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NAS CECIL FIELD  
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FIRST QUARTER UPDATE SITE MANAGEMENT PLAN FOR CALENDAR YEAR 2012 WITH  
TRANSMITTAL LETTER NAS CECIL FIELD FL  
1/18/2012  
TETRA TECH



**TETRA TECH**

PITT-01-12-068

January 18, 2012

Project 112G02267

BRAC PMO SE  
Attn: Mr. Art Sanford  
4130 Faber Place Drive  
North Charleston, South Carolina 29405

Reference: CLEAN Contract No. N62470-08-D-1001  
Contract Task Order JM09

Subject: Site Management Plan First Quarter Update for Calendar Year 2012  
Naval Air Station Cecil Field  
Jacksonville, Florida

Dear Mr. Sanford:

Enclosed please find one copy of the Site Management Plan (SMP) First Quarter Update for Calendar Year 2012. Any comments obtained will be incorporated in subsequent quarterly updates and the Annual SMP document submission. Copies have been sent to the members of the NAS Cecil Field Partnering Team as identified below.

If you have any questions, please call me at 412-921-8163 or Mark Jonnet at 412-921-8622.

Sincerely,

Robert F. Simcik, P.E.  
Task Order Manager

RFS/clm

Enclosure

cc: D. Vaughn-Wright, U.S. EPA (1 copy)  
D. Grabka, FDEP (1 copy)  
S. Martin, NAVFAC Atlantic (electronic copy)  
M. Davidson, BRAC PMO SE (electronic copy)  
M. Halil, CH2MHill (electronic copy)  
J. Trepanowski, Tetra Tech (electronic copy)  
S. Currie, Tetra Tech File JM09 (1 copy unbound)

**Site Management Plan  
First quarter Update**

**for**

**Calendar Year 2012**

**Naval Air Station Cecil Field  
Jacksonville, Florida**



**Naval Facilities Engineering Command  
Southeast**

**Contract Number N62470-08-D-1001**

**Contract Task Order JM09**

January 2012

**SITE MANAGEMENT PLAN  
FIRST QUARTER UPDATE  
FOR  
CALENDAR YEAR 2012**

**NAVAL AIR STATION CECIL FIELD  
JACKSONVILLE, FLORIDA**

**COMPREHENSIVE LONG-TERM  
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:  
Naval Facilities Engineering Command Southeast  
2155 Eagle Drive  
North Charleston, South Carolina 29406**

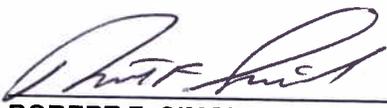
**Submitted by:  
Tetra Tech  
234 Mall Boulevard, Suite 260  
King of Prussia, Pennsylvania 19406**

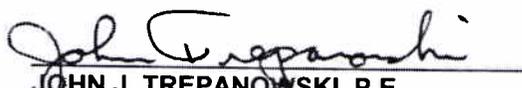
**CONTRACT NUMBER N62470-08-D-1001  
CONTRACT TASK ORDER JM09**

**JANUARY 2012**

**PREPARED UNDER THE DIRECTION OF:**

**APPROVED FOR SUBMISSION BY:**

  
\_\_\_\_\_  
**ROBERT F. SIMCIK, P.E.  
PROJECT MANAGER  
TETRA TECH  
PITTSBURGH, PENNSYLVANIA**

  
\_\_\_\_\_  
**JOHN J. TREPANOWSKI, P.E.  
PROGRAM MANAGER  
TETRA TECH  
KING OF PRUSSIA, PENNSYLVANIA**

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## ACRONYMS

ABB-ES	ABB Environmental Services, Inc.
AIMD	Aircraft Intermediate Maintenance Division
APR	Alternate Procedures Request
AS	Air sparging
AST	Above-ground storage tank
BCP	BRAC Cleanup Plan
BCT	BRAC Cleanup Team
BRA	Baseline risk assessment
BRAC	Base Realignment and Closure
BS	Biosparging
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CA	Contamination Assessment
CAR	Contamination Assessment Report
CARA	Contamination Assessment Report Addendum
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Contaminant of concern
COJ	City of Jacksonville
CSR	Confirmation Sampling Report
CY	Calendar Year
DCE	Dichloroethene
DoD	Department of Defense
DPT	Direct-push technology
DRMO	Defense Reutilization and Marketing Office
EE/CA	Engineering Evaluation/Cost Analysis
EMT	Earth-Mounded Tank
ESB	Explosives Safety Board
ESD	Explanation of Significant Difference
FDEP	Florida Department of Environmental Protection
FFA	Federal Facility Agreement
FID	Flame ionization detector
FOST	Finding of Suitability to Transfer
FS	Feasibility Study
FY	Fiscal year
GCTL	Groundwater Cleanup Target Level
IRA	Interim Remedial Action

IRP	Installation Restoration Program
iSOC	In-Situ Oxygen Curtain
JAA	Jacksonville Aviation Authority
JETC	Jet Engine Test Cell
KAG	Kerosene Analytical Group
LTM	Long-Term Monitoring
LUC	Land Use Control
MCL	Maximum Contaminant Level
MDAS	Material Documented as Safe
MEC	Munitions and Explosives of Concern
MIP	Membrane interface probe
MNA	Monitored Natural Attenuation
MOA	Memorandum of Agreement
MONA	Monitoring Only Natural Attenuation
MOP	Monitoring Only Plan
MRA	Munitions Response Area
MRP	Munitions Response Program
MTBE	Methyl Tertiary Butyl Ether
NADC	Natural Attenuation Default Concentration
NAMP	Natural Attenuation Monitoring Plan
NAMPAO	Natural Attenuation Monitoring Plan Approval Order
NAS	Naval Air Station
NDI	Non-Destructive Inspection
NFA	No Further Action
NFF	North Fuel Farm
NOSSA	Naval Ordnance Safety and Security Activity
NSAP	North-South Apron Plume
OGC	Old Golf Course
O&M	Operation and Maintenance
OPS	Operating Properly and Successfully
OU	Operable Unit
OWS	Oil-Water Separator
PAH	Polynuclear aromatic hydrocarbon
PARM	Post-active remediation monitoring
PCB	Polychlorinated biphenyl
PP	Proposed Plan
ppb	parts per billion

ppm	parts per million
PRG	Preliminary Remediation Goal
PSC	Potential Source of Contamination
RA	Remedial Action
RAC	Remedial Action Contractor
RACR	Remedial Action Completion Report
RAO	Remedial Action Objective
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
SAOR	Sampling and Analysis Outline Report
SAP	Sampling and Analysis Plan
SAR	Sampling and Analysis Report/Site Assessment Report
SARA	Superfund Amendments and Reauthorization Act/SAR Addendum
SCTL	Soil Cleanup Target Level
SFF	South Fuel Farm
SMP	Site Management Plan
SOW	Scope of Work
SRCO	Site Rehabilitation Completion Report
SRR	Source Removal Report
SVE	Soil vapor extraction
TCE	Trichloroethene
TPH	Total Petroleum Hydrocarbons
TRPH	Total recoverable petroleum hydrocarbons
Tetra Tech	Tetra Tech, Inc.
UFP	Uniform Federal Policy
U.S. COE	United States Corps of Engineers
U.S. EPA	United States Environmental Protection Agency
UST	Underground storage tank
UXO	Unexploded Ordnance
VOC	Volatile organic compound
WWTP	Wastewater Treatment Plant

## 1.0 INTRODUCTION

This Site Management Plan (SMP) First Quarter Update for Former Naval Air Station (NAS) Cecil Field was prepared in accordance with the requirements of the Federal Facility Agreement (FFA) among the United States Environmental Protection Agency (U.S. EPA), the Florida Department of Environmental Protection (FDEP), and the United States Navy. The FFA is an interagency agreement required by Section 120(e)(1) of the Superfund Amendments and Reauthorization Act (SARA) of 1986. Each year, or as otherwise agreed to by the FFA parties, the SMP is amended to reflect current information on progress made and future activities. Quarterly progress reports are also required to be submitted to FDEP and U.S. EPA in the FFA. In accordance with the requirements in the FFA, the intent of the SMP Quarterly Progress Report Update is to:

- Identify and briefly describe the actions which the Navy has taken during the previous quarter to implement the requirements of the FFA (Section 2.0).
- Identify and briefly describe the upcoming activities scheduled to be taken during the current quarter (Section 3.0).
- Include a statement of the manner and extent to which the requirements and time schedules set out in the FFA and approved Work Plans are being met.
- Identify any anticipated delays in meeting time schedules, along with the reason(s) for the delays and actions taken to prevent or mitigate the delay.

Information pertaining to the Petroleum [underground storage tank (UST) and above-ground storage tank (AST)] Program is also included to provide an overview of the environmental programs being conducted at Former NAS Cecil Field. NAS Cecil Field was closed in September 1999.

### 1.1 SITE MANAGEMENT STRATEGY

The SMP provides a schedule of Installation Restoration Program (IRP) activities and is intended to be a dynamic document. The SMP will be amended as warranted and as mutually agreed to by the Navy, U.S. EPA, and FDEP. The principles used in preparing the SMP include: maximizing the utilization of resources, having the flexibility to meet changing and unforeseen conditions, and cleaning up the site in a scientific and expeditious manner. These principles provide the basis for expedited remedial response at Former NAS Cecil Field. Guidance and promulgation offered by the U.S. EPA and FDEP are used to prepare the SMP.

The IRP investigations have been conducted following guidance presented in the Navy/Marine Corps Installation Restoration Manual (February, 1997). Additional guidance as defined in the U.S. EPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (1988) and the National Oil and Hazardous Substances Pollution Contingency Plan (1990) is followed for project deliverables.

The long-term goal of the SMP is to guide the completion of the investigation and remediation of all sites at Former NAS Cecil Field. To the extent practicable, Base Realignment and Closure (BRAC) issues will be considered during the cleanup process. The Navy has prepared a BRAC Cleanup Plan (BCP) that details ways to accelerate cleanup at the following classifications of sites: IRP, Munitions Response Program (MRP), petroleum, Resource Conservation and Recovery Act (RCRA)/Hazardous and Solid Waste Amendments (HSWA), asbestos, and other types of sites. The BCP discusses and identifies the Former NAS Cecil Field Partnering Team and their role in the cleanup process, and presents strategies to expedite the investigation and cleanup processes. The Partnering Team was formed to address the numerous issues surrounding base closure and to enhance environmental decision-making processes at Former NAS Cecil Field, where property has been or will be available for transfer to the community. This team approach is intended to foster partnering; accelerate the cleanup process; and expedite timely, cost-effective, and environmentally responsible disposal and reuse decisions.

The Partnering Team, in cooperation with the City of Jacksonville (COJ) and Jacksonville Aviation Authority (JAA), assesses candidate sites and updates the prioritization plan for site cleanup at Former NAS Cecil Field by considering planned reuse, waste characteristics, potential migration pathways, and potential receptors (human and ecological). The Navy intends to work with the FFA parties utilizing a continual review process to coordinate prioritization of cleanup sites at Former NAS Cecil Field.

## **1.2 INSTALLATION RESTORATION PROGRAM**

Brief descriptions and the current investigative status of all the IRP sites and potential sources of contamination (PSCs) identified under the IRP are presented in Table 1-1. The statuses of these sites were updated based on activities conducted or progress made through the Fourth Quarter of CY 2011.

## **1.3 MUNITIONS RESPONSE PROGRAM**

There are three sites at former NAS Cecil Field under the MRP, coordinated through Naval Ordnance Safety and Security Activity (NOSSA) and the Department of Defense (DoD) Explosives Safety Board (ESB). The MRP sites are being investigated to expedite removal of all unexploded ordnance (UXO), munitions and explosives of concern (MEC), and material document as safe (MDAS) at Former NAS Cecil

Field. Brief descriptions and the current investigative status of the sites where MRP concerns have been identified at Former NAS Cecil Field are presented in Tables 1-1 and 1-2, as applicable. Currently, the following sites are being investigated under the MRP: IRP Site 15 (see Table 1-1); and Building 365 Munitions Response Area (MRA) and Hangar 860 MRA (see Table 1-2).

#### **1.4 PETROLEUM PROGRAM**

Although petroleum sites are not required by the FFA to be part of the SMP and Quarterly Progress Updates, they have been included to assist the Partnering Team in planning future activities to expedite petroleum site (UST and AST) cleanup at Former NAS Cecil Field. Brief descriptions and the current investigative status of the identified petroleum-contaminated sites at Former NAS Cecil Field are presented in Table 1-2. Sites may be added or removed in the future as a result of contamination assessments and BRAC surveys. Currently, the following sites are being investigated and/or monitored under the Petroleum Program: North Fuel Farm (NFF), South Fuel Farm (SFF), Day Tank 1, Jet Engine Test Cell (JETC), BP Wells Site, North-South Apron Plume (NSAP), Ocala Crash Site, Building 46/Tank 46, Building 82/Tank G-82; Building 502/Tank 502, Building 81/Tanks 81 A, B, and C, Building 271 Tanks, and Hangar 815 Wash Rack. Several other sites that were previously investigated are also included in Table 1-2.

