05.
- Complete MEC investigation of the A-Area Detonation Area, the 155mm High Explosive Proof Range, and the Grenade Burial Area in FY05.

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|------------------------|---|--|---|
| FFID: | NY221382083000 | Funding to Date: | \$ 84.3 million |
| Size: | 10,594 acres | Estimated Cost to Completion (Completion Year): | \$ 70.7 million(FY 2031) |
| Mission: | Received, stored, distributed, maintained, and demilitarized conventional ammunition, explosives, and special weapons | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2013 |
| HRS Score: | 37.30; placed on NPL in August 1990 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| 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. 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 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, eight required removal actions, and 28 required remedial investigations and feasibility studies (RI/FSs). The 28 sites requiring RI/FSs were divided into 13 groups. In FY03, the Army identified 18 Military Munitions Response Program (MMRP) sites at this location, but by the end of FY03 13 achieved response complete (RC) status. 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.

To date, the Army has signed four Records of Decision (RODs) and transferred approximately 7,000 acres. The cleanup progress at Seneca for FY00 through FY03 is detailed below.

In FY00, the installation closed as scheduled. The Army transferred the prison site and the north depot properties. A treatability study for an iron filing reactive wall demonstrated that the method was successful as an in situ treatment. The installation completed the unexploded ordnance (UXO) engineering evaluation and cost analysis project on the upland portions of the installation.

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 UXO, discarded military munitions, or munitions constituents. Eighteen MMRP sites were identified at this location, but by the end of FY03 13 had already reached RC. 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.

FY04 IRP Progress

The Army signed two RODs with land use controls (LUCs). The installation completed three IRAs and continued work on additional IRAs. The installation investigated six operable units (OUs) and removed 13 USTs. The Army transferred 30 acres to the LRA. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed the termination of the Nuclear Regulatory Commission (NRC) license for the storage of depleted uranium rounds.

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.

FY04 MMRP Progress

The installation initiated site investigations (SIs) at three MMRP sites using geophysical equipment to locate all potential munitions and explosives of concern.

Plan of Action

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

IRP

- Continue to pursue completion of two RODs with LUCs in FY05.
- Complete IRAs at three sites in FY05.
- Transfer clean parcels in FY05.
- Continue termination requirements of the NRC to terminate the license for the storage of depleted uranium rounds in FY05.

MMRP

- Complete SI on three MMRP sites in FY05.
- Complete ROD for OU with both MMRP and CERCLA hazardous substances in FY05.
- Initiate remedial action for OU with both MMRP and CERCLA hazardous substances in FY06.

| | | | |
|----------------------|---|--|--------------------------|
| FFID: | CA921382084300 | Media Affected: | Groundwater and soil |
| Size: | 96,930 acres | Funding to Date: | \$ 76.8 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): | \$ 89.0 million(FY 2017) |
| HRS Score: | N/A | IRP/MMRP Sites Final RIP/RC: | FY 2008/FY 2017 |
| IAG Status: | Two-party federal facility agreement signed in May 1991 | Five-Year Review Status: | Completed FY2002/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 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.

Environmental studies identified 46 sites at this installation. Records of Decision address 17 sites. 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 Army has transferred approximately 62,500 acres to date. The cleanup progress at Sierra Army Depot for FY00 through FY03 is detailed below.

In FY00, the Army initiated installation and operation of the groundwater remediation system.

In FY01, the installation initiated the 5-year review of monitored natural attenuation (MNA) at the TNT area. It also 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 bioventing at SIAD-011 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 contract. This contract addresses 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 five BRAC Military Munitions Response Program (MMRP) sites and 11 active MMRP sites at Sierra. The RAB met three times to review the findings of suitability to transfer for the Herlong Parcel, the OE 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.

FY04 IRP Progress

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. The Army transferred the Susanville Road and the Cross Depot Access parcels. The installation drafted the EE/CA for the Honey Lake Demolition Area.

Technical issues delayed completion of the response action on the remaining 136 acres of East Shore, Airfield, and north Cross Depot Access parcels. This delay prevented the 136 acres from being transferred.

FY04 MMRP Progress

The Army initiated the SI in FY04.

Plan of Action

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

IRP

- Complete the Honey Lake Demolition Area EE/CA in FY05.
- Complete the response action on East Shore area and transfer the remaining 136 acres in FY05.

MMRP

- Complete the SI in FY06.

| | | | |
|----------------------|--|--|---|
| FFID: | MA117002202200 | Media Affected: | Groundwater, surface water, sediment, soil |
| Size: | 2,094 acres | Funding to Date: | \$ 39.5 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): | \$ 60.5 million(FY 2025) |
| 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 storage area, a tank farm where jet fuel is stored, a rubble disposal area, and a fire training area. The installation was placed on the NPL in May 1994. 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. The installation signed a federal facility agreement (FFA) in April 2000.

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 FY00 through FY03 is detailed below.

In FY00, the installation completed the FFA and a site management plan. It also conducted a remedial action (RA) for UST 1. South Weymouth NAS completed two draft remedial investigation (RI) Phase II reports and reviewed all IRP sites as candidates for presumptive remedies and innovative and improved technologies. Interim RAs for two IRP sites were initiated.

In FY01, the installation completed 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 include CERCLA waste in both the soil and the groundwater. Work was underway 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 basewide report work. The Navy completed an inventory of all MMRP sites. Preliminary assessments were completed and no further action is planned.

FY04 IRP Progress

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.

The covenant deferral request (CDR) and environmental services cooperative agreement (ESCA) were delayed, pending a revised reuse plan from the local redevelopment authority.

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

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete the Site 2 RA and initiate the long-term management in FY05-FY06.
- Complete the Site 5 PP and ROD in FY05-FY06.

- Complete the Site 7 FS in FY05-FY06.
- Initiate Sites 10 and 11 RI field programs in FY05-FY06.
- Re-initiate the CDR and ESCA in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | VA317002758100 | Funding to Date: | \$ 8.5 million |
| Size: | 490 acres | Estimated Cost to Completion (Completion Year): | \$ 20.1 million(FY 2016) |
| 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 2007/None |
| HRS Score: | 50.0; placed on NPL in August 2000 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Pesticides, heavy metals, explosives, SVOCs, solvents | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |



Progress To Date

Historically, this facility 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 and the facility was placed on the NPL in August 2000. The installation formed a Restoration Advisory Board (RAB) in FY00 and completed a community relations plan (CRP) in FY01. The navy completed a federal facilities agreement (FFA) in FY04.

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 FY00 through FY03 is detailed below.

In FY00, the installation developed work plans and conducted remedial investigation (RI) fieldwork for Sites 2 through 6. A background study began for soil. A site management plan and master project plans were completed. A RAB was also formed. The RAB participated in ecological and human health risk assessment (HHRA) training and site tours. Partnering training was initiated and a facilitator was assigned to the regulatory partnership team, which consists of the Navy, EPA, the State, and contractor representatives.

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 RI/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.

FY04 IRP Progress

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

FY04 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

- Conduct expanded RI for Site 2 in FY05.
- Complete final proposed remedial action plan and draft ROD for Site 3 in FY05.
- Complete soil cover for Site 4 and hot spot removal for Site 19 in FY05.
- Complete draft CRP, draft Phase II BERA report for Blows Creek, and draft EE/CA for Site 5 in FY05.
- Implement engineering controls at various Installation Restoration Program (IRP) sites in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | CT121382292400 | Funding to Date: | \$ 18.1 million |
| Size: | 78 acres | Estimated Cost to Completion (Completion Year): | \$ 21.9 million(FY 2016) |
| Mission: | Manufacture engines for heavy armor vehicles and rotary wing aircraft | IRP/MMRP Sites Final RIP/RC: | FY 2015/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 two 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. In addition, a draft BRAC cleanup plan was completed, which was updated 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. This decommissioning was completed 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 FY00 through FY03 is detailed below.

In FY00, the installation completed an engineering evaluation and cost analysis for the causeway and submitted the decision document (DD) for public comment. It also completed a draft remedial investigation (RI) for the entire installation and conducted a pilot study for the cleanup of chromium-contaminated groundwater.

In FY01, the Army submitted the draft RI to the State and the RAB for review. The Army completed the DD 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 the State 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 the State 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.

FY04 IRP Progress

The installation completed the RI sampling and submitted the final RI to the State. The installation initiated compliance sampling of subsurface soil gas. Additionally, the installation drafted a focused FS.