#### **1.5 SCHEDULE AND DELAYS**

The requirements and time schedules set out in the FFA and approved Work Plans are being met and are periodically discussed and reviewed with the NAS Cecil Field Partnering Team. Departures from the schedule are communicated with the Partnering Team when applicable. Delays in meeting time schedules discussed in the FFA and Annual Calendar Year (CY) SMP will be mentioned in the following Sections as required, along with reasons for any delays. As the SMP for CY 2012 was the first SMP for NAS Cecil Field written as a Calendar Year document rather than a Fiscal Year document, the schedule for activities conducted and documents to be submitted during the last quarter of CY 2011 was not included in the Annual SMP. Therefore, an accurate determination of schedule adherence could not be conducted. All future Quarterly Updates will include a more comprehensive discussion of schedule adherence.

TABLE 1-1

**SITE DESCRIPTION CHART  
INSTALLATION RESTORATION PROGRAM  
NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
PAGE 1 OF 18**

Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
1	OU 1	Old Landfill (9 acres)	1950s- 1965	Solid waste, oils, fuels, paints, paint stripper, solvents, municipal solid waste	Municipal solid waste, industrial operations. Trench and fill landfill for commercial and residential wastes (solid and liquid).	Complete closure of the landfills in accordance with state and federal ARARs for landfill closure; Remove and prevent transport and accumulation of the orange-red flocculant material from the Site 2 tributary if biomonitoring shows the materials to be harmful to the benthic macroinvertebrate community of Rowell Creek; Reduce unacceptable exposure of ecological receptors to metals (Cyanide, nickel, cadmium, mercury, selenium, silver and vanadium) in sediments; Reduce unacceptable aquatic receptor responses to iron, lead, and aluminum in the Site 2 tributary surface water.
<ul style="list-style-type: none"> <li>• The Record of Decision (ROD) was signed in September 1995. The selected remedial alternative, site closure, included landfill gas, radiological and unexploded ordnance surveys, surface debris removal, groundwater monitoring, post-closure care, and a 5-year review.</li> <li>• The final design was submitted in April 1996. Bechtel and the Navy conducted an unexploded ordnance survey in 1997, and Bechtel completed a radiological survey in 1998.</li> <li>• An Explanation of Significant Differences (ESD) was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>• A final Land Use Control (LUC) Remedial Design (RD) was submitted on March 29, 2005, and approved by the United States Environmental Protection Agency (U.S. EPA) on April 15, 2005.</li> <li>• A final Operating Properly and Successfully (OPS) Demonstration Report was submitted on April 21, 2005, and approved by U.S. EPA on June 16, 2005, and by Florida Department of Environmental Protection (FDEP) on May 20, 2005.</li> </ul> <p>On May 5, 2011, MK-76 practice bombs were identified in the creek within Sites 1 and 2. The Mayport Explosives Ordnance Disposal responded and removed the munitions and explosives of concern (MEC) items. A site walk by unexploded ordnance personnel to verify that no more MEC is identified was conducted the week of August 15 through August 19, 2011. A Technical Memorandum was prepared and submitted on December 28, 2011 presenting the findings of the site walk.</p> <p><b>Upcoming and Ongoing Activities:</b> Annual monitoring is ongoing. The Year 15 annual sampling event is scheduled for April 2012. The 5 Year Review for 2011 recommended reviewing the sampling program to determine if could be curtailed due to no signs of any releases for three or more years.</p>						

TABLE 1-1

**SITE DESCRIPTION CHART  
INSTALLATION RESTORATION PROGRAM  
NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
PAGE 2 OF 18**

Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
2	OU 1	Recent Landfill (5 acres)	1965-1975	Solid waste, oils, fuels, paints, paint stripper, solvents	Industrial operations and shops. Trench and fill landfill for commercial and residential wastes (solid and liquid).	Complete closure of the landfills in accordance with state and federal ARARs for landfill closure; Remove and prevent transport and accumulation of the orange-red flocculant material from the Site 2 tributary if biomonitoring shows the materials to be harmful to the benthic macroinvertebrate community of Rowell Creek; Reduce unacceptable exposure of ecological receptors to metals (Cyanide, nickel, cadmium, mercury, selenium, silver and vanadium) in sediments; Reduce unacceptable aquatic receptor responses to iron, lead, and aluminum in the Site 2 tributary surface water.
	<ul style="list-style-type: none"> <li>• The ROD was signed in September 1995. The selected remedial alternative included site closure and biomonitoring in the wetland area.</li> <li>• The Final design was submitted in April 1996. Bechtel and the Navy conducted an unexploded ordnance survey in 1997 and Bechtel completed a radiological survey in 1998.</li> <li>• An ESD was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>• A final OPS Demonstration Report was submitted on April 21, 2005, and approved by U.S. EPA on June 16, 2005 and FDEP on May 20, 2005.</li> </ul> <p>On May 5, 2011, MK-76 practice bombs were identified in the creek within Sites 1 and 2. The Mayport Explosives Ordnance Disposal responded and removed the MEC items. A site walk by unexploded ordnance personnel to verify that no more MEC is identified was conducted the week of August 15 through August 19, 2011. A Technical Memorandum was prepared and submitted on December 28, 2011 presenting the findings of the site walk.</p> <p><b><u>Upcoming and Ongoing Activities:</u></b> Annual monitoring is ongoing. The Year 15 annual sampling event is scheduled for April 2012. The 5 Year Review for 2011 recommended reviewing the sampling program to determine if could be curtailed due to no signs of any releases for three or more years.</p>					

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**SITE DESCRIPTION CHART  
INSTALLATION RESTORATION PROGRAM  
NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
PAGE 3 OF 18**

Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
3	OU 8	Oil/Sludge Disposal Pit (50-100 ft in diameter and 3-5 ft deep)	1950s-1975	Waste fuels, oils, paints, paint strippers, solvents	Fuel farm, Aircraft Intermediate Maintenance Division (AIMD), squadrons, public works shops; waste was placed in at least four shallow pits. Groundwater was the only medium identified in the baseline risk assessment (BRA) as having an unacceptable human health risk. No ecological risk was identified for any medium	Prevent exposure to groundwater that contains VOCs at concentrations that are greater than the State of Florida guidance criteria and that cause unacceptable risk to human health.
	<ul style="list-style-type: none"> <li>The ROD was signed in September 1998.</li> <li>The final groundwater RD was submitted in October 1998 and identified air sparging (AS) of the source, natural attenuation monitoring of the plume, LUCs to prevent use of groundwater, and 5-year reviews.</li> <li>AS system began operation in late May 1999, and the system was shut down in May 2000. The AS system was restarted in December 22, 2000, and then shut down in February 2001.</li> <li>An Interim Remedial Action (IRA) report was submitted in June 2001.</li> <li>An ESD was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>A final LUC RD was submitted on April 21, 2005, and approved by U.S. EPA on June 1, 2005 and FDEP on May 18, 2005. A final OPS Demonstration Report was submitted on April 22, 2005, and approved by U.S. EPA on June 16, 2005 and FDEP on April 14, 2005.</li> <li>A DPT Investigation was conducted the week of July 11, 2011 to delineate the vertical and horizontal limits of the plume along the edge of the creek. Based on the findings, the BCT discussed the implementation of a solar-powered air sparge system to treat the groundwater. A Draft Work Plan was prepared and submitted on October 26, 2011 detailing this system.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b></p> <ul style="list-style-type: none"> <li>The third 5 year review recommended that an ESD or other appropriate decision document be prepared to clearly define COCs and RAOs. Also, it recommended that due to increasing concentrations in CEF-003-31S and CEF-003-WP should be closely monitored during upcoming events and further action should be considered if exceedances continue. Due date is September 20, 2016.</li> <li>Annual sampling is continuing, with the next event planned for September 2012.</li> </ul>					
4	--	Grease Pits (9 acres)	1950s-1983	Waste oils, mess greases	Multiple shallow pits which received liquid wastes from installation dining facilities and facility oil/water separators.	No RAOs
	<ul style="list-style-type: none"> <li>Field investigation work plan was submitted in March 1995. Field screening activities (including surface and subsurface soil sampling and monitoring well installation) were completed in June 1997. Groundwater sampling was completed in August 1997.</li> <li>The final Technical Memorandum for no further action (NFA) was submitted in September 1998.</li> </ul>					

TABLE 1-1

**SITE DESCRIPTION CHART  
INSTALLATION RESTORATION PROGRAM  
NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
PAGE 4 OF 18**

Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
5	OU 2	Oil Disposal Area Northwest (100 ft in diameter)	1950s	Oil, fuel	Shallow, unlined pit that received liquid wastes from the fuel farms.	Protect humans from exposure from potable water use of groundwater at Site 5 that contains concentrations of VOCs, SVOCs, pesticides, and inorganics above drinking-water-based ARARs or risk assessment remedial goal options; protect ecological receptors from exposure to sediment that contains concentrations of PCBs above guidance concentrations and TRPH that are demonstrated to pose a toxic effect at Site 5.
	<p><u>Interim Action:</u> An Interim ROD was signed in September 1994 with RAOs: Clean up contamination in the unsaturated soil above the water table to reduce the source of contaminants to groundwater; Remove free product to reduce the source of contamination to groundwater; and Clean up contaminated surface soil to reduce health risks from direct contact exposure. An IRA was initiated in March 1995 for source removal. The IRA included removal and disposal of free petroleum product and removal and treatment of contaminated soil using bioremediation. Per BCT recommendation, the IRA (bioremediation) activities were discontinued in June 1996. Remedial Action (RA) reports were submitted in May 1995.</p> <ul style="list-style-type: none"> <li>• Final ROD was signed September 1995. Due to discontinuation of the interim action, the ROD was amended and issued in January 2000.</li> <li>• The RAs for soil and sediment were initiated in April 1998. The final groundwater RD for AS was submitted in May 1998.</li> <li>• The final IRA and Year 3 Groundwater Report were submitted in March 2002</li> <li>• An ESD was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>• A final LUC RD was submitted on May 5, 2006, and approved by U.S. EPA on May 9, 2006 and FDEP on May 12, 2006.</li> <li>• A final OPS Demonstration Report was submitted on July 28, 2006.</li> <li>• Monitoring frequency was reduced to annual at the November 2007 BCT meeting.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <ul style="list-style-type: none"> <li>• The third 5 year report recommended that an ESD or other appropriate decision document clearly define the site COCs and RAOs; it also recommended that due to increasing concentrations at CEF-005-LTM01, the well should be closely monitored, and further actions considered if exceedances continue. Due date September 20, 2016.</li> <li>• It was decided at the November 9, 2011 BCT Meeting that a groundwater investigation by DPT would be conducted in the vicinity of well CEF-005-LMT01. A Work Plan detailing this investigation is being prepared.</li> <li>• Annual sampling is continuing, and the next event is scheduled for September 2012.</li> </ul>					

TABLE 1-1

**SITE DESCRIPTION CHART  
INSTALLATION RESTORATION PROGRAM  
NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
PAGE 5 OF 18**

Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
6	--	Lake Fretwell Rubble Disposal Area (3.5 acres)	1950s-1984	Inert rubble	Concrete/asphalt from demolition of runway, construction debris, lumber, scrap metal, cut foliage. Rubble was disposed along banks of a low-lying marsh area by public works; some of the rubble has been overlain with soil and sod; additional rubble is uncovered.	NA
	<ul style="list-style-type: none"> <li>A Field Investigation Plan was submitted in March 1995. Field screening activities (geophysical surveys, monitoring well installation, surface and subsurface soil sampling, surface water and sediment sampling) were conducted in June 1997. Groundwater sampling was completed in August 1997.</li> <li>The draft Technical Memorandum presenting investigation findings was submitted in May 1998. However, the BCT decided that additional sampling was required. Three additional soil sampling events were conducted between April and July 1999 to delineate soil contaminated with arsenic, total recoverable petroleum hydrocarbons (TRPH), and benzo(a)pyrene.</li> <li>A dig and haul package was completed in August 1999. The Navy excavated and disposed of the contaminated soil in August 1999.</li> <li>The final Technical Memorandum for NFA was issued in July 2000.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					
7	OU 3	Old Fire Fighting Training Area (1/3 acre)	1950s-1975	Waste fuels, oil, solvents, paint, paint strippers	Burnable liquid wastes were poured onto metal objects (jets) in shallow, unlined pits and ignited for firefighting training. Wastes received from fuel farms, AIMD, squadrons, and public works shops.	Prevent exposure to contaminants that pose an unacceptable human health risk and are present at concentrations exceeding the Florida soil cleanup goal for industrial sites. Prevent exposure to groundwater that contains benzene at concentrations greater than the Florida groundwater cleanup goal.
	<ul style="list-style-type: none"> <li>The ROD was signed in February 1999.</li> <li>A draft soil and groundwater design package was submitted in May 1998. In September 1998, surface soil sampling in support of the RA was conducted to further delineate TRPH, polynuclear aromatic hydrocarbons (PAHs), and inorganic contamination. The RA for soil was conducted in December 1998 and the Construction Completion Report indicated NFA for the soil.</li> <li>The groundwater portion of the design package was implemented in August 1998 and consists of annual groundwater monitoring.</li> <li>An AS pilot test was conducted at Well 8S in April 2001 after the quarterly sampling event.</li> <li>Final RA Completion Report (RACR) recommending NFA was submitted on September 15, 2003, and was approved by the BCT.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					