FY04 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

- Submit FS in FY05.
- Submit proposed plan in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|---|-------------------------------------|---|
| FFID: | KS721382087800 | Estimated Cost to Completion | \$ 81.1 million(FY 2015) |
| Size: | 9,065 acres | (Completion Year): | |
| Mission: | Manufactured smokeless powder and propellants | IRP/MMRP Sites Final RIP/RC: | FY 2010/FY 2003 |
| HRS Score: | 50.00; proposed for NPL in February 1995 | Five-Year Review Status: | The installation has not completed a 5-year review. |
| IAG Status: | None | | |
| Contaminants: | Nitrates, sulfates, lead, chromium, propellants | | |
| Media Affected: | Groundwater, surface water, sediment, soil | | |
| Funding to Date: | \$ 33.0 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 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 (OB/OD) 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 FY00 through FY03 is detailed below.

In FY00, SFAAP completed interim remedial actions (IRAs) for SWMU 50 and achieved closure of the OB/OD site (SWMU 23). Long-term monitoring began for SWMUs 13 and 27. The installation completed supplemental sampling at SWMU 41.

In FY01, the installation completed removal actions for SWMUs 10, 11, and 50. SFAAP conducted confirmatory sampling for SWMU 2 and SWMU 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 IRAs 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.

FY04 IRP Progress

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 onsite versus offsite disposal of non-hazardous contaminated soils. The installation continued RA for SWMU 22. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Regulatory issues delayed completion of RFIs for SWMUs 1, 21, 39, 45 and 47.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete RFIs for SWMUs 1, 3, 10, 14, 18, 21,

25, 38, 39, 44, 45, 47, and 53, and begin RFIs for SWMUs 51, 58, 60, and AOCs 14 and 22 in FY05.

- Complete the installationwide explosive safety assessment, TS, and EE/CA in FY05.
- Complete RA for SWMU 22, and begin RA for SWMU 10 in FY05.
- Continue long-term monitoring for SWMUs 11, 13, 27, 33, 35, 41, 48 and 50 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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 September 1988
Contaminants: Organic solvents, heavy metals, petroleum
Media Affected: Groundwater, surface water, sediment, soil
Funding to Date: \$ 197.3 million

Estimated Cost to Completion \$ 99.0 million(FY 2023)
(Completion Year):
IRP/MMRP Sites Final RIP/RC: FY 2008/None
Five-Year Review Status: Completed FY1999/Underway/Planned FY2008



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 September 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, waste pits, fire training areas, spill sites, and low-level radioactive waste sites. The installation has implemented numerous interim actions, including removal of contaminated soil and underground storage tanks 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, the installation completed a 5-year review of NPL treatment systems. In FY03, the installation submitted to regulators 5-year review Record of Decision (ROD) reports.

To date, RODs have been signed for Building 3001 and for Soldier Creek. The cleanup progress for Tinker AFB for FY00 through FY03 is detailed below.

In FY00, regulators accepted the feasibility study (FS) for the Soldier Creek Off-Base groundwater (SCOBGW) Operable Unit (OU). All landfills at Tinker now have a RCRA cap in place. The installation began an interim remedial action (IRA) at the Industrial Water Treatment Plant (IWTP), which should enable the site to reach remedy in place (RIP) status. Air Force documentation formally closing the four radioactive waste disposal sites and Fire Training Area 1 was completed.

In FY01, the decision documents (DDs) necessary to achieve 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. A comprehensive range inventory was initiated. This inventory was designed to be an annual, iterative effort. To supply data for the inventory, a detailed questionnaire was completed that collected data on the types of munitions used, the range's environmental status, and the type and level of external stakeholder interest.

In FY02, the installation completed the DD necessary to achieve RIP and RC status for Landfill 4. The IRA 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

In FY03, the Air Force completed the risk assessment necessary to achieve site closeout for Industrial Waste Pit 2. The 5-year review ROD reports were submitted to regulators. Tinker Creek AFB began installation and use of the IRA-C groundwater extraction system for the SCOBGW OU, and incorporated changes into the proposed plan. The Northwest Groundwater Management Unit (CG-37) FS was completed and recommended monitored natural attenuation as the remedy. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

The Air Force achieved site closeout status for the Soldier Creek sediment and surface water OU. It also completed the DD and achieved RIP for the IWTP soils site.

Due to document content and formatting issues, the installation was not able to complete the ROD, RD and RIP for the SCOBGW OU. Document content and format issues also negatively affected the completion of the DD and achieving RIP and RC for the four fuel sites. These issues are being addressed and will be resolved in FY2005.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

Plan of Action

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

IRP

- Complete the ROD and remedial design and achieve SCOBGW RIP in FY05.
- Complete DD and achieve RIP and RC for Four Fuel Sites in FY05.
- Achieve RIP for the Southwest Groundwater Management Unit in FY05.
- Complete the study phase for the East Groundwater Management Unit and the Gator Facility Groundwater Management Unit in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--------------------------|
| FFID: | PA321382089200 | Funding to Date: | \$ 15.0 million |
| Size: | 1,293 acres | Estimated Cost to Completion (Completion Year): | \$ 29.1 million(FY 2017) |
| Mission: | Provide logistics for communications and electronics equipment | IRP/MMRP Sites Final RIP/RC: | FY 2005/FY 2017 |
| HRS Score: | 37.93; placed on NPL in August 1990 | Five-Year Review Status: | Completed FY2002/Planned |
| IAG Status: | AG 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 includes 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 1,293 acres at the installation; EPA partially delisted 62 of the AOCs from the NPL in FY01. The installation completed six Records of Decision (RODs), including five in FY00. The cleanup progress at TYAD from FY00 through FY03 is detailed below.

In FY00, the installation removed the sewage drying beds at AOC 32. It also completed closeout documents for five sites and the ecological risk assessment. Two proposed remedial action plans were completed. The Army and regulators signed RODs for those sites and TYAD attained construction complete status. TYAD became the first federal facility in EPA Region 3 to achieve this status.

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 monitor wells were installed at TYAD-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. The inventory includes CTT ranges, sites with UXO, discarded military munitions, or munitions constituents. 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. An MMRP site inspection was initiated. The installation provided information regarding the UXO area and a former machine gun range (TYAD-029) to the Army Environmental Center for inclusion in the CTT range inventory. The UXO fence and warning signs were maintained.

FY04 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.

FY04 MMRP Progress

The installation maintained the UXO fence and warning signs. The Army began a site investigation of the TYAD's MMRP sites.

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 FY05.

MMRP

- Maintain the UXO fence and warning signs in

FY05.

- Complete the site investigation in FY05.

| | | | |
|-------------------------|--|--|--------------------------|
| FFID: | UT821382089400 | Estimated Cost to Completion (Completion Year): | \$ 72.3 million(FY 2034) |
| Size: | 24,732 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2018 |
| Mission: | Store and demilitarize munitions | Five-Year Review Status: | Completed FY2002/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: | \$ 103.5 million | | |



Progress To Date

In 1993, the BRAC Commission recommended realignment of the Tooele Army Depot (TEAD) maintenance mission with the installation retaining its conventional ammunition storage and demilitarization missions. EPA placed the installation on the NPL in August 1990. Identified sites include open burning and open detonation areas, ammunition demilitarization facilities, landfills, firing ranges, industrial sites, underground storage tanks, surface impoundments, lagoons, and drain fields. Organic solvents are the main contaminant affecting groundwater. A CERCLA federal facility agreement signed by the Army and EPA in 1991 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): one in FY94, that covered six sites, four of which required no further action, one in FY03 for Operable Unit 4 (OU 4), and one in FY04 for OU 8. 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 23,069 acres for the conventional ammunitions mission. The cleanup progress at TEAD for FY00 through FY03 is detailed below.

In FY00, TEAD completed a Phase I RCRA facility investigation (RFI) of groundwater contaminant source areas in the BRAC parcel. TEAD began a Phase I RFI to define the extent of off-site groundwater contamination to the northeast of the property. It completed a decision document (DD) for Group B RCRA corrective action sites. The installation completed an interim action plan for the removal of the primary source of groundwater contamination. The U.S. Army Corps of Engineers started preparing a site management plan for land use controls.

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 RFI fieldwork for delineation of groundwater contamination, and completed corrective action for ten Group B sites. The RAB had the opportunity to review 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 actions for ten Group A and nine Group C 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 known release sites, and completed a 5-year review for all sites at the installation.

In FY03, TEAD completed all required remedial actions (RAs) at nine Group A and eight Group C sites. It also initiated RAs at one Group C site and one Group A site. EPA approved and signed the ROD for OU 4 and the Army implemented all required remedies. The installation completed CMSs for Sites 10, 12, and 15 and initiated DDs for these sites. The Army completed an inventory of operational and 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.

FY04 IRP Progress

The installation signed DDs and initiated corrective measures at Solid Waste Management Unit 10 (SWMU 10) (TNT Washout Ponds), SWMU 12 (Pesticide Disposal Area), and SWMU 15 (Landfill). The Army signed a ROD for OU 8 and initiated RA 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 (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.

The discovery of ordnance items during execution work delayed corrective measures for one Group C site, SWMU 56 (Gravel Pit) and one Group A site, SWMU 42 (Bomb Washout Facility).

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Complete corrective measures at the SWMUs 42 and 56 in FY05.
- Complete corrective measures design for the soil and vegetation cover improvements at SWMUs 12 and 15 in FY05.
- Initiate explosive contaminated soil composting at SMWU 10 in FY05.
- Complete planned soil stabilization and solidification at Sites 6 and 8 in FY05.
- 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 FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|---|--|--|
| FFID: | CA957182457500 | Contaminants: | VOCs, heavy metals, POLs, PAHs |
| Size: | 6,383 acres | Media Affected: | Groundwater, surface water, sediment, soil |
| Mission: | Provide air refueling and strategic airlift services for troops, cargo, and equipment | Funding to Date: | \$ 89.7 million |
| HRS Score: | 29.49; placed on NPL in November 1989 | Estimated Cost to Completion (Completion Year): | \$ 80.9 million(FY 2042) |
| IAG Status: | Federal facility agreement signed in September 1990 and amended in May 1993, October 1995, July 1996, November 1997, and July 1998 Federal facility agreement signed in September 1990 and amended in May 1993, October 1995, July 1996, November 1997, and July 1998 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2013 |
| | | Five-Year Review Status: | Completed FY2003/Planned FY2008 |



Progress To Date

Travis Air Force Base (AFB) has supported Air Force operations since 1943. Historical activities at the base have resulted in releases of fuels, solvents, and petroleum/oils/lubricants (POLs), which have migrated into groundwater. Since FY85, studies have identified numerous sites, including old landfills, a closed sewage treatment plant, four fire training areas, disposal pits, spill areas, the 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. Granular activated carbon treatment systems were installed to treat groundwater contaminated with trichloroethylene (TCE) at a storm sewer outfall in Union Creek and a source area for the installation’s largest TCE groundwater plume. In FY95, the installation formed a Restoration Advisory Board (RAB). The installation received technical assistance for public participation funding in FY99. The installation conducted a 5-year review of interim groundwater actions in FY03.

The Air Force initially divided Travis AFB into four operable units (OUs), later reducing it to 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 both groundwater and soil in the West/Annexes/Basewide OU (WABOU). The cleanup progress at Travis AFB for FY00 through FY03 is detailed below.

In FY00, interim remedial actions (IRAs) were completed at nine groundwater sites. The IRA for one off-base groundwater plume (SS030) was also completed. The RAB continued to review restoration documents and provide advice on project prioritization.

In FY01, the installation completed construction on one part of Landfill 2. It also installed two additional dual-phase extraction wells and a thermal oxidizer as part of an expansion of the IRA for the groundwater plume at Site SS016. Construction of the IRAs at LF008 and DP039 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 Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. An MMRP site was identified at this installation.

In FY03, the installation began IRA construction at one off-base groundwater plume and completed the WABOU soil ROD. The installation also completed remedial actions (RAs) at six of seven soil sites, as well as the 5-year review of interim groundwater actions. A land access agreement was approved, allowing RA construction at one off-base groundwater plume to begin. The Air Force updated its MMRP inventory. No additional MMRP sites were identified at this installation during the inventory development and update.

FY04 IRP Progress

The installation developed a pre-draft NEWIOU soil, sediment, and surface water ROD for coordination with Air Mobility Command/Air Staff and completed one 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 another site to enhance removal of TCE. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Technical issues delayed two of the 12 planned RDs and three planned RA contract awards for the NEWIOU soil sites, as well as one RA contract award for a WABOU soil site. Regulatory issues delayed nine planned NEWIOU soil site RDs and seven RA contract awards, which may no longer be required.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Issue draft NEWIOU soil, sediment, and surface water ROD in FY05.
- Complete RD at two NEWIOU soil sites in FY05.
- Award RA contracts, if necessary, for seven NEWIOU soil sites in FY05.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|----------------------|--|--|---|
| FFID: | CA917002333000 | Media Affected: | Groundwater and soil |
| Size: | 1,075 acres | Funding to Date: | \$ 102.2 million |
| Mission: | Provide services and materials to support units of operating forces and shore activities | Estimated Cost to Completion (Completion Year): | \$ 33.8 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 cleanup progress at Treasure Island Naval Station for FY00 through FY03 is detailed below.

In FY00, the installation completed lead removal at Building 1133 and removed an underground storage tank (UST) at Building 1. The installation also conducted pilot investigation sampling of debris, soil gas sampling, and additional sampling at the Site 12 debris areas. Polychlorinated biphenyl (PCB)- and polycyclic aromatic hydrocarbon (PAH)-contaminated soil was removed from Halyburton/Bigelow/Flounder Court housing. Groundwater monitoring was performed, and a tidal study was completed. The installation investigated the former fuel line right-of-way for petroleum in soil. Sites 5, 7, and 17 were proposed for no further action. Site 7 was later continued in the RI. Sites 5 and 17 were combined into Site 24.

In FY01, the draft corrective action plans for, and initial cleanup of, all petroleum sites were underway. During removal of the two remaining 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 PCB- and 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/cost analysis for a removal action in portions of Site 12 for review. The installation completed additional soil sampling for Site 12. An RI was completed for Sites 13 and 27. The installation installed a pilot study for in-situ remediation at Site 24.

FY04 IRP Progress

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 five percent of sites. Sites 32 (Former Training Area) and 33 (Waterline Replacement Area) were added to the Installation Restoration Program (IRP). The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

The findings of suitability for transfer (FOSTs) and findings of suitability for early transfer 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. Chemical detections delayed the completion of an RI for Site 10. Programmatic changes delayed completion of RIs for CERCLA Sites 9 and 21, and draft RIs for Sites 6, 24, 30, and 31. Regulatory issues delayed the draft RIs for Sites 8, 11, 28,

and 29 and the completion of the petroleum remedies for the remaining five percent of sites.

FY04 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 all petroleum sites except for three locations, pipeline area YF3 in the California Department of Transportation temporary construction easement, Coast Guard area, and the UST 238 area in FY05.
- Complete FOST for all transferrable property and RIs for Sites 9, 10, 21, 30, and 31 in FY05.
- Sign Record of Decision for Offshore Site 13 and complete feasibility study for Offshore Site 27 in FY05.
- Complete HRA and closure of Site 7 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|--------------------------------------|--|--------------------------|
| FFID: | NJ217002269500 | Estimated Cost to Completion (Completion Year): | \$ 17.1 million(FY 2000) |
| Size: | 529 acres | IRP/MMRP Sites Final RIP/RC: | FY 2000/None |
| Mission: | Test engine systems and components | Five-Year Review Status: | Completed FY2004 |
| HRS Score: | N/A | | |
| IAG Status: | None | | |
| Contaminants: | TCE, freon, fuels, mercury, solvents | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 22.7 million | | |



Progress To Date

In July 1993, the BRAC Commission recommended closure of this installation. 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 the draft 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 for FY00 through FY03 is detailed below.

In FY00, the installation conducted an off-site ecological investigation, a storm sewer infiltration study, and an off-site well installation. It also completed the classification exception area report and the operating properly and successfully document for groundwater. The closeout report for mercury was also drafted. The installation initiated long-term management of mercury and completed a finding of suitability to transfer (FOST) for Parcel B.

In FY01, the installation completed FOSTs 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.

FY04 IRP Progress

The Navy continued O&M and completed a 5-year review at this installation.

FY04 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 FY05.
- Complete a biannual review in FY05.
- Complete a bioaugmentation pilot study for groundwater in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---------------------------------|
| FFID: | AZ957282593400 | Funding to Date: | \$ 12.4 million |
| Size: | 84 acres | Estimated Cost to Completion (Completion Year): | \$ 32.2 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 FY2003/Planned FY2008 |
| 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 (POL) 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 FY00 through FY03 is detailed below.

In FY00, RAB activities with the UCAB and partnering efforts with EPA Region 9 and the Arizona Department of Environmental Quality (ADEQ) continued. One well was added on the western side of the base to improve plume capture. In FY01, 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 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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

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. The Air Force updated its MMRP inventory. Cost estimates and risk assessment code scores were updated for each MMRP site.

FY04 IRP Progress

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

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

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 FY05.
- Conduct a pilot chemical oxidation treatment study in FY05.
- Continue partnership with EPA and ADEQ in FY05.
- Continue participation in UCAB in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|--------------------|---|--|--|
| 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): | \$ 25.4 million (FY 2025) |
| 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 FY2006 |



Progress To Date

In July 1991, the BRAC Commission recommended closure of Tustin Marine Corps Air Station with retention of the family housing and related personnel facilities to support El Toro Marine Corps Air Station. 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. It also 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 two Records of Decision (RODs). The installation also transferred over 1,300 acres of property. The cleanup progress at Tustin Marine Corps Air Station for FY00 through FY03 is detailed below.