TABLE 1-1

**SITE DESCRIPTION CHART  
INSTALLATION RESTORATION PROGRAM  
NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
PAGE 6 OF 18**

Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
8	OU 3	Boresite Range/ Hazardous Waste Storage Area/Fire Fighting Training (6 acres)	1975-1984	Waste fuels, oil, solvents, paint, paint strippers, lead	Burnable liquid wastes were poured onto metal objects (jets) in shallow, unlined pits and ignited for firefighting training. Boresite range was used for machine gun and small arms practice. 55-gallon drums of waste were stored at the site and used as targets for practice. Wastes received from fuel farms, AIMD, squadrons, and public works shops.	Prevent exposure to groundwater at Site 8 that contains VOC and SVOCs at concentrations greater than the State of Florida groundwater cleanup target levels and that causes unacceptable risk to human health.
	<ul style="list-style-type: none"> <li>• The ROD was signed in July 1999.</li> <li>• The groundwater RD work plan was submitted in June 1998.</li> <li>• The draft soil RD, submitted in November 1998, identified excavation of the three pits to the groundwater table, removal of soil exceeding residential criteria to depth of 1 foot, and collection of confirmation samples. The Source Removal Report was issued in April 2000 and indicated NFA for soil.</li> <li>• The Baseline Sampling Event for natural attenuation was conducted in August 1998.</li> <li>• An ESD was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>• A final LUC RD was submitted on April 21, 2005, and was approved by U.S. EPA on June 1, 2005 and FDEP on August 12, 2005.</li> <li>• A final OPS Demonstration report was submitted on April 22, 2005, and was approved by U.S. EPA on June 16, 2005 and FDEP on May 18, 2005.</li> <li>• Year 11 sampling showed that the COC concentrations at all wells had been less than Groundwater Cleanup Target Levels (GCTLs) for two or more consecutive events.</li> <li>• The final RACR was submitted on December 23, 2010 and regulatory approval was received from FDEP on February 10, 2011 and EPA on February 17, 2011, confirming NFA for Site 8.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> Site closeout procedures, including well abandonment, will be completed as recommended in the Third Five-Year Review.</p>					
9	--	Recent Grease Pits (0.5 acre)	1983-1984	Grease mixed with water	Installation messes; three shallow pits were used to dispose of kitchen grease; each pit was used until full and then a new pit was excavated.	NA
	<ul style="list-style-type: none"> <li>• Field investigation work plan was submitted in March 1995.</li> <li>• Field screening activities, except for groundwater sampling, were completed in June 1997 (including geophysical survey, hydrological assessment, monitoring well installation, surface and subsurface soil, surface water and sediment sampling).</li> <li>• Groundwater sampling was completed in July 1997.</li> <li>• A draft Technical Memorandum presenting investigation results and conclusions was submitted in December 1997. The final technical memorandum for NFA was submitted in July 1998 and approved by the EPA and FDEP in August 1998.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
10	OU 4	Rubble Disposal Area (6.5 acres)	1950s-1960s	Inert Rubble	Surface disposal area received building demolition debris, runway debris, and metal.	NA
	<ul style="list-style-type: none"> <li>The final Remedial Investigation (RI) report was submitted in November 1996. The RI report presented an NFA recommendation with a proposal to prepare an NFA ROD. The Proposed Plan (PP) was submitted in July 1997. Final ROD was signed in September 1997.</li> <li>One detection of arsenic was observed greater than its background criterion, and in December 1998, soil sampling was conducted to delineate this area. A dig and haul package was submitted, and soil excavation and disposal related to arsenic contamination were completed in August 1999.</li> <li>An ESD was prepared in June 1999. The RA Report was issued in April 2000 and recommended NFA for the soil. The RA Report and the NFA recommendation were approved by EPA on June 05, 2000 and FDEP on May 15, 2000.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>					
11	OU 6	Golf Course Pesticide Disposal Area	1970s-1978	Pesticide, fungicide, and herbicide containers, vehicles, metal debris	Golf course maintenance area, which was used as a burial area for between 200 and 400 empty 5-gallon cans that had contained pesticides. A limited number of full containers of pesticides were buried in 1978.	Reduce human health risk associated with exposure to surface soil containing arsenic concentrations in excess of the site-specific background concentration (referred to as Hi-Cut value) of 2.1 milligrams per kilogram. Reduce human health risk associated with exposure to subsurface soil containing arsenic in excess of the FDEP brownfield site cleanup criterion of 29 mg/kg and DBCP in excess of its practical detection limit of 0.2 micrograms per kilogram (µg/kg). Reduce human health risk associated with exposure to groundwater containing DBCP and phenol in excess of their respective risk-based cleanup goals of 0.2 and 10 micrograms per liter (µg/L).
	<p><b>Interim Actions:</b></p> <ul style="list-style-type: none"> <li>An Interim ROD was signed in August 1994. The IRA was completed in January 1996. The RACR was submitted on October 18, 1996.</li> <li>The final ROD was signed in September 1998. The draft design for soil treatment was submitted in August 1998. A soil removal in accordance with the final RA occurred in December 1998. During the removal action, pesticide containers were discovered and disposed accordingly. A geophysical investigation was conducted in February 1999 to assess whether additional buried containers remained on site. Based on the anomalies found during this investigation, test pitting was conducted in the second quarter of FY 2000 (January to March 2000). A Soil RA Report Addendum was issued in August 2000 and indicated NFA for soil.</li> <li>The RD for groundwater was submitted in November 1998.</li> <li>The baseline groundwater sampling event was conducted in December 1998. The annual summary report for the Year 1 Quarterly Monitoring Program was completed in November 1999. Recommendations included reducing monitoring to semi-annual events.</li> <li>A final IRA report was completed in August 2002. A site close-out sampling event was conducted in October 2002, and the results of that sampling indicated that target cleanup levels were being met.</li> <li>A Final RA and Year 4 Annual Groundwater Monitoring Report recommending NFA at this site was submitted in June 2003 and approved by the BCT.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
12	--	Public Works Rubble Disposal Area (0.5 acre)	1970s-1984	Inert rubble, lumber, concrete, wire, cable, scrap metal, drums	Public works rubble was disposed on site. Majority of rubble was buried approximately 3 feet below land surface, some rubble is above ground.	NA
	<ul style="list-style-type: none"> <li>Field investigation work plan was submitted March 1995.</li> <li>Field screening activities (geophysical survey, hydrological assessment, monitoring well installation, surface and subsurface soil sampling, groundwater sampling and surface water and sediment sampling) were completed in August 1997.</li> <li>The Technical Memorandum for NFA was submitted in September 1998 and regulatory concurrence was received in October 1998.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					
13	--	Day Tank 1-Fuel Spill (1.5 acres)	1981	JP-5 fuel	Day tank containing JP-5 fuel spilled in 1981. Approximately 500,000 gallons of JP-5 fuel were spilled; approximately 250,000 gallons were recovered.	NA
	Transferred to the petroleum program.					
14	OU 5	Blue 5 Ordnance Disposal Area (4.5 acres)	1967-1977	Fuses, 100-pound bombs, large munitions, lulu fuses, other explosive materials	Installation ordnance disposal operations by open detonation or burning.	NA
	<ul style="list-style-type: none"> <li>The final RI report was submitted in October 1997.</li> <li>The final Feasibility Study (FS) report and the PP were submitted in March 1998.</li> <li>The ROD, which selected the NFA remedy, was signed in July 1998.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
15	OU 5	Blue 10 Ordnance Disposal Area (10 acres)	1960s-1977	Small arms, parachute/distr ess flares, Mark IV signal cartridges, rocket igniters, CADS, 5- and 2.75-inch rockets	Installation ordnance disposal operations by combustion in a chamber, with ashes being spread over the site.	Prevent unacceptable human health risk associated with exposure to Site 15 surface soil containing BaPEqs, arsenic, lead, and TRPH at concentrations greater than the established site-specific SCTLs. Reduce ecological risk associated with exposure to Site 15 surface soil containing BaPEqs, arsenic, and lead at concentrations greater than the established site-specific ecological target levels.
						<ul style="list-style-type: none"> <li>• The final FS was submitted in March 1998. An ecological study was conducted in September 1998. Additional sampling was conducted in 1999 to fill in data gaps for lead and PAH contamination.</li> <li>• A final Technical Memorandum for NFA for groundwater (no additional monitoring) at Site 15 was submitted in August 2001 and monitoring wells were abandoned. However, an FDEP rule change lowered the GCTL for arsenic from 50 parts per billion (ppb) to 10 ppb; therefore, the previous arsenic detection of 13.7 ppb exceeded the revised GCTL and Maximum Contaminant Level (MCL). Various rounds of groundwater sampling were conducted to evaluate arsenic exceedances and associated high turbidities.</li> <li>• A final FS was submitted in December 2006 and presented alternatives for remediation of soil and groundwater.</li> <li>• A revised Final FS was submitted in April 2007, indicating that groundwater was not a medium of concern. The revised draft ROD was submitted in June 2007.</li> <li>• Preliminary pre-excavation sampling in August 2007 resulted in significant revisions to the amount of lead-contaminated soil that would require disposal as hazardous waste and to the associated costs. Changes necessitated preparation of an Amended FS and revised ROD. Final Amended FS was submitted on April 30, 2008. The ROD was signed in June 2008.</li> <li>• The final LUC RD was submitted in August 2008, and the final RD was submitted in June 2008.</li> <li>• Excavation activities were conducted from July 7 to December 31, 2008, and a Construction Completion Report documenting the excavation activities was submitted in August 2009. Munitions concerns were identified during the excavation activities, and a cleaning was conducted in areas to be excavated.</li> <li>• The Final RACR was submitted October 7, 2011, documenting the completion of all events required by the ROD.</li> </ul> <p>Munitions Response Program Activities:</p> <ul style="list-style-type: none"> <li>• A Uniform Federal Policy (UFP)-SAP was prepared to address the Munitions Response Program (MRP) MEC RI, and submitted as a final document April 16, 2010. The FDEP and U.S. EPA approved the UFP-SAP.</li> <li>• A draft RI Report for Munitions Response was submitted August 4, 2010, and presented at the August 2010 BCT meeting based on the sampling described in the UFP-SAP. No regulatory comments were received and the final version of this report was submitted on January 12, 2011.</li> <li>• A final UFP-SAP was submitted on April 29, 2011 for the MRP MEC Supplemental RI. Field activities related to the MEC Supplemental RI were conducted in May and June 2011. The results of the Supplemental RI were presented at the August 2011 BCT meeting, and the Final Supplemental RI report was prepared and submitted on December 2, 2011</li> <li>• A Draft FS for Munitions Removal was submitted on November 29, 2011 and EPA comments were received. A final version of the document is being prepared.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b></p> <p>MRP concerns will continue to be addressed and MEC removed to a degree that will allow for the property to be transferred and used as a low-intensity recreational area.</p>