In FY00, the installation completed the proposed plan (PP), and the no further action (NFA) ROD was signed for Operable Unit 2 (OU 2). The installation issued an amended action memorandum (AM) and a draft closure report for Site 9A/9B. The installation delineated the methyl tertiary-butyl ether (MTBE) plume at UST Site 222. It also split OU 1 into OU 1A (Site 13 South) and OU 1B (Sites 3 and 12). Of the original 288 AOCs, 266 received NFA designations, three achieved remedy in place status, seven were being reviewed by regulators for NFA designations, and the remaining 12 required additional evaluation or fieldwork.

In FY01, the installation finalized the AM for OU 1A (a trichloropropane plume) and began the fieldwork. This fieldwork 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 show plume stabilization and containment.

In FY02, the installation coordinated interim actions at UST Site 222 and OU 1A. The installation issued the OU 1B PP. The installation commenced interim remedial actions for OU 1A and

the MTBE plume. 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). Finally, 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 additional 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 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. Support was provided to the installation for the EDC deed transfer. The installation also completed sampling at several OU 4 sites to support a dual exit strategy for these low-risk sites. The RAB continued to meet regularly and participate in document reviews.

FY04 IRP Progress

Tustin Marine Corps Air Station 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.

Regulatory and policy issues delayed the execution of the ROD for OU 1.

FY04 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

- Continue to develop the OU 1A and OU 1B RODs in FY05.
- Obtain ROD signatures and initiate soil removals and groundwater containment at OU 1A and OU 1B in FY05.
- Develop closure criteria for the MTBE groundwater site in conjunction with California Regional Water Quality Control Board in FY05.
- Complete removal action and finding of suitability to transfer at arsenic AOC site in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|-----------------------------|
| FFID: | MN721382090800 | Funding to Date: | \$ 152.1 million |
| Size: | 2,370 acres | Estimated Cost to Completion (Completion Year): | \$ 43.3 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 2009/None |
| HRS Score: | 59.60; placed on NPL in September 1983 | Five-Year Review Status: | Completed FY2000 and FY2004 |
| 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, which migrated into the Minneapolis-St. Paul groundwater supply. Ammunition-related metals, volatile organic compounds (VOCs), and polychlorinated biphenyls (PCBs) are the primary soil contaminants at the installation. In 1983, EPA placed the installation on the NPL. The Army 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 installable 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 FY00 and FY04.

The installation grouped twenty-five sites, including former landfills, burning and burial grounds, ammunition testing and disposal sites, industrial operations buildings, and sewer system discharge areas, into three OUs. To date, the Army has signed three Records of Decision (RODs). The cleanup progress at Twin Cities AAP for FY00 through FY03 is detailed below.

In FY00, the Army completed the 5-year review of OUs 1, 2, and 3. Remedial design (RD) concluded for two sites. The Army reduced pumping rates at the OU 3 containment boundary and sought regulator approval for shutting down the OU 3 system. Remedial action construction (RA-C) was completed at Sites A, 129-5, grenade range, and OU 1. RA-C started at Sites C and 129-3. Remedial action (RA) closeout began for soil vapor extraction (SVE) systems at Sites D and G. Removal site investigations (SIs) began at two sites. The installation completed Tier II ecological risk assessment (ERA) surface

water and sediment investigations and the amphibian report.

In FY01, the Army began operations and maintenance of all 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 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 SVE 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 RD 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 SI. The SI work commenced at the Building 135 Primer/Tracer area. The Army abandoned thirty-one 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 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 site inspection 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.

FY04 IRP Progress

The installation completed the cover construction at Site G. The installation completed its second 5-year review.

Contractor issues delayed the RA-C fieldwork at the 1900 Yard Range and the regulatory approval of the SI reports for the 135 and 535 Primer/Tracer areas. Regulatory issues delayed the revised remedy at Site C.

FY04 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 FY05.
- Resolve LUC issues and develop ROD amendments for various soil sites in FY05.
- Execute a ROD amendment documenting shut-off of the OU 3 extraction system as a final decision in FY05.
- Obtain regulatory approval for the Tier II ERA for various water bodies and initiate a feasibility study in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|---|
| FFID: | FL457152412400 | Funding to Date: | \$ 17.5 million |
| Size: | 28,824 acres | Estimated Cost to Completion (Completion Year): | \$ 59.2 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: | The installation has not completed a 5-year review. |
| IAG Status: | Pending | | |
| Contaminants: | POs, 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 325th 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 FY00 through FY03 is detailed below.

In FY00, the draft remedial investigation/baseline risk assessment (RI/BRA) for Site FT017, basewide background study, and a pesticide reference study were completed.

In FY01, RIs were conducted for Sites Landfill 006 (LF006), LF007, and FT017. Draft RIs were conducted for Sites SS026 and OT029. Draft feasibility studies (FSs) were conducted for LF006 and LF007. A comprehensive range inventory was initiated. A detailed questionnaire was completed for each range that collected data on the types of munitions used, the range's environmental status, and the type and level of external stakeholder interest.

In FY02, the installation finalized the FSs for LF006, LF007, and FT017. Sites OT004, LF009, LF010, LF012, OT024, LF002, and OT025 received no further remedial action planned (NFRAP) regulatory concurrence. The RI/BRA was completed for Site SS026 and a draft RI/BRA was completed for OT029. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for non-operational ranges. MMRP sites have been identified at this installation. Several additional members were added to the TRC to increase public input.

In FY03, the installation began a source removal pilot project at Petroleum Sites SS015 and FT023. Remedial action (RA) began at Site FT016. The installation developed a final proposed plan and draft Record of Decision (ROD) for Sites LF006, LF007, FT017, and SS026. The Air Force conducted an innovative environmental assessment at an off-site location (OT018) using the Triad approach. The Air Force updated its MMRP inventory. Cost estimates and Risk Assessment Code scores were updated for each MMRP site.

FY04 IRP Progress

The Air Force began developing and implementing performance based changes to the IRP program. Tyndall awarded three contracts covering seven sites resulting in a cost avoidance over \$6.16 million. Performance based contractors initiated a three-year plan to address remedial designs for four sites (LF006, LF007, FT017, and SS026) and to initiate RA construction at seven sites (LF006, LF007, SS015, FT017, SS019, FT023, and SS026). The RI/BRA was finalized and post RI and FS work began at Site OT029. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

Changes in contracting strategies and emerging policies on performance based RODs and interagency agreements (IAGs) caused postponement of the planned submittal of a federal facility agreement (FFA) and three RODs (Sites FT017, LF006/LF007, and SS026). The disputes over land use controls and post-ROD authority held up development of FFAs and RODs. Tyndall AFB proceeded with remedy implementation on agreed portions or the preferred remedy alternative without signed RODs.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

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 FY05.
- Finalize three performance based draft RODs (LF006/007, FT017, and SS026) in FY05.
- Submit three sites (LF001, LF003, and SS014) for NFRAP regulatory concurrence in FY05.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|------------------------|--|--|---------------------------|
| FFID: | NJ221382070400 | Funding to Date: | \$ 88.2 million |
| Size: | 6,500 acres | Estimated Cost to Completion (Completion Year): | \$ 146.4 million(FY 2035) |
| 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 FY2002 |
| 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). 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 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 one Record of Decision (ROD). The cleanup progress at ARDEC for FY00 through FY03 is detailed below.

In FY00, the installation submitted FSs for the Post Farm landfill, Area D groundwater, and the Burning Grounds to the regulators. An additional Phase I RI work plan featuring eight sites was completed. The installation conducted an investigation of the gun cotton line (Site 16) that resulted in removal of contaminated pipe and surrounding contaminated soil. The Army submitted an ecological risk assessment for Lake Denmark to the regulators. The regulators approved the Phase I and III investigative work plans for Sites 2A and 3A. The installation completed an engineering evaluation and cost analysis for polychlorinated biphenyl (PCB) contamination at Site 122, and removed PCB-contaminated soil near Building

60. The Army submitted the Phase II ecological risk report to the regulators.

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, and 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. Quarterly RAB meetings were held and site tours were conducted. The installation continued to facilitate partnering with regulators.

FY04 IRP Progress

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. The cost of

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

The Army signed the Post Farm ROD; however, regulatory issues delayed completion. Regulatory issues delayed the Green Pond Brook and the Burning Grounds RODs. Technical issues delayed the PP for Site 180. Land use control issues delayed the ROD for 13 sites with institutional controls. Regulatory issues delayed the treatability studies with hydrogen release compound in groundwater for Areas B and D.

FY04 MMRP Progress

The Army provided the CTT report to regulators for review and information. The installation informed the RAB of the MMRP site inspection project that will be conducted in FY05.

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 Green Pond Brook, Post Farm Landfill, the Burning Grounds, Area E, Site 22, Site 25/26, and 13 sites with institutional controls in FY05.
- Submit PPs for Site 180 and Area B in FY05.
- Submit FSs for the former Defense Reutilization and Marketing Office yard, Building 31/33, and 25 sites in FY05.
- Initiate RD for the permeable reactive wall and MNA for Area D and Green Pond Brook removals and long-term monitoring in FY05.
- Continue sump and dry-well removals as necessary in FY05-FY06.

MMRP

- Update community relations plan to incorporate MMRP issues in FY05-FY06.
- Conduct site investigation project in FY06.

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|------------------------|---|--|--------------------------|
| FFID: | MA121382063100 | Funding to Date: | \$ 33.0 million |
| Size: | 78 acres | Estimated Cost to Completion (Completion Year): | \$ 19.9 million(FY 2029) |
| Mission: | Research and develop food, clothing, equipment, and materials for military operations | IRP/MMRP Sites Final RIP/RC: | FY 2010/None |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Planned |
| 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. After EPA placed the installation on the NPL in 1994, the installation made efforts to partner with state and federal regulators and to communicate with the community. 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 FY00 through FY03 is detailed below.

In FY00, the installation prepared a draft ROD for Building T-25 groundwater. Tier II ecological remedial investigation (RI) activities were concluded for the installation outfalls, which indicated the need for a Tier III ecological investigation. RI activities began at Building 22.

In FY01, the Army awarded the contract to begin interim removal actions at the gymnasium site and fieldwork was scheduled. 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 (RAs) 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 RI/feasibility study (FS) for the Building 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. No Military Munitions Response Program (MMRP) sites were identified at this installation.

FY04 IRP Progress

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. The Soldier Systems Center continued a cooperative work relationship with EPA and MA DEP.

FY04 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 (Buildings T-62 and T-68 site) and NRDEC-09/12 (Building 14 and former Building 13 site) in FY05.
- Complete updated RI for NRDEC-11 (former Post

Drinking Water Wells site) in FY05.

- Complete FS for NRDEC-16 (Buildings 22 and 36 site) in FY05.
- Complete the Tier III ecological study in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|---|--|--------------------------|
| FFID: | OR021382091700 | Estimated Cost to Completion (Completion Year): | \$ 10.4 million(FY 2023) |
| Size: | 19,729 acres | IRP/MMRP Sites Final RIP/RC: | FY 2003/FY 2008 |
| Mission: | Store ammunition | Five-Year Review Status: | Completed FY2004 |
| 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: | \$ 53.6 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 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 nine operable units (OUs). The Army signed eight Records of Decision (RODs) to date. The cleanup progress at Umatilla Chemical Depot for FY00 through FY03 is detailed below.

In FY00, the installation completed Ammunition Demolition Activity Area (ADA) OU supplemental soil sampling. The installation concluded dispute resolution with EPA Region 10 regarding the ADA OU unexploded ordnance (UXO) issues.

In FY01, the BCT conducted informal dispute resolution regarding the 60 percent design document for the supplemental soil cleanup in the 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.

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 UMCD-001-R). The installation completed an engineering evaluation and cost analysis for the range.

FY04 IRP Progress

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.

Technical issues delayed completion of the groundwater RA report.

FY04 MMRP Progress

The installation completed the proposed plan and draft ROD for the QAFR.

Internal Army staffing and regulatory issues delayed the final ROD approval for the QAFR. Funding and safety issues delayed initiation of the UXO cleanup for the QAFR.

Plan of Action

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

IRP

- Complete groundwater RA in FY05.
- Complete ROD for UMCD Landfill in FY05.
- Complete revised monitoring plan for the UMCD Landfill in FY05.

MMRP

- Finalize ROD for the QAFR in FY05.

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|--------------------|---|--|--|
| 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): | \$ 2.7 million(FY 2005) |
| IAG Status: | None | IRP/MMRP Sites Final RIP/RC: | FY 2005/None |
| | | Five-Year Review Status: | Planned FY2005 |



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.

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 FY00 through FY03 is detailed below.

In FY00, the Army completed four decision documents (DDs) and one closure letter, leaving three sites for additional remedial action (RA). During investigations at the Intelligence Materiel Management Center photo neutralization pit, the Army discovered groundwater contamination in a portion of the property transferred in finding of suitability to transfer (FOST) 1. The installation designated the additional site AREE 34.

In FY01, the Army investigated groundwater contamination in AREE 34. The Army completed the Phase II FOST and transferred an additional five acres.

In FY02, the Army completed 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 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).

FY04 IRP Progress

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

Regulatory issues delayed the DD and final remedy for AREE 34.

The installation held a public meeting to present the proposed remedy (monitored natural attenuation and land use controls) for AREE 34.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

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 FY05.
- Perform 5-year reviews on Sites 1 and 39 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|----------------------|--|--|--|
| FFID: | PA317002454500 | Media Affected: | Groundwater and soil |
| Size: | 817 acres | Funding to Date: | \$ 23.3 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): | \$ 21.4 million(FY 2029) |
| HRS Score: | 57.93; placed on NPL in October 1989 | IRP/MMRP Sites Final RIP/RC: | FY 2001/None |
| IAG Status: | Federal facility agreement signed in September 1990 | Five-Year Review Status: | Completed FY2002 - remedy remains protective |
| Contaminants: | VOCs, heavy metals, firing range wastes, fuels, land sewage sludges, non-industrial solid wastes, paints, PCBs | | |



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 (EBST) for the public benefit conveyance (PBC) and the economic development conveyance (EDC) parcels for Phase I, which were completed in FY00. In FY02, the installation completed a 5-year review.

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 (NFA) 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 FY00 through FY03 is detailed below.

In FY00, the installation signed a final NFA ROD for soil, surface water, and sediment at Site 4 (OU 6). Final NFA RODs were also signed for Areas B and D and Site 5. RODs were signed for Area A and Sites 6 and 7. The installation completed the operating properly and successfully documentation for Areas A, C, and D groundwater and received concurrence. EBSTs and findings of suitability to transfer for the remaining PBC and EDC parcels were completed.

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.

FY04 IRP Progress

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).

FY04 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

- Conduct perimeter and off-base monitoring according to the LTM plan in FY05.
- Investigate the strategy to reduce sample frequency and number of wells in FY05.
- Maintain, optimize, and conduct sampling of the groundwater treatment system in FY05.
- Maintain and operate LUCs in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|---|
| FFID: | DC317002431000 | Funding to Date: | \$ 21.8 million |
| Size: | 63 acres | Estimated Cost to Completion (Completion Year): | \$ 16.5 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 2011 |
| 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 a no further action (NFA) Record of Decision (ROD). The cleanup progress at WNY for FY00 through FY03 is detailed below.

In FY00, the installation completed a human health risk assessment (HHRA) for soil at Site 16. A removal site evaluation report was submitted for Sites 7, 11, and 13. A technical memorandum summarizing the river sediment sampling results was completed and submitted to EPA, Washington, DC (EPA/DC). A remedial investigation (RI) was initiated for soil at Site 5. A screening-level ecological risk assessment (ERA) for Sites 4, 6, and 14, and sample data for the groundwater operable unit (OU) investigation were submitted. WNY submitted an internal Navy draft RI report for Site 16. The installation continued repairs and replacements to the base storm sewer system. WNY submitted master project plans to EPA/DC.

In FY01, the installation completed a data gap investigation for the RI report regarding the groundwater OU and Sites 4, 6, and 14. The draft HHRA and ERA were also submitted for review and comment. The installation submitted the RI report for Site 16 for review. It also completed the 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, Navy

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.

FY04 IRP Progress

The installation initiated fieldwork 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 cost of completing environmental restoration at this installation has changed significantly due to technical and regulatory issues.

The feasibility studies (FSs) for Sites 5 and 16 were not completed since additional sampling was necessary. The FS for Site 14 was not completed because regulators agreed to a NFA ROD instead.

FY04 MMRP Progress

The installation completed the preliminary assessment (PA) process as well as the draft final report and a recommendations report.

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 and the SSA fill field investigation in FY05.
- Finalize OU 2 sediment workplan in FY05.

- Finalize final proposed remedial action plan and NFA ROD for Site 14 in FY05.
- Finalize RI and NFA proposed remedial action plan for Site 16 in FY05.
- Complete NFA proposed remedial action plan and finalize FS for Site 5 in FY05.