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
16	OU 7	AIMD Seepage Pit (40x3x10 ft)	1960-1980	Solvents, heavy metals, acids, blasting grit, paint residue, photo wastes	Building 313, jet engine maintenance shop, utilized a seepage pit to drain wastewater (containing solvents, paint, grease, metals) into area soils. Holding tank for wastewater is also located at Site 16; glass bead separator and associated piping also present.	Prevent exposure to groundwater that contains chlorinated VOCs at concentrations that are greater than the State of Florida GCTLs which includes the State and Federal drinking water standards and that cause unacceptable risk to human health.
	<p><u>Interim Remedial Action:</u></p> <ul style="list-style-type: none"> <li>• Focused FS and RD for the removal of holding tank and impacted soils were issued. Final responsiveness summary and Interim ROD were submitted in March 1994. The removal and closure of the Non-Destructive Inspection (NDI) Holding Tank were completed in June 1994. Final NDI Holding Tank Closure Certification and Report was submitted in September 1994.</li> <li>• The ROD was signed and submitted in August 1996. The RD for Site 16 was revised and consisted of RAs proposed for the source area and storm sewer system as identified below. An Amended ROD was signed in April 1999.</li> </ul> <p><u>Storm Sewer System:</u></p> <ul style="list-style-type: none"> <li>• A pilot-scale treatability study work plan for the storm sewer system was submitted in April 1998. The pilot study for the storm sewer system was completed in April/May 1998 and a pilot-scale treatability study report was submitted in June 1998.</li> <li>• The draft Storm Sewer RD was submitted in August 1998. A storm sewer investigation was conducted in August 1998 to evaluate the remaining portions of the storm sewer system near Site 16. The storm sewer system was repaired in June 1999.</li> </ul> <p><u>Source Area:</u></p> <ul style="list-style-type: none"> <li>• A decision was made based on new information to revise the RA to AS of the source and natural attenuation of the plume in the Amended ROD.</li> <li>• The AS/SVE system installation was completed in June 1999, the operation of the system began in late June 1999, and the system was shut down in May 2000.</li> <li>• The AS/SVE system was restarted on December 22, 2000, and shut down in February 2001.</li> <li>• An ESD was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>• A final LUC RD was submitted on April 21, 2005, and was approved by U.S. EPA on June 1, 2005 and FDEP on May 18, 2005.</li> <li>• A final OPS Demonstration Report was submitted on April 22, 2005, and was approved by U.S. EPA on June 16, 2005 and FDEP on May 18, 2005.</li> <li>• The AS/SVE system was restarted on April 16, 2009, after a direct-push technology (DPT) investigation was completed to verify that the hot spot area continued to be within the AS/SVE system limits. The AS/SVE system operated prior to the September 2009 event, and was then shut down.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <p>The third 5 year review recommended that an ESD or other appropriate decision document be prepared to clearly define COCs and RAOs. Annual sampling is continuing, and the next sampling event is scheduled for September 2012.</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
17	OU 2	Oil/Sludge Disposal Pit Southwest (2 acres)	Late 1960s - early 1970s	Waste fuels/oils	Unlined shallow disposal pit received wastes from fuel farms.	Protect human health from potable water use of groundwater at Sites 5 and 17 that contains concentrations of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, and inorganics above drinking water-based applicable or relevant and appropriate requirements (ARARs) or risk assessment RAOs.
	<p><u>Interim Remedial Action:</u></p> <ul style="list-style-type: none"> <li>An Interim ROD was signed in September 1994. An IRA was initiated in February 1995 for source removal and on-site treatment of contaminated soil. A RACR was submitted in September 1996.</li> <li>The final ROD was signed in September 1995. The remedial alternative is intrinsic bioremediation with an aggressive monitoring program. The final RD work plan was submitted in January 1997.</li> <li>An ESD was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>A final LUC RD was submitted on April 21, 2005, and was approved by U.S. EPA on June 1, 2005 and FDEP on May 18, 2005.</li> <li>A final OPS Demonstration Report was submitted on April 22, 2005, and was approved by U.S. EPA on June 16, 2005 and FDEP on May 18, 2005.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <p>The third five-year review recommended that an ESD or other appropriate decision document be prepared to clearly define COCs and RAOs. Annual monitoring is ongoing, and the next event is scheduled for September 2012.</p>					
18	--	Ammunition Disposal Area (0.1 acre)	1940s – 1950	Ammunition crates, miscellaneous ordnance	Waste material from a nearby magazine area was trucked in and dumped over the site during the 1940s until 1950. Reportedly, all munitions were removed.	NA
	<ul style="list-style-type: none"> <li>Field investigation work plan was submitted in March 1995. Field screening activities (monitoring well installation, surface and subsurface soil, surface water, and sediment sampling) were completed in August 1997.</li> <li>The draft Technical Memorandum for NFA was submitted in March 1998. The final Technical Memorandum for NFA was submitted in October 1998 and approved by EPA on November 30, 1998 and approved by FDEP on December 2, 1998.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <p>None</p>					
19	--	Rowell Creek Rubble Disposal Area (3 acres)	Section until 1991	Concrete, construction debris, asphalt, wood debris, trash	Construction and operations disposal; there is limited information on disposal practices	NA
	<ul style="list-style-type: none"> <li>Field investigation work plan was submitted in March 1995. Field screening activities (records and document search, geophysical surveys, monitoring well installation, surface and subsurface soil, surface water and sediment sampling) were completed in August 1997.</li> <li>The Technical Memorandum for NFA was submitted in November 1998, and approved on December 10, 1998 by EPA and on January 15, 1999 by FDEP.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <p>None</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
21	OU 10	Golf Course Pesticide Mixing Area	1950s to present	Pesticides, TRPH, and arsenic	Site activities included the storage and maintenance of golf course maintenance equipment, cleaning and rinsing of chemical-dispensing equipment, and preparation of chemical solutions. Empty containers at one time were disposed in a pile on the northwest side of the site. Rinsing took place at one of two places: on the east side of Building 238, and on a concrete pad on the north side of the site. At both locations, rinse water discharged into the ditch along the east side of the site.	Prevent unacceptable risk from exposure to soil with concentrations of arsenic greater than the background value. Prevent unacceptable risk from ingestion of groundwater with concentrations of chlordane greater than the FDEP GCTL and the federal Maximum Contaminant Level (MCL). Reduce concentrations of chlordane in groundwater to less than the FDEP GCTL and federal MCL.
	<ul style="list-style-type: none"> <li>• Soil contamination was delineated and a final Action Memorandum for soil removal to meet industrial criteria was issued in April 2001. The soil RA was completed in June 2001.</li> <li>• A draft Action Memorandum Addendum for removal of soil to risk levels was submitted in May 2002, and the RA was completed in September 2002. The RI was submitted in October 2001, and the final FS was submitted in September 2002. A final revised FS reflecting industrial land use was submitted in October 2003, and a revised final PP was submitted in early July 2005. A revised final ROD reflecting finalized LUC language was signed in September 2005.</li> <li>• A work plan for long-term groundwater monitoring was submitted in June 2002, and monitoring began in July 2002.</li> <li>• A final LUC RD was submitted on May 5, 2006, and was approved by U.S. EPA on May 8, 2006 and FDEP on May 15, 2006.</li> <li>• A final OPS Demonstration Report was submitted on July 28, 2006, and was approved by U.S. EPA on August 30, 2006 and FDEP on July 31, 2006.</li> <li>• A final Interim RA report was submitted on October 13, 2006, and was approved by U.S. EPA on October 31, 2006 and FDEP on January 3, 2007.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> Annual monitoring is ongoing. The next event is scheduled for September 2012.</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
25	OU 10	Former Transformer Storage Yard	1953 to 1999	Pesticides, polychlorinated biphenyls (PCBs), and benzo(a)pyrene	Limited information on practices. Site activities included the storage of pesticides and old transformers, operation of the wash rack, and service of equipment.	Prevent ingestion of groundwater with alpha- and beta-BHC concentrations greater than their respective cleanup goals of 0.006 microgram per liter (µg/L) and 0.02 µg/L, which are the FDEP Groundwater Cleanup Target Levels (GCTLs). Reduce concentrations of alpha- and beta-BHC in groundwater to less than FDEP GCTLs.
	<ul style="list-style-type: none"> <li>The soil contamination was delineated and a final Action Memorandum for soil removal was issued in April 2001. A soil RA was completed during May 2001.</li> <li>The RI and FS reports were submitted in October 2001.</li> <li>A work plan for long-term groundwater monitoring was submitted in June 2002, and sampling began in July 2002. The final ROD was signed in September 2004.</li> <li>A final Interim RA report was issued on September 14, 2005, and was approved by U.S. EPA on November 3, 2005 and FDEP on October 14, 2005.</li> <li>A final LUC RD was submitted on May 5, 2006, and was approved by U.S. EPA on May 9, 2006 and FDEP on May 15, 2006.</li> <li>A final OPS Demonstration Report was submitted on July 28, 2006, and was approved by U.S. EPA on September 13, 2006 and FDEP on July 31, 2006.</li> <li>Groundwater concentrations were less than cleanup goals for two consecutive sampling events, and the draft RACR was submitted on May 15, 2008. Regulatory comments were received, and the final RACR was approved by U.S. EPA February 3, 2009 and by FDEP December 16, 2008. NFA is required at Site 25.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					
32	OU 12	Defense Reutilization and Marketing Office (DRMO) Asphalt Storage Yard		PAHs and metals	Site was used for unpermitted storage of hazardous materials in drums.	Prevent unacceptable risk from exposure to soil with concentrations of PAHs greater than FDEP residential SCTLs and concentrations of inorganics greater than FDEP residential SCTLs and/or IBDS values. Address the potential risk of migration of organic and inorganic contamination from soil to groundwater from soils with concentrations that exceed FDEP SCTLs for leachability.
	<ul style="list-style-type: none"> <li>A Sampling and Analysis Report (SAR), issued in 1996, indicated that metals detected in surface soil at the site may represent a hazard. Field investigations were conducted between May 1999 and April 2000 to delineate soil contamination.</li> <li>A final Action Memorandum for soil removal was prepared in May 2000, and 140 tons of soil were excavated and disposed in August 2000. Because contaminated soil remains at the site beneath a paved storage area, an Engineering Evaluation/Cost Analysis (EE/CA) was prepared and submitted in August 2002. The EE/CA recommended groundwater monitoring with LUCs as the preferred RA alternative at the site.</li> <li>The final ROD was signed in October 2004.</li> <li>A final LUC RD was submitted on May 5, 2006, and was approved by U.S. EPA on May 9, 2006 and FDEP on May 15, 2006.</li> <li>A final OPS Demonstration Report was submitted on July 28, 2006, and was approved by U.S. EPA on August 30, 2006 and FDEP on July 31, 2006.</li> <li>Groundwater sampling to verify that contaminants are not leaching from soil is to be conducted every 5 years per the ROD.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> The next sampling event will take place in May 2014.</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
36	OU 9	Control Tower TCE Plume		Chlorinated solvent, benzene, toluene, ethylbenzene, and xylene (BTEX) plume.	The plume was discovered during the Day Tank 2 groundwater plume investigation. The plume's major contaminants are TCE and BTEX. The groundwater plume is located south of Building 82, the control tower.	Prevent unacceptable risks from human exposure to contaminated groundwater at Sites 36 and 37; Prevent contaminant migration from groundwater to surface water at Site 36; Restore surficial aquifer quality at Sites 36 and 37 to meet Preliminary Remediation Goals (PRGs).
	<ul style="list-style-type: none"> <li>• The RI Report was completed in August 1999.</li> <li>• The remediation of Day Tank 2 groundwater contamination is included in the Site 36 groundwater remediation. The FS and PP were issued in September 2000.</li> <li>• The ROD was signed in June 2001.</li> <li>• The final RD for the AS system was submitted in September 2001, and the RA construction began in December 2001. The AS system began operation at one hot spot in March 2002. The construction for the entire system was completed in July 2002. Also, a long-term monitoring (LTM) plan for groundwater was submitted in January 2001 and monitoring began in the same month.</li> <li>• An ESD was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>• The final LUC RD was submitted on May 5, 2006, and was approved by U.S. EPA on May 9, 2006 and FDEP on June 29, 2006.</li> <li>• A final OPS Demonstration Report was submitted on August 1, 2006, and was approved by U.S. EPA on August 30, 2006 and FDEP on October 10, 2006. The Year 5 final annual monitoring report was submitted on June 1, 2007, and recommended that the AS system at Hot Spot 2 be shut down.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> Semi-annual sampling is continuing, and the next event is scheduled for March 2012.</p>					
37	OU 9	Hangars 13 and 14 dichloroethene (DCE) Plume		Chlorinated solvent and BTEX plume	Groundwater plume located southeast of Hangars 13 and 14. The plume was discovered as part of the flightline groundwater investigation. Its major contaminants are DCE and BTEX.	Prevent unacceptable risks from human exposure to contaminated groundwater at Sites 36 and 37; Prevent contaminant migration from groundwater to surface water at Site 36; Restore surficial aquifer quality at Sites 36 and 37 to meet PRGs.
	<ul style="list-style-type: none"> <li>• The RI Report was completed in August 1999. The FS and PP were issued in September 2000. The ROD was signed in June 2001.</li> <li>• The final RD for the AS system was submitted in September 2001, and the RA construction began in December 2001. The AS system began operation at one hot spot in March 2002. The construction for the entire system was completed in July 2002. Also, a LTM plan for groundwater was submitted in January 2001 and monitoring began the same month.</li> <li>• An ESD was signed in November 2003 to provide enforceable LUC provisions that were to become part of the ROD.</li> <li>• The final LUC RD was submitted on May 5, 2006, and was approved by U.S. EPA on May 9, 2006 and FDEP on June 29, 2006.</li> <li>• A final OPS Demonstration Report was submitted on August 1, 2006, and was approved by U.S. EPA on August 30, 2006 and FDEP on October 10, 2006.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> Quarterly monitoring in the source area will continue until there have been four quarterly events after system shut-down with no exceedances. Semi-annual monitoring of the full site is also continuing. The next event will be a semi-annual event, scheduled for March 2012.</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
42	OU 12	Former Boiler House /Steam Plant and General Storehouse	1940s to 1960s	PAHs, TRPH, and metals	Steam generation from buildings. Limited information on practices since the buildings were all demolished in the late 1950s and early 1960s.	NA
	<ul style="list-style-type: none"> <li>Initial investigation began in 1994. In 1999, a Sampling and Analysis Outline Report (SAOR) for the Yellow Water Weapons Area indicated that arsenic, barium, and benzo(a)pyrene at Site 42 exceeded FDEP Soil Cleanup Target Levels (SCTLs). Further field investigations were conducted between April 1999 and April 2000 to delineate soil contamination.</li> <li>A final Action Memorandum for soil removal was submitted in January 2001, and 2,420 tons of soil were excavated and disposed in February and March 2001.</li> <li>A Technical Memorandum for NFA was submitted in March 2002. An NFA PP was issued in June 2002, and an NFA ROD was signed in October 2002.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					
44	OU 12	Ditch from DRMO to Wastewater Treatment Plant (WWTP)	1942 to 1999	PAHs, PCBs, TRPH, pesticides and metals	USTs were present in the area of the WWTP. Sewage discharges from WWTP occurred. Wash water containing solvents accidentally discharged to ditch at least once.	NA
	<ul style="list-style-type: none"> <li>Initial investigation began in 1993. Field investigations were conducted between June 1999 and April 2000 to delineate soil contamination and evaluate ecological risks from sediment and surface water pathways. An Action Memorandum for soil removal was submitted in June 2000, and 290 tons of soil were excavated and disposed in September 2000.</li> <li>A Technical Memorandum for NFA was submitted in January 2002. It was determined that post-excavation ecological risks at the site are negligible. An NFA PP was issued in June 2002, and an NFA ROD was signed in October 2002.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
45	OU 11	Facility 11, Steam Generating Plant	1941 to 1999	Benzo(a)pyrene, arsenic, and vanadium	Activities related to steam generation for the base. Limited information on practices at the site.	Prevent unacceptable risk from exposure to soil with concentrations of BaPEq and TRPH greater than the FDEP residential SCTLs and concentrations of arsenic greater than the background value. Prevent unacceptable risk from ingestion of groundwater with concentrations of vanadium greater than the FDEP Groundwater Cleanup Target Level (GCTL). Reduce concentrations of vanadium in groundwater to less than the FDEP GCTL.
	<ul style="list-style-type: none"> <li>Beginning in 1998, field investigations were conducted to delineate soil and groundwater contamination. The soil contamination was delineated, and a final Action Memorandum for soil removal was issued in May 2000. A soil RA was conducted in August 2000.</li> <li>The RI was submitted in June 2001, the FS was submitted in August 2001, the PP was submitted in July 2003, and the final ROD was signed in October 2003.</li> <li>A final LUC RD was submitted in April 2004 and was approved by U.S. EPA on May 11, 2004 and FDEP on June 12, 2004. A final Interim RA report was submitted on December 28, 2004, and was approved by U.S. EPA on February 8, 2005 and FDEP on January 7, 2005.</li> <li>A final OPS Demonstration Report was submitted on November 10, 2005, and was approved by U.S. EPA on August 30, 2006 and FDEP on April 7, 2006.</li> <li>Soil sampling was to be conducted every 5 years per the ROD was conducted in July 2009, and results were evaluated as part of the Third Five-Year Review Report, which states that soil sampling will be discontinued upon the acceptance of the document. The Five-Year Review was accepted on September 8, 2011.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b></p> <ul style="list-style-type: none"> <li>Discussions regarding the current LUC boundaries, groundwater flow in the surrounding area, and monitoring well results are on-going.</li> <li>Annual groundwater monitoring is ongoing. The next monitoring event is scheduled for July 2012.</li> </ul>					
49	OU 5	Skeet Range	1965 to 1998	PAHs and metals	Recreational skeet shooting generated clay pigeons and lead shots.	Prevent unacceptable risk from exposure to soil with concentrations of PAHs and lead in excess of FDEP residential SCTLs. Address the potential risk of transfer of organic and inorganic contamination from soil to groundwater from soil with concentrations that exceed FDEP SCTLs for leachability.
	<ul style="list-style-type: none"> <li>Initial investigation began in 1999. Soil sampling indicated PAH and lead soil contamination. Additional soil sampling from 1999 to 2001 was conducted to delineate the extent of contamination.</li> <li>A draft EE/CA was prepared in August 2001 to evaluate alternatives for site remediation. The final EE/CA was submitted in February 2002.</li> <li>An Action Memorandum for soil removal was submitted in May 2002 and the remedial excavation, which began in August 2002, was completed at the end of December 2003. The delay was because of flooding over parts of the site.</li> <li>A NFA ROD was signed in September 2006.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
57	OU 9	Flight Line Building 824A & Day Tank 1 Area	1957 to 1999	BTEX and chlorinated solvents	Aircraft ground support, specifically, BTEX from Day Tank 1 Area	Prevent unacceptable risk from exposure to Site 57 groundwater with concentrations of chlorinated VOCs, BTEX, PAHs, and TRPH greater than the cleanup goals that are the federal MCLs and FDEP GCTLs. Restore contaminated groundwater concentrations to less than cleanup goals, which are the federal MCLs and FDEP GCTLs.
	<ul style="list-style-type: none"> <li>• Initial investigation began in 1997. In 1999, as part of the MB-18 SAOR, contamination of groundwater with PAHs and chlorinated compounds was reported. Additional well installation and groundwater sampling activities to delineate the extent of contamination were conducted in 2000. Because of the proximity to existing Day Tank 1 wells (Petroleum Program), and because of the presence of some common groundwater contaminants (petroleum-related components), it was decided in April 2001 that a comprehensive evaluation of groundwater in the entire area was required under the Installation Restoration Program (IRP). The RI work plan for this investigation was submitted in August 2001, and the RI field investigation occurred from September to December 2001.</li> <li>• The final RI Report was submitted in August 2002, the final FS report was submitted in October 2002, and the final PP recommending LTM with LUCs as the RA for this site was submitted in July 2003.</li> <li>• A final ROD was signed in September 2005. A final RD Work Plan for LTM was submitted in April 2003, and the Year 1 quarterly groundwater monitoring events occurred in May 2003, July 2003, October 2003, and January 2004.</li> <li>• A final Interim RA report was submitted in May 2007.</li> <li>• A final LUC RD was submitted on May 5, 2006, and was approved by U.S. EPA on May 9, 2006. A final OPS Demonstration Report was submitted on August 1, 2006, and was approved by U.S. EPA on August 30, 2006 and FDEP on October 10, 2006.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> Annual monitoring is continuing. The next sampling event is scheduled for March 2012.</p>					
58	OU 9	Flight Line Building 312	1957 to 1999	BTEX and chlorinated solvents	UST, oil/water separator, wash rack and paint booth received waste from aircraft maintenance activities.	Prevent unacceptable risk from exposure to Site 58 groundwater with concentrations of naphthalene and TRPH greater than the cleanup goals that are the federal MCLs and FDEP GCTLs. Restore contaminated groundwater concentrations to less than cleanup goals, which are the federal MCLs and FDEP GCTLs.
	<ul style="list-style-type: none"> <li>• The RI work plan for this investigation was submitted in August 2001, and the RI field investigation occurred in September 2001. The final RI report was submitted in August 2002, the final FS report was submitted in October 2002, and the final PP recommending LTM with LUCs as the RA was submitted in July 2003.</li> <li>• A final ROD was signed in September 2005.</li> <li>• A final RD Work Plan for LTM was submitted in April 2003, and groundwater monitoring began in May 2003.</li> <li>• A final Interim RA report was submitted on October 13, 2006, and was approved by U.S. EPA on October 31, 2006 and FDEP on March 12, 2007.</li> <li>• A final LUC RD was submitted on May 5, 2006, and was approved by U.S. EPA on May 9, 2006 and FDEP on May 12, 2006.</li> <li>• A final OPS Demonstration Report was submitted on August 1, 2006, and was approved by U.S. EPA on August 30, 2006 and FDEP on October 10, 2006.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> Annual monitoring is continuing. The next sampling event is scheduled for March 2012.</p>					

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Site No.	Operable Unit (OU)	Site Name/Size	Period of Operation	Waste Type	Sources	Remedial Action Objective
59	OU 9	Buildings 324/1845 Areas	1989 to present	Chlorinated solvents in groundwater	No source determined. Engine Maintenance Shack used primarily by a Naval subcontractor.	Prevent unacceptable risk from exposure to groundwater with concentrations of chlorinated VOCs in excess of their respective FDEP GCTLs. Restore groundwater quality at Site 59 to meet drinking water standards based on FDEP classification of the aquifer as a potential source of drinking water (Class G-11).
	<ul style="list-style-type: none"> <li>A RI Work Plan was submitted in August 2004. The RI field investigation was initiated in September 2004 and completed in September 2005.</li> <li>A final Pilot Study Work plan for bioremediation was submitted on January 11, 2006, and the pilot study was initiated the following month. The pilot study was completed in April 2007.</li> <li>The final RI Report and final FS report were submitted on November 9, 2006 and April 6, 2007, respectively.</li> <li>The final LUC RD was submitted as draft final on May 29, 2009, and was accepted as final on July 1, 2009 by U.S. EPA, and on July 29, 2009 by FDEP.</li> <li>The final RD was submitted on March 24, 2008, and the ROD was signed in April 2008.</li> <li>The full-scale bioremediation system was installed and turned on in November 2008. Two of the hot spot bioremediation systems were shut down in November 2009, and the Hot Spot 2A system was expanded and operated from December 02, 2009 to July 29, 2010. The bioremediation system was taken offline on July 29, 2010.</li> <li>The Hot Spot 2A expansion system was fully restarted after the May 23, 2011 event and is currently running.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> While the Hot Spot 2A expansion system is operating, sampling will continue quarterly in that area, and semi-annually across the full site. One semi-annual event will include analysis for natural attenuation parameters along with the VOCs analyzed during all rounds. The upcoming sampling event, scheduled for February 2012, will include only the system expansion area.</p>					
Potential Source of Contamination (PSC) 51	--	Golf Course	1950s to present	Pesticides and metals	Golf course. Limited information on practices. Site activities are an active golf course.	NA
	<ul style="list-style-type: none"> <li>Initial field investigations were conducted to delineate soil contamination and began in April 1999.</li> <li>The groundwater, surface water, and sediment in the streams and ponds were investigated and a Technical Memorandum for NFA was submitted in November 1999. A revised Technical Memorandum recommending NFA at this site was submitted in September 2003 and approved by the BCT.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					
OGC	OU 12	Old Golf Course	1940s to 1950s	Pesticides and arsenic	Golf course. Limited information on practices. Site activities were an active golf course until the 1950s.	NA
	<ul style="list-style-type: none"> <li>Initial investigation began in 1993. Field investigations were conducted between November 1999 and May 2000 to delineate soil contamination at the former tee boxes and greens.</li> <li>A final Action Memorandum for soil removal was submitted in July 2000, and 480 tons of soil were excavated and disposed in August 2000.</li> <li>A Technical Memorandum for NFA was submitted in August 2001. An NFA PP was issued in June 2002, and a NFA ROD was signed in October 2002.</li> </ul> <p><b><u>Upcoming and Ongoing Activities:</u></b> None</p>					