MMRP

- Provide draft final PA for regulator comments in FY05.
- Finalize PA in FY05.

| | | | |
|------------------------|--|--|---------------------------------|
| FFID: | WV39799F346100 | Funding to Date: | \$ 67.5 million |
| Size: | 2,704 acres | Estimated Cost to Completion (Completion Year): | \$ 36.2 million(FY 2031) |
| Mission: | Manufactured TNT | IRP/MMRP Sites Final RIP/RC: | FY 2020/FY 1995 |
| HRS Score: | 35.72; placed on NPL in September 1983 | Five-Year Review Status: | Completed FY2000/Planned FY2008 |
| 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 | | |



Progress To Date

From 1941 to 1946, West Virginia Ordnance Works manufactured TNT from toluene, nitric acid, and sulfuric acid. By-products of the manufacturing process included TNT, DNT, 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 a 5-year review in FY00. EPA partially deleted a 509-acre parcel from the NPL in FY03 and an additional 1,004 acres in FY04.

The property is now divided into 13 operable units (OUs). To date, the Army and EPA have signed a Record of Decision (ROD) for OU 11 and no further action (NFA) RODs for OU 10 and OU 12. The cleanup progress at West Virginia Ordnance Works for FY00 through FY03 is detailed below.

In FY00, USACE submitted the proposed plan (PP) for the OU 5 and OU 2 ROD amendment. Final decision documents (DDs) were completed for expanded site inspections (ESIs) 3, 5, 7, and 8. USACE completed the OU 4 corrective action remedial design and the underground storage tank removal at ESI 6. ESI 6 site closure was approved. USACE completed construction of 30 acres of aquatic and wetland habitat for mitigation and began filling ponds. EPA approved the 5-year review report. The Army and EPA approved the final OU 11 ROD.

In FY01, based on additional samples of surface soil, USACE developed PPs for OU 10 and OU 12. USACE awarded a contract for revising the human health risk assessment for ESI 1, OU 8, and OU 9. Groundwater issues for ESI 9 were resolved and USACE signed a DD. West Virginia 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. 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 the ROD for OU 12, which required NFA. USACE continued long-term management (LTM) as planned and completed LTM on the OU 11 property. The supplemental sampling at ESI 6 was completed. The use of the consensus agreement approach, which was implemented using a formal facilitated partnering process with EPA, state regulators, EPA Biological and Technical Assistance Group, and USACE members and contractors, enhanced the decision making ability of the team and resulted in both time and cost savings.

In FY03, USACE signed NFA DDs for ESI 1, ESI 4, and ESI 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 savings of approximately \$138,000. An additional \$100,000 was saved during the disposal of wastewater at 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 deleted a 509-acre parcel and USACE prepared a draft notice of intent for partial delisting of an additional 978 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. The RAB met as needed to present the DD and PP for OU 10.

FY04 IRP Progress

USACE completed the removal of contaminated soils from OU 5. In addition, the property completed the second NPL partial delisting by transferring 1,004 acres, bringing the size of the NPL boundary down to 1,184 acres. USACE also completed the draft 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 innovative Hydrogen Release Compound injection to clean up the groundwater for in situ treatment of groundwater for OU 9. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

West Virginia Ordnance Works prepared documents to complete the property transfer of OU 11 to the State of West Virginia, however additional time was requested to review the documents. Technical issues delayed the draft PP and FS for OU 8 and OU 9.

FY04 MMRP Progress

USACE has identified no MMRP work at this property.

Plan of Action

Plan of action items for West Virginia Ordnance Works are grouped below according to program category.

IRP

- Complete transfer of OU 11 property to the State of West Virginia in FY05.
- Complete final 5-year review report in FY05.
- Complete TS for OU 9 in FY05.
- Complete draft PP for OU 8 and OU 9 in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

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|--------------------|---|--|--|
| 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: | \$ 89.7 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): | \$ 41.0 million(FY 2031) |
| IAG Status: | Federal facility agreement signed in September 1990 | IRP/MMRP Sites Final RIP/RC: | FY 2006/None |
| | | Five-Year Review Status: | Completed FY2004 |



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 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 FY00 through FY03 is detailed below.

In FY00, the installation completed soil removal at OU 2 and prepared a closure report. EPA proposed delisting all sites in OUs 2, 3, and 5 and transferring lead-agency responsibility to the State. A closure report for Lake Hancock was submitted to the State. Confirmation sampling at Site 31 (OU 5) was completed and a closure report was submitted to EPA.

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/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.

FY04 IRP Progress

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.

FY04 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

- Investigate potential new contaminant of concern from Area 6-Current Landfill in off-site private wells in FY05.
- Investigate recontamination in Site 16-Runway Ditches in FY05.
- Conduct optimization study on pump and treat system in FY05.
- Complete development of the explanation of significant differences for all OUs by FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|---|--|-------------------------|
| FFID: | MD317002344400 | Funding to Date: | \$ 32.9 million |
| Size: | 710 acres | Estimated Cost to Completion (Completion Year): | \$ 3.7 million(FY 2016) |
| 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 FY2006 |
| 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. 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. In July 1995, the BRAC Commission recommended closure of White Oak NSWC. The facility closed in July 1997. The BRAC cleanup plan (BCP) and the CRP were updated in FY02.

White Oak NSWC has identified 37 sites. The installation has completed eight Records of Decision (RODs) to date, including two in FY04. The cleanup progress at White Oak NSWC for FY00 through FY03 is detailed below.

In FY00, the installation initiated remedial designs for Sites 1 and 2 consolidation and capping. It also submitted a draft Operable Unit (OU) 1 remedial investigation (RI) report. An exterior explosives survey was completed. An interim removal action at the centrifuge was expanded. The installation initiated the final delineation of the bedrock aquifer contamination at Site 11 and the delineation of PCB contamination at Site 28 for stream sediment behind Building 90. The installation submitted a draft corrective measures study for Site 11. The installation also wrote a draft proposed plan (PP) for Site 11. Partnering efforts continued.

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 OU 1. It also completed the basewide ecological risk assessment. The installation prepared a draft PP for Site 8 and completed a removal action at Site 3.

In FY02, the installation finalized the site screening report and

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declared no further action (NFA) for 24 sites. The installation completed NFA RODs for Site 11 soils and Site 8, and completed remedy implementation at Sites 1 and 2. The installation also submitted draft 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 2 sites. 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.

FY04 IRP Progress

White Oak NSWC completed two RODs for Sites 7 and 11 and prepared draft RODs for 4 sites (Sites 4, 5, 9, and 13) for FY05 signature. It also completed all certifications and demilitarizations of ordnance shapes.

The RAB decreased meetings from bimonthly to quarterly. The installation anticipates dissolving the RAB in FY05. The installation continued partnering interactions with EPA and the Maryland Department of the Environment.

FY04 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

- Complete RODs for all remaining sites in FY05.
- Complete all remaining remedies in place in FY05.
- Complete 5-year review in FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--------------------------|
| FFID: | FL417002324400 | Funding to Date: | \$ 31.8 million |
| Size: | 3,842 acres | Estimated Cost to Completion (Completion Year): | \$ 21.0 million(FY 2032) |
| Mission: | Train student naval aviators | IRP/MMRP Sites Final RIP/RC: | FY 2007/FY 2011 |
| HRS Score: | 50.00; placed on NPL in May 1994 | Five-Year Review Status: | Underway FY2004 |
| 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's community relations plan (CRP) was updated in FY93 and FY03. Whiting Field NAS formed a TRC for the OLF Barin in FY92; the OLF Barin's CRP was completed 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 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 FY00 through FY03 is detailed below.

In FY00, the draft FFA for the installation was reviewed and commented on by all parties. Long-term management continued for Site 2894. The installation completed a field investigation at the seven remaining sites. Additionally, the installation initiated interim remedial actions (IRAs) at three sites.

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 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, thereby saving money and achieving better

information distribution.

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.

FY04 IRP Progress

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, but weather issues delayed completion of the final 5-year reviews. The installation delayed the ROD for Site 1/12 OU 2 pending further investigation of the the contaminant source.

FY04 MMRP Progress

The installation completed the draft preliminary assessment (PA) for all MMRP sites at NAS Whiting Field.

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 in

FY05.

- Sign FFA in FY05.
- Continue monitoring Sites 1, 2, 4, 30, 32, and 33 and UST 000005 in FY05-FY06.
- Conduct RA operations at UST 000002 in FY05-FY06.