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**SITE DESCRIPTION CHART  
 PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
 NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Jet engine test cell (JETC) Building 334	Adjacent to Building 339	JP-5 Jet Fuel	<p>Two 20,000-gallon asphalt-coated, steel tanks with corrosion-resistant metal piping with cathodic protection installed in 1953 (Tanks 339-TC1 and 339-TC2).</p> <p>One 5,000-gallon steel aboveground storage tank (AST) (339-TC3) (removed in 1995).</p> <p>Past releases have occurred because of tank overfilling. In October 1989, efforts to leak test Tanks TC1 and TC2 failed when inadequate seals were discovered between the manway covers and tank walls.</p>	Reduce contaminant concentrations in the petroleum-impacted soil at the site. Retard plume migration at the site. Protect human health and the environment by reducing the concentrations of hydrocarbons detected at the site to target cleanup levels.
<p><u>Current Investigative Status:</u></p> <ul style="list-style-type: none"> <li>• A Preliminary Contamination Assessment (CA) was initiated in December 1990 by ABB Environmental Services, Inc. (ABB-ES). United States Corps of Engineers (U.S. COE) conducted a soil investigation in January 1991. The CA was completed in 1993 and a Contamination Assessment Report (CAR) Addendum (CARA) was submitted in March 1994. A CARA II was submitted in November 1994. Subsequently, an Alternate Procedures Request (APR) for free-product recovery was submitted on August 4, 1995.</li> <li>• The Remedial Action Plan (RAP) was submitted on November 22, 1996. A letter report identifying a variation in soil treatment from thermal treatment to biopiles was submitted in July 1997.</li> <li>• An Interim Remedial Action (IRA) for soil excavation was completed in September 1997. Soil removal activities took place during the first quarter of FY 1999. Additional assessment activities were conducted in May and June 2001 using direct push technology (DPT)/mobile laboratory followed by installation of permanent monitoring wells to further delineate the plume.</li> <li>• The Sampling and Analysis Report (SAR) Addendum (SARA) was prepared and concluded that two plumes exist on site and that additional soil removal was required on the southern side of Building 334. Two other areas where contaminated soil could not be excavated were recommended for institutional controls to prevent exposure.</li> <li>• A RAP was recommended to address the contaminated (accessible) soil and groundwater on the site. The RAP was submitted on September 27, 2002. FDEP issued a response on November 30, 2002 requesting additional information and clarification. A RAP Addendum was submitted on January 20, 2003.</li> <li>• The sparge system was started on November 17, 2003. The Operation and Maintenance (O&amp;M) Report covering August 1 to October 31, 2006 indicated that concentrations in monitored wells were less than GCTLs. Based on these results, the system was turned off on April 15, 2007.</li> </ul> <p><u>Other Information:</u></p> <ul style="list-style-type: none"> <li>• Part of Building 339 was demolished and rebuilt in June 1991. Approximately 137.6 tons of soil was sent to Anderson Columbia for incineration.</li> <li>• A 200-gallon spill occurred adjacent to Building 339 in July 1995. Soil was excavated and placed in 55-gallon drums and properly disposed off-site.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <ul style="list-style-type: none"> <li>• Quarterly groundwater monitoring is ongoing. The first quarter 2012 event is scheduled for February 2012.</li> </ul>				

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 PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Sal Taylor Creek Containment Areas (Dam Sites)	Along Sal Taylor Creek	JP-5 Jet Fuel	JP-5 fuel spill from the North Fuel Farm (NFF) Tank 76E that occurred on February 10, 1991. The seven dam sites are located along Sal Taylor Creek and emergency response actions were conducted at these sites after the spill. Heavy equipment and vacuum trucks were used to recover the fuel from Sal Taylor Creek.	No RAOs
<p><u>Current Investigative Status:</u></p> <ul style="list-style-type: none"> <li>• CAs were conducted in 1991 and 1994. The field investigation included soil borings, surface water and sediment sampling, and monitoring well installation. A CAR was submitted in July 1994. Based on FDEP comments, further investigations were conducted in 1995. The investigations included toxicity assessment and surface water and sediment sampling. A CARA was submitted in March 1996 and approved by FDEP in May 1996.</li> <li>• Per Base Realignment and Closure (BRAC) Cleanup Team (BCT) recommendations, sediment samples were collected for toxicity testing in December 1996. Samples were collected from the dam sites where biomonitoring or remediation was recommended in the CARA. Toxicity testing results were submitted in February 1997.</li> <li>• A CARA recommending no further action (NFA) at all dam sites, except Possum Dam, was submitted on May 19, 1997. An additional sample was collected at the Possum Dam site in December 1997. A CARA recommending NFA at Possum Dam was submitted in February 1998.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u> None</p>				
103 <sup>rd</sup> Street Pipeline	Intersection of 103 <sup>rd</sup> and Ave. A	Type JP-5 Jet fuel	A "pinhole" leak in the 8-inch pipeline conveying fuel from Naval Air Station (NAS) Jacksonville to NAS Cecil Field was discovered and repaired in the Spring of 1997. An IRA was performed to remove petroleum impacted soils and to repair the pipeline. The pipeline was then taken out of service. In the spring of 1998, a site assessment was initiated.	Eliminate the presence of LNAPL. Reduce the soil and groundwater contaminant concentrations to target levels established by the FDEP as eligibility requirements for a natural attenuation monitoring program. The following paragraphs list the target levels for site specific COCs for each of the contaminated media.
<p><u>Current Investigative Status:</u></p> <ul style="list-style-type: none"> <li>• Investigation activities were conducted from September to December 1998 to delineate free product and a SAR was submitted in February 1999. A RAP was submitted in August 1999 recommending air sparging (AS)/soil vapor extraction (SVE) to address soil and groundwater plumes. The installation of the AS/SVE system was completed in the third quarter of fiscal year (FY) 2000. It began operation in June 2000 and continued to operate until May 2005, at which time a Site Rehabilitation Completion Order (SRCO) stipulating NFA at the site was issued by FDEP.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u> None</p>				

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**SITE DESCRIPTION CHART  
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NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
JP-5 Spill Area	Adjacent to Tank 76-E, northeast corner of NFF	JP-5 Jet Fuel	On February 10, 1991, JP-5 fuel overflowed from Tank 76-E. The fuel flowed down the slope on the east side of the earth-mounded tank (EMT) into a small ditch that discharges into Sal Taylor Creek.	See North Fuel Farm
<p><u>Current Investigative Status:</u></p> <ul style="list-style-type: none"> <li>A preliminary CA was conducted in 1991 and a CA was conducted from May 27 through June 5, 1992. The investigation included soil borings and monitoring well installation and the CAR was submitted in July 1994. Based on FDEP comments on the CAR, further investigations were conducted in 1995.</li> <li>A CARA, submitted in March 1996, was approved by FDEP in May 1996. Recommendations for remedial actions (RAs) were included in the RAP for the NFF site. Supplemental samples were collected in September 1997, and a CAR letter report was submitted in November 1997.</li> </ul> <p><u>Other Information:</u></p> <ul style="list-style-type: none"> <li>From September 1995 through January 1996, an IRA was conducted by Bechtel. The IRA included removal of about 2,750 cubic yards of contaminated soil [greater than 1000 parts per million (ppm)] from the site. Additional soil removal activities were performed in July and August 1999.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <p>None</p>				
South Fuel Farm (SFF)	Facility 43, south of intersection of 2nd Street and "A" Avenue	JP-5 Jet Fuel	Location of several ASTs, underground storage tanks (USTs), and EMTs. All ASTs were removed in 1995 and all USTs and EMTs (except Tank 342-DT) were removed in July 1994.	Achieve cleanup of contaminated areas to levels prescribed in Chapter 62-770 FAC.
<p><u>Current Investigative Status:</u></p> <ul style="list-style-type: none"> <li>CA was completed in December 1991 and CAR was submitted in July 1992. Upon review of CAR, FDEP requested additional investigation at this site. Supplemental investigation was completed in July 1995 and CARA was submitted in January 1996.</li> <li>A RAP addendum submitted on October 28, 1996, was approved by FDEP in February 1997.</li> <li>The remedial system (biosparging [BS]) was installed in February 1998 and system start-up activities were completed in March 1998. The remedial system was operating, but not to the satisfaction of the Navy. Supplemental site investigations and system evaluation were completed in November 2002, May 2003 and October 2003.</li> <li>A RAP Addendum documenting the results of the supplemental assessment and recommending modifications to improve the performance of the system was submitted on July 1, 2004.</li> <li>A final Technical Memorandum submitted on June 6, 2006, recommended shutting down the BS system and adding bioventing wells to address soil contamination.</li> <li>A Post-Active Remediation Monitoring (PARM) work plan was submitted in January 2008. The PARM Report which covered the events from February 2008 through March 2009 was submitted August 17, 2009, recommending further monitoring at select wells.</li> <li>It was decided by the BCT that a Site Assessment Report (SAR) would be appropriate. The SAR was prepared and submitted August 5, 2011. An additional round of sampling event was conducted the week of August 22, 2011 to supplement the SAR, based on FDEP comments. A Draft Final version of the SAR was submitted on December 21, 2011.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <p>The Site Assessment Report has been revised to include the new data, and a recommendation has been made accordingly. FDEP review of the SAR is pending. Monitoring will commence upon approval.</p>				

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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Truck Stand Site	Loop road south of NFF	JP-5 Jet Fuel	Used as loading station for the flightline refueling tank trucks resulting in probable spills and soil staining. The site consists of a control building, a pumping station, asphalt and concrete parking area, and a retention pond.	See North Fuel Farm
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>A preliminary CA was conducted in 1990. A CA was completed in 1991 and CAR was submitted in May 1992. Subsequently, CARA was submitted in July 1994. Upon review of CARA, FDEP recommended additional investigation that included monitoring well installation, collection of groundwater samples, and advancement of soil borings. CARA was submitted to FDEP in March 1996. The CARA II was approved by FDEP in April 1996.</li> <li>The Monitoring Only Plan (MOP), submitted on December 6, 1996, was approved in February 1997.</li> <li>Additional contaminated soil was removed in August 2000 and a sampling event was performed in March 2000. The September 2000 semi-annual groundwater sampling event was postponed because several monitoring wells were destroyed during the source removal activities. The monitoring wells were replaced and the sampling resumed in February 2001, and a report was submitted in April 2001.</li> <li>The April 2001 sampling report recommended that a RAP be prepared. A supplemental assessment to better delineate the groundwater plume began in the fourth quarter of FY 2002, and it was completed in January 2003. A letter report describing the results was submitted in June 2003. A remedial strategy and remedial system design were prepared for the site as part of the RAP prepared for the NFF Site. The RAP, which recommended AS and SVE, was submitted to FDEP in late March 2004.</li> <li>The Truck Stand has been incorporated into the NFF site.</li> </ul> <p><b>Other Information:</b></p> <ul style="list-style-type: none"> <li>An IRA to remove soils saturated with free product was completed in May 1996. Approximately 1,000 cubic yards of soil were excavated and properly disposed off-site. An RA report was submitted in June 1996.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>				
Sal Taylor Creek Bank Sites	Along Sal Taylor Creek	JP-5 Jet Fuel	Activities were conducted following the JP-5 fuel spill in February 1991.	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>Nine locations along the banks of Sal Taylor Creek were investigated to determine extent of soil and groundwater contamination due to the 1991 fuel spill. Results of the 1992-93 investigation were presented in the July 1994 CAR.</li> <li>Per FDEP recommendations, additional investigations were completed in September 1995. The CARA submitted in March 1996 was approved by FDEP in April 1996. The CARA recommended natural biodegradation for the RA at these sites. Temporary wells were installed in December 1996 at the two locations recommended by FDEP. Groundwater samples were collected from these wells in January 1997.</li> <li>A CARA presenting the groundwater sampling results from the temporary wells, along with a recommendation for NFA, was submitted on June 16, 1997. The NFA recommendation was approved by FDEP.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>				