MMRP

- Complete NAS Whiting Field MMRP PA in FY05.

| | | | |
|-------------------------|---|--|---------------------------------|
| FFID: | AZ957002858200 | Estimated Cost to Completion (Completion Year): | \$ 13.8 million(FY 2054) |
| Size: | 4,043 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2005 |
| Mission: | Supported pilot training and ground equipment maintenance | Five-Year Review Status: | Completed FY2001/Planned FY2006 |
| HRS Score: | 37.93; placed on NPL in November 1989 | | |
| IAG Status: | Federal facility agreement signed in 1990 | | |
| Contaminants: | VOCs, POLs, heavy metals, pesticides and UXO | | |
| Media Affected: | Groundwater and soil | | |
| Funding to Date: | \$ 52.2 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 1990. Sites identified on the base 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 its BRAC cleanup plan in FY97. 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 3855 acres have been transferred to date. The cleanup progress at Williams AFB for FY00 through FY03 is detailed below.

In FY00, the signature process for the OU 4 ROD was completed. Discussions on the OU 2 focused feasibility study (FS) and ROD amendment were underway.

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(SS-17)]. The base initiated land farming of pesticide-contaminated soils at SS-17.

In FY02, groundwater monitoring continued at OU 1 Site LF-04, OU 2 Site ST-12, and compliance site Building 760. The base agreed to take more aggressive remedial actions at ST-12 and drafted an explanation of significant difference for the OU 2 ROD to take the action. The base continued the removal action (land farming contaminated soils) at SS-17.

In FY03, the Air Force continued groundwater monitoring at OU 1 Site LF-04, OU 2 Site ST-12, OU 6 Site SS-17, and compliance site Building 760. In preparation for innovative

thermal enhanced extraction (TEE) treatment at OU 2 Site ST-12, the base 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 base initiated an evaluation of the land farming removal action at SS-17.

FY04 IRP Progress

The installation transferred 39 acres and planned for the construction and operation of the initial phase of TEE at OU 2 Site ST-12. The installation also conducted an engineering evaluation and cost assessment for the Bullet Fragment Area of Concern (AOC). The OU 6 ROD continues to be under regulatory review. 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 OU 6 ROD and the OU 3 ROD amendment and the performance evaluation of TEE at OU 2 Site ST-12.

FY04 MMRP Progress

The Air Force conducted an inventory of MMRP sites. MMRP sites were identified at this installation.

Plan of Action

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

IRP

- Continue property transfers and resolution of issues to complete RODs in FY05.
- Operate and evaluate performance of initial phase of TEE at OU 2 Site ST-12 in FY05, pending receipt of adequate funding.
- Seek amendment of OU 2 ROD to modify the remedy in FY05.
- Conduct removal in Bullet Fragment AOC, initiate preliminary assessment and site investigation in Parcel N Debris Area, and dispose of pesticide contaminated soil in FY05.

MMRP

- Evaluate requirements at MMRP sites in FY05.

| | | | |
|------------------------|---|--|---|
| FFID: | VA317002460500 | Funding to Date: | \$ 6.8 million |
| Size: | 1,578 acres | Estimated Cost to Completion (Completion Year): | \$ 25.4 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 2011 |
| 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 semivolatle organic compounds (SVOCs), polyaromatic hydrocarbons (PAHs), metals, and polychlorinated biphenyls (PCBs). These primarily affect groundwater, surface water, and sediment. 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 area of concerns (AOCs) 1 and 2 have been investigated. A potential AOC were discovered in FY03, north of Cheatham Annex Depot Building 14. The cleanup progress at Williamsburg FISC for FY00 through FY03 is detailed below.

In FY00, the installation completed field investigations of Sites 4 and 7, and AOCs 1 and 2, and initiated ecological investigations at Site 1. The installation conducted a time-critical removal action for Site 1 in January 2000 to address erosion of the landfill perimeter.

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 Cheatham Annex background study was

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completed. The installation also began an engineering evaluation/cost analysis (EE/CA) and the soil removal action for Site 1. The installation initiated a preliminary assessment (PA) for Unexploded Ordnance (UXO) 00001.

FY04 IRP Progress

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. It also finalized environmental geographic information system for Cheatham Annex and completed NFRAP DD for Site 12. Williamsburg FISC initiated an initial federal facilities agreement for Cheatham Annex and a time-critical removal action 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. The cost of completing environmental restoration at this installation has changed significantly due to technical and regulatory issues.

A new area of debris discovered in the treeline south of the original soil removal action delayed the completion of the removal action for Site 1.

FY04 MMRP Progress

The installation completed the draft final PA for Unexploded Ordnance (UXO) 00001 (Marine Rifle/Pistol Range.)

The draft final PAs were put on hold in order to take additional, limited samples to support a no further action recommendation in the final PAs.

Plan of Action

Plan of action items for Williamsburg FISC, Cheatham Annex are grouped below according to program category.

IRP

- Complete RI with baseline ERA Step 3a for Site 11 in FY05.
- Complete sediment work plans for Round 2 RI at Site 1 in FY05.
- Complete RI with SERA Steps 1 and 2 for Sites

4 and 9 in FY05.

- Initiate EE/CA for Site 7 in FY05.

MMRP

- Complete PAs for UXO 00001 (Marine Rifle/Pistol Range) in FY05.

| | | | |
|-------------------------|---|--|---|
| FFID: | PA357122534900 | Estimated Cost to Completion (Completion Year): | \$ 1.2 million(FY 2013) |
| Size: | 210 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/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: | \$ 4.6 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).

In FY84, seven Installation Restoration Program (IRP) sites were identified. The cleanup progress at Willow Grove ARS for FY00 through FY03 is detailed below.

In FY00, additional site inspections (SIs) at Sites SS-02, OT-03, SD-04, SS-05, OT-06, and OT-07 were required based on comments from EPA.

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 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. The Air Force completed an inventory of Military Munitions Response

Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. No MMRP sites were identified at this installation.

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. The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update. Two RAB meetings were held.

FY04 IRP Progress

The installation implemented the chemical oxidation process at two out of eight area zones of the petroleum/oil/lubricant (POL) 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 cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

Willow Grove ARS held two RAB meetings.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. No MMRP sites were identified at this installation during the inventory development and update.

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 (Fenton's reagent) at the remaining necessary area zones in FY05-FY06.
- Implement in situ bioremediation process (biosparging) at the area zones where

chemical oxidation process is achieved [light non-aqueous phase liquids (LNAPL) eliminated] in FY05-FY06.

- Complete groundwater sampling (quarterly compliance and performance) in FY05-FY06.
- Hold quarterly RAB meetings in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|-------------------------|---|--|---|
| FFID: | PA317002231200 | Estimated Cost to Completion (Completion Year): | \$ 6.2 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: | \$ 6.9 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. 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 FY00 through FY03 is detailed below.

In FY00, the installation completed a basewide water-level study. The Navy completed pump replacement on two production wells that are in the vicinity of Site 1, and supplied potable and emergency water to the Willow Grove facility. This project also allowed the Navy to obtain valuable analytical data for Site 1 groundwater, as requested by EPA. Additional fieldwork was completed at Site 5.

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.

FY04 IRP Progress

The RI report for Site 2 was delayed due to difficulties completing the ecological risk assessment. The no further action (NFA) Records of Decision (RODs) for Site 2 soils and groundwater were also delayed pending an RI. The cost of completing environmental restoration at this installation has changed significantly due to technical and estimating criteria issues.

FY04 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

- Submit an NFA ROD for Site 1 soil in FY05.
- Complete the proposed remedial action plan and ROD for Site 5 groundwater in FY05.
- Complete the Site 2 RI and the federal facility agreement in FY05.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.

| | | | |
|------------------------|--|--|--------------------------|
| FFID: | OH557172431200 | Funding to Date: | \$ 186.4 million |
| Size: | 8,511 acres | Estimated Cost to Completion (Completion Year): | \$ 32.9 million(FY 2028) |
| Mission: | Serve as host to many organizations, including headquarters Air Force Materiel Command | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2003 |
| HRS Score: | 57.85; placed on NPL in October 1989 | Five-Year Review Status: | Completed FY2000 |
| 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 and 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 FY00 through FY03 is detailed below.

In FY00, the installation completed a site inspection (SI) at Building 20059 and removed one known source of trichloroethylene (TCE) from the site. A preliminary assessment (PA) was completed at an AOC, Building 20079. A treatability study for in situ oxidation for the TCE plume was completed. A 5-year review was completed.

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 TCE-contaminated soil. The SI 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. A comprehensive range inventory was initiated. This inventory was designed to

be an annual, iterative effort. To supply data for the inventory, a detailed questionnaire was completed that collected data on the types of munitions used, the range's environmental status, and the type and level of external stakeholder interest.

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. The Air Force completed an inventory of Military Munitions Response Program (MMRP) sites, including preliminary cleanup cost estimates for sites at eligible non-operational ranges. One MMRP site was identified at this installation.

In FY03, the installation completed the PA 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. The Air Force updated its MMRP inventory. Cost estimates and risk assessment code scores were updated for each MMRP site.

FY04 IRP Progress

WPAFB began conducting 5-year ROD reviews and continued system O&M and LTM activities.

Regulatory issues delayed the completion date for the SI phase at Facility 20055. The installation discontinued yearly supplemental floating-product recovery using a bioslurper at the bulk-fuels storage area.

FY04 MMRP Progress

The Air Force updated its MMRP inventory. Cost estimates were updated for each MMRP site. The Air Force will prioritize these MMRP sites and perform response actions on each site beginning in FY05.

Plan of Action

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

IRP

- Complete 5-year ROD review in FY05.
- Continue O&M and LTM activities in FY05.
- Conduct a time-critical removal of contaminated soils at Facility 20055 in FY05.

MMRP

- Conduct investigation between FY05 and FY09.

| | | | |
|-------------------------|---|--|--------------------------|
| FFID: | MI557002427800 | Estimated Cost to Completion (Completion Year): | \$ 19.9 million(FY 2032) |
| Size: | 4,627 acres | IRP/MMRP Sites Final RIP/RC: | FY 2006/FY 2005 |
| Mission: | Conducted tactical fighter and bomber training | Five-Year Review Status: | Completed FY2004 |
| HRS Score: | 50.00; proposed for NPL in January 1994 | | |
| IAG Status: | None | | |
| Contaminants: | Jet fuel and waste oil, spent solvents, VOCs, and UXO | | |
| Media Affected: | Groundwater, wetlands, surface water | | |
| Funding to Date: | \$ 51.0 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, transfer of KC-135 aircraft to the Air Reserve component, retirement of the assigned B-52G aircraft, and deactivation of the 379th Bombardment Wing. The installation closed in June 1993, and was proposed 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. A 5-year review was completed in FY04. The cleanup progress at Wurtsmith AFB for FY00 through FY03 is detailed below.

In FY00, the feasibility study and the decision document (DD) for Landfill (LF)-30/31 were completed. Construction of two additional purge wells at the benzene pump and treat system at SS-06 was completed. The installation obtained regulator and Air Force concurrence on DDs for 8 Installation Restoration Program (IRP) sites and 12 areas of concern. A draft of the consolidated remedial action plan (RAP) document was reviewed.

In FY01, the installation completed construction of the OT-24 remedial action (RA) system. Construction of RA systems at FT-02, LF-30, and LF-31 was also completed. The contract for the remedial design (RD) for SS-57 was awarded, and the design was partially completed. The optimization study for the RA systems was completed. The RA system at SS-08 was shut down; RA goals were met.

In FY02, the basewide RAP was completed and submitted for regulatory review. Fieldwork for the supplemental remedial investigation (SRI) was completed and delivery of the draft SRI report is planned. Initial results from the field indicated no changes to the RAPs for sites WP-04 and LF-23. The results for POI-20 led to the characterization of a small, chlorinated groundwater plume and the designation of IRP Site SS-71. The RD was completed for SS-57 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 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 groundwater at SS-06.

In FY03, the installation completed SRIs at several sites to verify the adequacy of implemented remedies. The investigation concluded that plume contaminants were 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 of seven sites. The Air Force also completed construction of the RA system at SS-57. A draft operating properly and successfully document for Site SS-05 received concurrence contingent upon incorporating EPA comments.

FY04 IRP Progress

The installation completed the first CERCLA 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 FT-02. The installation removed a previously unknown 300 gallon UST. The installation created a project to fill data gaps at LF-30/31 and issued a request for proposal. Site ST-69 achieved apparent cleanup levels. The cost of completing environmental restoration at this installation has changed significantly due to estimating criteria issues.

A Restoration Advisory Board meeting was held that included a presentation on the findings of the 5-year review and description of status at various sites.

FY04 MMRP Progress

The installation conducted Military Munitions Response Program (MMRP) inventory at the former Wurtsmith AFB and identified potential sites.

Plan of Action

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

IRP

- Complete project to fill data gaps at LF-30/31 in FY05.
- Resolve RCRA cap issue with Michigan's Department of Environmental Quality in FY05.
- Complete remedial investigation and feasibility study, DD and RD/RA for Site SS-72 in FY05.
- Complete site assessment for leaking UST at Building 5002 in FY05.

MMRP

- Evaluate requirements at remaining identified MMRP sites in FY05.
- Begin work for two MMRP sites in FY06.

| | | | |
|--------------------|---|--|---|
| 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: | \$ 42.0 million |
| HRS Score: | 50.00; placed on NPL in October 1992 | Estimated Cost to Completion (Completion Year): | \$ 24.0 million(FY 2013) |
| IAG Status: | Federal Facility Agreement signed in September 1994 | IRP/MMRP Sites Final RIP/RC: | FY 2011/FY 2011 |
| | | Five-Year Review Status: | Completed FY2002 |



Progress To Date

Yorktown Naval Weapons Station (NWS) provided ordnance technical support and related services to the Atlantic Fleet. The installation was placed 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 11 Records of Decision (RODs). The cleanup progress at Yorktown NWS for FY00 through FY03 is detailed below.

In FY00, the installation signed RODs for two sites. It initiated a remedial action (RA) at two sites, completed an RA at three sites, and finalized one site screening area (SSA). An RA Phase I was completed, and Phase II began at Site 6. A remedial investigation/feasibility study (RI/FS) was completed at two sites.

In FY01, the installation continued RA efforts for Site 6, as planned. Groundwater monitoring was conducted at six sites. The RI/FS for three sites was in progress.

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 1 (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 (UXO) 000001 (NWS Small Arms Range).

FY04 IRP Progress

The installation continued the Site 6 RA and finalized an 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 updated Master Project Plans. The installation completed final Round II RIs for Sites 2, 8, 18, and SSA 14. The cost of completing environmental restoration at this installation has changed significantly due to technical issues.

Ecological issues delayed the planned signing of the RODs for three sites and one SSA as well as the initiation of an RI for groundwater OU 4. Adjustments in regulator environmental restoration priorities delayed finalization of the draft RIs for Sites 27, 28, 29, and 30.

FY04 MMRP Progress

The installation completed the draft final preliminary assessment (PA) for UXO 000001 (NWS Small Arms Range).

The necessity for additional samples to support a no further action recommendation delayed the final PAs.

Plan of Action

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

IRP

- Finalize RODs for two sites in FY05.
- Initiate work plans for groundwater OU 3 and OU 4 in FY05.
- Finalize long-term monitoring report for Site 12 in FY05.
- Release environmental geographical information system in FY05.

MMRP

- Complete PA for UCO 000001 (NWS Small Arms Range) in FY05.

| | | | |
|------------------------|---|--|-----------------------------|
| FFID: | AZ917302449300 | Funding to Date: | \$ 49.9 million |
| Size: | 4,741 acres | Estimated Cost to Completion (Completion Year): | \$ 23.5 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 FY2003 and FY2004 |
| 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 five 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, 32 sites have been identified at this installation. The installation signed the Record of Decision (ROD) for OU 2 and for Areas 1, 2, 3, and 6 in OU 1. The installation received Plume Areas 6 and 5A site closure in FY04. The cleanup progress for Yuma MCAS for FY00 through FY03 is detailed below.

In FY00, the installation finalized the ROD and implemented the remedial action (RA) for OU 1. Active UST remediation was completed. The installation received a closure letter from the Arizona Department of Toxic Substances Control for Site 4 in the Chocolate Mountains Aerial Gunnery Range, concurring with the Navy's no further action determination. A closure letter was also received for all USTs in the fuel farm. The installation abandoned 35 existing monitoring wells and finalized the long-term management (LTM) plan.

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 RA for site closures under the FFA assessment program. The OU 1 ROD for Areas 1, 2, 3, and 6 was signed. 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 (LUC) 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. Remedial action 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 Military Munitions Response Program (MMRP) sites. MMRP sites were identified at this installation.

In FY03, MCAS Yuma 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.

FY04 IRP Progress

MCAS Yuma 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 at the LEPA remains in temporary shutdown status.

FY04 MMRP Progress

No work was performed on MMRP sites at this installation in FY04.

Plan of Action

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

IRP

- Continue LTM for Area 1 in FY05.
- Request site closure at Areas 2 and 3 plumes in FY05.
- Abandon monitoring wells at plume Areas 6 and 5A in FY05.
- Request permanent shutdown of RA-O system located at the LEPA in FY05.
- Remove remedial system at the LEPA in FY05-FY06.

MMRP

There are no MMRP actions scheduled for FY05 or FY06.