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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Day Tank 1	Northeast of Jet Road	JP-5 Jet Fuel	200,000-gallon interior-lined asphalt-coated steel tank containing JP-5. Tank was installed in 1956. Location of fuel spill in 1981; approximately 497,000 gallons of JP-5 fuel were spilled because of overfill; approximately 250,000 gallons were recovered.	Containment and physical removal of free product.
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• The CA was completed in 1993 and a CARA was submitted to FDEP in December 1993.</li> <li>• An APR was submitted to FDEP in August 1995 to recover free product. The APR was approved in September 1995. Per FDEP recommendation, five additional wells were installed and sampled in September 1995. A revised RAP was submitted in January 1997, recommending excavation and the installation of a BS/SVE system.</li> <li>• Day Tank 1 was removed in December 1999 and the excavation of the soil mound occurred in December 1999 and January 2000. The BS/SVE system has been in place since 2000.</li> <li>• Semi-annual groundwater monitoring was conducted in July 2000 and January 2001. Shortly afterward, it was determined that the petroleum plume from Day Tank 1 was co-mingling with a chlorinated solvent plume under investigation near Building 824A. The BCT decided to postpone further groundwater monitoring at Day Tank 1 and expand the scope of the Building 824A (Site 57) to include the Day Tank 1 plume area. The Site 57 investigation also included some free product delineation.</li> <li>• At the June 2002 BCT meeting, it was agreed to conduct additional soil delineation outside the original source removal area to address soil contamination encountered by the Remedial Action Contractor (RAC). In August 2002, a flame ionization detector (FID) was used to delineate soil contamination based on headspace measurements. In October and November 2002, soil samples were collected from approximately 80 locations to delineate the extent of contamination. Additional temporary monitoring wells were installed to confirm the extent of free product. Additional delineation of soil contamination was completed in early September 2003, and excavation of the remaining contaminated soil and the free product was completed during the 1st quarter of FY 2004.</li> <li>• A SARA was submitted in November 2003, resulting in a removal action being performed during the 1<sup>st</sup> Quarter of FY 2004. An additional soil investigation began in April 2004 resulting in an additional excavation of soil, which was completed in September 2004. The final SARA No. 2 for Day Tank 1, recommending NFA for soil, was submitted on January 30, 2006. FDEP issued a Natural Attenuation Monitoring Plan Approval Order (NAMP AO) on October 19, 2006.</li> <li>• A report detailing the disassembly and removal of the BS/SVE system at the site was submitted October 14, 2009. The 2010 semi-annual events were conducted in March and September 2010, and the associated report was submitted as final on February 16, 2011. The latest sampling event was conducted on March 16, 2011.</li> <li>• A Uniform Federal Policy-Sampling and Analysis Plan (UFP-SAP) was submitted on March 25, 2011.</li> </ul> <p><b>Other information:</b></p> <ul style="list-style-type: none"> <li>• A BS/SVE system was installed by JA Jones/CH2M Hill in 2000. The system is shut down. In February 2002, JA Jones began work to locate and close the pipeline that exists between Day Tank 1 and the North-South High Speed Refuelers.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> Sampling is continuing semi-annually. The next sampling event is scheduled for March 2012.</p>				

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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
NFF Area	Northeast corner of A Avenue and Loop road	JP-5 Fuel	Six 595,000-gallon, interior-lined, asphalt-coated, steel, EMTs (76, 76A through 76E). Tanks 76 and 76A were installed in 1952 and remaining tanks were installed in 1954. In 1987, all tanks were relined and overflow protection was installed. In addition, Tank 76 was equipped with automatic shut-off system. Tank 76E was taken out of service in 1991. However, the following spills occurred: 22,772-gallon spill on August 3, 1987; 913,000-gallon spill on February 10, 1991; and 1,800-gallon spill on November 28, 1993.	Remediate contaminated groundwater. Protect human health and the environment by reducing the concentrations of groundwater contamination at the site to GCTLs.
<p><u>Initial Remedial Action:</u></p> <ul style="list-style-type: none"> <li>• Completed installation of a catalytic oxidizer at the NFF site. Also installed 15 extraction wells. Nine of these extraction wells were connected to the bioslurper unit. Quarterly groundwater sampling was completed during this reporting period. Continued free-product recovery activities. The bioslurper system was shut down in April 1998.</li> </ul> <p><u>Current Investigative Status:</u></p> <ul style="list-style-type: none"> <li>• CA was completed in 1991. The CAR was submitted in June 1992. Supplemental investigation was completed in 1993/94. Field work was conducted in April 1994 to investigate the 1,800-gallon spill. In July 1994, FDEP recommended additional investigation that was completed in 1995. A CARA was submitted in April 1996. Supplemental assessment recommended by the BCT was completed in November 1996. The RAP and the revised CARA were submitted in January 1997. Supplemental soil samples were collected in September 1997 and the results were presented in a RAP letter memorandum submitted in November 1997. Additional soil samples for Kerosene Analytical Group (KAG) parameters were collected in April 1998.</li> <li>• The BCT recommended that a pilot study be conducted to evaluate recirculation wells as a viable alternative for groundwater treatment. The 1999 recirculation well pilot-scale study showed difficulties in operation of the system. The technology was eliminated in favor of AS.</li> <li>• A RAP Addendum was submitted in August 1999. This addendum also described the removal of the tanks, earth mound, and soil beneath the tanks. The source removal action began in the 3rd quarter of FY 2000 and was completed in mid-February 2001. Supplemental assessment activities were initiated in July 2001. These activities included the use of DPT/membrane interface probes (MIPs) followed by installation of permanent monitoring wells to evaluate the current conditions and the impact of the source removal activities recently conducted at the site. Monitoring well installation and sampling were completed in February 2003, and the results indicated the need for additional wells. The additional well installation was completed in July 2003.</li> <li>• The Supplemental SAR was submitted to the FDEP in October 2003. A RAP Addendum recommending AS/SVE was submitted to the FDEP in late March 2004. FDEP issued a directive to discontinue AS/SVE system operation on October 24, 2005.</li> <li>• A site-wide groundwater sampling event conducted in May 2007 indicated a significant reduction in the size of the groundwater plume. An Optimization Study was conducted to evaluate the path forward, and the Optimization Report was submitted in June 2008. The recommendations were approved by FDEP on August 20, 2008. The AS system was restarted in November 2008 with a reduced number of wells operating.</li> <li>• The UFP-SAP was submitted on March 25, 2011.</li> </ul> <p><u>Other information:</u></p> <ul style="list-style-type: none"> <li>• The soil source removal, conducted by JA Jones/CH2M Hill involved the excavation 140,957.03 tons of petroleum-contaminated soil and the recycling of 19,550 gallons of free product and petroleum contact water. The Source Removal Report (SRR) was approved on February 22, 2002.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u> Quarterly sampling is continuing, and the next event is scheduled for March 2012.</p>				

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**SITE DESCRIPTION CHART  
PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Tank 199	Building 199, Southeast corner of C Avenue and 6th Street	Heating oil	Leaking 2,000-gallon underground heating oil tank	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>A CA plan was prepared in August 1996. The CA was initiated in September 1996 and the field program was completed in December 1996. The CAR was submitted in March 1997. Additional soil samples were collected in September 1997, and the results were presented in a CAR memorandum submitted in November 1997. Soil samples for KAG analysis were collected in March 1998. Soil removal activities took place during the 1st quarter of FY 1999.</li> <li>Natural attenuation monitoring began in July 1999 on a semi-annual basis and was changed to annual after the February 2000 event. The latest annual sampling event occurred during January 2007, and the associated Supplemental Assessment Letter Report was submitted on February 28, 2007.</li> <li>A Site Rehabilitation Completion Letter Report was submitted to the FDEP on April 26, 2007, and the SRCO for this site was issued on September 6, 2007.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>				
Day Tank 2	Facility 342-DT, south of intersection of 2nd Street and "A" Avenue	JP-5 fuel	Several USTs and ASTs were located adjacent to the Day Tank 2 facility. In October 1996, free petroleum product was observed in a piezometer located south of Day Tank 2. The release was believed to have been from the 200,000-gallon earth mounded, interior-lined, asphalt-coated, steel tank or associated piping. Approximately 29,000 gallons of free product were recovered. Day Tank 2 was taken out of operation in October 1996 and removed in 1997.	No RAOs
<p><b>Initial Remedial Action:</b></p> <ul style="list-style-type: none"> <li>Day Tank 2 was decommissioned in 1996 and was removed in August 1997</li> </ul> <p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>A CA plan was submitted in June 1997. The field investigation at Day Tank 2 included installation of several monitoring wells, DPT groundwater screening points, soil borings, and soil sampling in March 1998.</li> <li>SAR was completed in July 1998.</li> <li>A source removal plan was submitted in October 1998, and the removal action was conducted in November 1998. Monitoring wells that were destroyed during the IRA were replaced and sampled in April 1999. A report describing the analytical results was completed in May 1999.</li> <li>Groundwater contamination will be addressed as part of OU 9, Sites 36/37.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>				

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**SITE DESCRIPTION CHART  
PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Tank 46 (Includes 46R, 46D, 46SUL, and 46UL)	Building 46 across D Avenue from the Bachelor Officers Quarters	Regular and unleaded gasoline and diesel fuel	A total of eight leaking tanks: - four 2,000-gallon tanks - two 10,000-gallon tanks - two 6,000-gallon tanks	Soil remedial action goals for Building 46 site-specific COCs are listed in Table 2 of the University of Florida Soil Cleanup Target Level Development Web Site. Groundwater remedial actions goals are listed in Table 1 of the University of Florida Soil Cleanup Target Level Development Web Site.
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• A RAP was submitted in March 1999. This RAP included the design of an AS/SVE System for the remediation of contaminated soil and groundwater. The RAP was revised to use a nutrient-enhanced BS system to remediate the source area and plume in June 2000. Installation of the remediation system was completed in January 2001. The RAC reported contaminated groundwater exceeding GCTLs in a perimeter well.</li> <li>• A supplemental assessment to delineate this contamination began during the fourth quarter of FY 2002 and was completed in January 2003. A letter report describing the results of the investigation was submitted on May 28, 2003.</li> <li>• A RAP modification was issued in March 2004 to extend the current system to adequately remediate that part of the groundwater plume that was not currently being affected. The two PHOSter systems (east and west) were removed and were replaced by one BS system in the eastern portion of the site.</li> <li>• A Remedial Action Optimization Report was submitted in May 2007 to address path forward for two small hotspots with exceedances of FDEP Natural Attenuation Default Concentrations (NADCs) for naphthalene and methyl tertiary butyl ether (MTBE). The Optimization Report recommended redirecting flows to these two hotspots and bringing the west side BS system offline. In January 2008, FDEP approved discontinuing use of the west system.</li> <li>• Both systems were removed from the site on January 31, 2008. A new AS system was installed on the eastern side of the site on September 17, 2008. The AS system was shut down in December 2009.</li> <li>• A final UFP-SAP was submitted on March 25, 2011.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> Semi-annual monitoring is on-going, and the next event is scheduled for March 2012.</p>				
Tank 9L1 and 9L2	Building 9 near the corner of B Avenue and 3 <sup>rd</sup> Street	Gasoline	Two leaking tanks, each 1,250 gallons	Soil and groundwater remediation objectives are based on Table V, Selected Soil Cleanup Target Levels and Groundwater Cleanup Target Levels, as listed in the FDEP guidance manual.
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• A RAP was submitted in February 1999. This RAP included the design of an AS/SVE system for the remediation of contaminated soil and groundwater. The RAP was revised to use a nutrient-enhanced BS system to remediate the source area and plume in June 2000. Installation of the remediation system was completed in January 2001, and the system was in operation through the end of 2005.</li> <li>• FDEP has declared this a NFA site with orders to abandon the wells.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>				

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**SITE DESCRIPTION CHART  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
312 O/W	North side of Building 312 (Corrosion Control Hangar)	Used oil group constituents	Leaking 900-gallon oil/water separator (OWS) tank or the associated piping	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• A confirmatory sampling investigation of soil and groundwater was initiated in July 1998.</li> <li>• A Confirmation Sampling Report (CSR) was submitted in 1999. The CSR indicated that the site had been impacted by used oil group constituents.</li> <li>• A site assessment using DPT/mobile laboratory screening was conducted, followed by installation of permanent monitoring wells. A SAR recommending a source removal and follow-up groundwater monitoring was submitted to FDEP in April 2002. FDEP issued a letter indicating that additional assessment was required. The additional assessment activities were completed in mid-July 2003.</li> <li>• A Supplemental SAR was issued on September 5, 2003. A source removal was performed by WRS in October 2003 to remove petroleum impacted soil. A SRR was submitted to FDEP in December 2003 indicating that stained soil was observed in one location during the excavation. This area was subsequently sampled, and the laboratory results indicated that concentrations of COCs were less than SCTLs.</li> <li>• An NFA recommendation was subsequently submitted to FDEP on November 9, 2006, and FDEP approved the NFA recommendation with an SRCO was submitted by FDEP on January 47, 2007.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>				
824 O/W	South side of Building 824 (Avionics Shop)	Used oil group constituents	Leaking oil/water separator (capacity unknown) and/or associated piping	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• A confirmatory sampling investigation was initiated in September 1998. A CSR was submitted in 1999. The CSR indicated that the site had been impacted by used oil group constituents.</li> <li>• A site assessment using DPT/mobile laboratory screening, followed by the installation of permanent monitoring wells was conducted.</li> <li>• The SAR recommended NFA for the site. At the August 2002 BCT meeting, FDEP indicated that the review was complete, and an NFA letter was issued by FDEP on August 29, 2002.</li> </ul> <p><b>Other information:</b></p> <ul style="list-style-type: none"> <li>• A SRR was submitted by the RAC on December 16, 2000.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None</p>				

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**SITE DESCRIPTION CHART  
 PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
 NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
North-South Apron Plume	East of Building 815 on eastern edge of north-south flightline apron	Unknown	Possible leakage from storm sewers or downward migration of an upgradient plume from an unknown site.	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• Earlier investigations indicated that VOCs were present in the groundwater at concentrations that exceeded FDEP GCTLs. Additional assessment activities conducted between November 1999 and November 2000 confirmed that VOCs were present in the groundwater at concentrations that exceeded GCTLs. A SAR was submitted recommending implementation of natural attenuation monitoring.</li> <li>• FDEP issued a NAMP AO in March 2001. The first three quarterly events indicated that groundwater VOC concentrations continued to exceed GCTLs, and the plume appeared to be static, and a supplemental assessment was recommended.</li> <li>• The additional assessment began during the fourth quarter of FY 2002. A letter report was submitted on January 14, 2003, recommending natural attenuation monitoring. An FDEP response, issued on May 2, 2003, requested additional assessment to delineate the vertical extent of contamination. The installation and sampling of additional wells was completed in July 2003, and a second supplemental assessment letter report was submitted to FDEP in December 2003. FDEP issued a response on January 30, 2004, requesting additional sampling.</li> <li>• The Navy issued a Scope of Work (SOW) for the additional sampling on July 20, 2004, and the sampling was completed on March 24, 2005. A Supplemental Assessment Letter Report was issued in August 2005 and approved by FDEP in September 2005. A new groundwater monitoring program began on July 7, 2006.</li> <li>• A final UFP-SAP was prepared for the site, and submitted on April 12, 2010, and monitoring is ongoing.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b></p> <p>Semi-annual monitoring is ongoing, and the next event is scheduled for January 2012.</p>				
Building 82/ Tank G-82	Eastern side of Building 82 on western edge of north-south flight line apron		Remaining contaminated soil next to Building 82 removed in 2000.	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• A site investigation was conducted from October 1999 to July 2000. Petroleum contaminants were detected in the soil and groundwater. A total of 148.1 tons of contaminated soil were removed and approximately 49 yards of contaminated soil were left in place because of physical obstructions.</li> <li>• A groundwater Monitoring Only Natural Attenuation (MONA) proposal was recommended to begin after the excavation was completed. On April 18, 2002, additional subsurface soil samples were collected for TRPH Subclassification Evaluation to determine if the contaminated soil left in place required excavation. All results were less than FDEP Industrial SCTLs; therefore, the soil was left in place and land use controls (LUCs) were put in place.</li> <li>• A Monitored Natural Attenuation (MNA) Work Plan was submitted in May 2008; MNA monitoring began in July 2008, and sampling was performed quarterly. Sampling was changed to semi-annual frequency after the Year 1 Fourth Quarter Report.</li> <li>• A final UFP-SAP was prepared for the site, and submitted on April 12, 2010.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b></p> <ul style="list-style-type: none"> <li>• Semi-Annual sampling is continuing, and the next event is scheduled for April 2012.</li> </ul>				

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**SITE DESCRIPTION CHART  
PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
BP Wells	Southeast of Building 880 on western edge of the north-south flightline apron		ASTs in secondary containment and an associated OWS.	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• A groundwater investigation was conducted in 1999. The results from the 1999 investigation indicated that contaminants of concern (COCs) in groundwater exceeded GCTLs in two monitoring wells. Additional assessment activities were conducted in February 2000. The SAR submitted in August 2000 indicated that groundwater had been impacted by VOCs. In response to the SAR, FDEP issued a NAMP AO.</li> <li>• The Navy gave approval to conduct a treatability study at this site using in-situ oxygen curtain (iSOC) technology. The iSOC system was installed and began operation in October 2002 after a baseline groundwater sampling event was conducted. The Fourth Quarter Monitoring and Annual Treatability Study Evaluation Report, recommending that the treatability study be discontinued, was approved June 2004.</li> <li>• Natural Attenuation Monitoring Plan (NAMP) and an MNA Work Plan were submitted in May 2008, MNA monitoring began in July 2008.</li> <li>• A final UFP-SAP was prepared for the site, and submitted on April 12, 2010.</li> <li>• It was decided by the BCT that a chemical injection (ORC Advanced) event would take place at BP Wells to address the NADC exceedances.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b></p> <ul style="list-style-type: none"> <li>• Semi-annual monitoring is on hold. The ORC Advanced injection was conducted in November 2011, and monitoring will begin again upon completion of the construction of the new hangar and installation of the new monitoring wells.</li> </ul>				
Building 502, Tank 502	West of Building 502, south of the perimeter road	Fuel oil	Leaking 1,000-gallon fuel oil tank was removed in 1997	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• Tank 502 was removed in 1997, followed by a soil source removal.</li> <li>• The FDEP provide a MOP in July 1999 that required the semi-annual sampling of various monitoring wells at the site.</li> <li>• The Supplemental SAR recommended several modifications to the monitoring program.</li> <li>• Additional characterization of the source of contamination was conducted. Tetra Tech installed a total of 10 step-out soil borings in the vicinity of the source well in November 2006 for additional site characterization. During the November 2006 sampling event, total petroleum hydrocarbons (TPH) were detected in excess of the soil cleanup target level (SCTL) at four soil borings. According to the SAR Addendum, excavation in the vicinity of these soil borings was recommended.</li> <li>• A Dig and Haul Package was submitted on September 11, 2007.</li> <li>• Excavation occurred in June 2010 and approximately 90 cubic yards of soil were removed.</li> <li>• Post-excavation groundwater monitoring was conducted and the results indicated concentrations were all less than GCTLs for consecutive rounds; therefore, it was proposed that the site be closed out.</li> <li>• A Site Rehabilitation Completion Report requesting NFA was prepared, and a Site Rehabilitation Completion Order was signed by FDEP on November 10, 2011.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b></p> <p>Conduct close-out activities.</p>				

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**SITE DESCRIPTION CHART  
 PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
 NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Ocala F-18 Crash Site	In Ocala National Forest approx. 82 miles south of Cecil Field and approx. 22 miles southeast of Ocala, Florida	Jet Fuel	Past releases due to crashed F-18 Jet	No RAOs
<p><u>Current Investigative Status:</u></p> <ul style="list-style-type: none"> <li>In June 1994, a Navy F-18 jet crashed in the Ocala National Forest.</li> <li>A site assessment and initial RA were conducted. A MONA plan was submitted in April 1998 requiring quarterly monitoring.</li> <li>Based on the new sampling data, a revised MONA was proposed with new milestone objectives for different COCs and different wells, and the MONA was approved in October 2005.</li> <li>A supplemental soil sampling event was to be conducted in the area around the source well because February 2008 concentrations of benzene, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene exceeded end of Year 3 action levels specified in the NAMPAO. The Year 4 event was conducted in March 2009 and the supplemental soil sampling was conducted concurrently.</li> <li>It was decided by the BCT that semi-annual sampling would be appropriate for this site to monitor for seasonal fluctuations. The first semi-annual, Year 7 sampling event was conducted August 22, 2011, and the associated report was submitted on November 30, 2011.</li> </ul> <p><u>Upcoming and Ongoing Activities:</u></p> <p>Semi-annual sampling is ongoing, and the next event is scheduled for February 2012.</p>				

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**SITE DESCRIPTION CHART  
PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Building 81, Tanks 81 A, B, and C	Next to former locations of Building 81, near PCA 25	Gasoline	Tanks 81 A, B, and C	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• The 2002 SAR identified shallow groundwater contamination and concluded that soil contamination was adequately addressed by previous source removals in the area. The SAR recommended implementation of a groundwater monitoring program and groundwater use restrictions. A NAMP was signed by FDEP on October 1, 2002.</li> <li>• The Supplemental Site Assessment Letter Report recommended that additional wells be installed to delineate shallow and intermediate groundwater contamination. Based on sampling results, preparation of a revised NAMP and continuation of the quarterly monitoring program was recommended. The revised NAMP was submitted on November 21, 2007. .</li> <li>• A UFP-SAP was prepared for the site and submitted in July 2010 and monitoring is ongoing based on the SAP.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> Long-term monitoring is continuing, with the sampling frequency being semi-annual. The next event is scheduled for April 2012.</p>				
Building 271	To the west and east of Bldg 271.	Gasoline	Four USTs and 2 OWSs	No further remedial action is planned for soil. For groundwater: retarding plume migration at the site. Protecting human health and the environment by reducing the concentrations of hydrocarbons detected at the site to target cleanup levels.
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>• A RAP was submitted in September 2002 to the FDEP and a RAP Addendum was submitted to the FDEP in January 2003. AS was selected as the remedial alternative. The AS system was installed from September to November 2003, and commenced operation on November 17, 2003.</li> <li>• The system was put back online, and quarterly sampling is ongoing. The system was taken offline in September 2008.</li> <li>• A draft UFP-SAP was submitted to the BCT in August 2010.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> Quarterly sampling is ongoing. The next event is scheduled for March 2012.</p>				

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**SITE DESCRIPTION CHART  
 PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
 NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Building 290A, Tank G-290A	located north of Building 290A, southeast of intersection of north-south and east-west runways	Diesel	250-gallon AST used for Standby Generator	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>A CSR Addendum recommending SRR was submitted December 31, 2002. FDEP requested resubmittal in August 2003. FDEP approved proposed soil excavation for NFA on November 30, 2006. Draft Dig and Haul Package submitted May 14, 2007, and FDEP provided comments on August 31, 2007. The site was discussed during the September 2007 BCT Meeting, and additional sampling was recommended. Sampling was conducted on September 14, 2007, and a revised Dig and Haul Package was submitted on October 13, 2007.</li> <li>The tank was removed by Jacksonville Aviation Authority in June 2007. A Dig and Haul Package was submitted on November 16, 2007. Excavation took place in June 2010. One source area monitoring well was installed in August 2010, and the well was sampled in September 2010 to verify absence of groundwater contamination. A Site Rehabilitation Completion Report was submitted on December 15, 2010 and approved by FDEP January 31, 2011.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> None.</p>				
Hangar 815 Wash Rack	North of Building 815, South of Building 1845	Wash water, petroleum products	Wash Rack	No RAOs
<p><b>Current Investigative Status:</b></p> <ul style="list-style-type: none"> <li>A SAR for the site, now designated building 815 Wash Rack Area, was submitted in August 2000 and identified TRPH and naphthalene groundwater contamination at the site. MONA was recommended based on the results of the SAR. Semi-annual monitoring began in January 2001.</li> <li>The site was transferred to the IRP to be addressed with Site 59, but was transferred back to the Petroleum Program based on discussions at the September 2007 BCT Meeting.</li> <li>A SAR Addendum was recommended during the September 2007 BCT meeting and was submitted to FDEP on May 20, 2008.</li> <li>A NAMPAO was issued on November 16, 2008 and a final UFP-SAP was submitted on April 12, 2010.</li> <li>Sampling frequency was changed from semi-annual to annual as agreed upon at the November 15, 2011 BCT meeting and with FDEO approval of the second Semi-Annual, Year 3 Groundwater Monitoring Report.</li> </ul> <p><b>Upcoming and Ongoing Activities:</b> Annual sampling is ongoing, and the next event is scheduled for January 2012.</p>				

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**SITE DESCRIPTION CHART  
 PETROLEUM PROGRAM AND MUNITIONS RESPONSE PROGRAM  
 NAS CECIL FIELD, JACKSONVILLE, FLORIDA  
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Site Name	Site Location	Waste Type	Sources	Remedial Action Objective
Building 365 Munitions Response Area (MRA)	On the Northwestern edge of the North-South Flightline	UXO	Munitions discarded by unknown persons.	No RAOs
<ul style="list-style-type: none"> <li>• Munitions were first identified at the Site in September 2004. A Munitions Response Team visited the site and talked with one of the responding Florida Air National Guard Explosives Ordnance Disposal (EOD) Technicians. An Explosives Safety Submission (ESS) was submitted in October 2004 and approved by the Department of Defense Explosives Safety Board (DDESB) in November 2004. The initial mag and dig operation was conducted in December 2004, and it was determined that the area needed to be expanded. The area was expanded according to a Work Plan submitted in February 2005 and MRP investigations continued.</li> <li>• Munitions response on 28.5 acres completed to date.</li> </ul> <p><b>Upcoming and Ongoing Activities</b></p> <p>Munitions response fieldwork started in November 2011 and completed on Dec 5, 2011. No MEC items were found in periphery grids. The MEC items that were recovered during fieldwork activities are currently stored in a magazine at Hanger 860 and are scheduled to be disposed of by demolition in February 2012. The After Action Report is scheduled for submittal in March 2012.</p>				
Hangar 860 MRA	On the Northwestern edge of the East-West Flightline	UXO	Munitions discarded by unknown persons.	No RAOs
<ul style="list-style-type: none"> <li>• Temporary storage of munitions is reported to have taken place at the Building 865 Facility.</li> <li>• A possible MEC item was first identified in the MRA in February 2005 during a visual site survey for an upcoming construction project. Munitions response has continued since in various investigations.</li> <li>• Munitions response on 44.5 acres completed to date</li> </ul> <p><b>Upcoming and Ongoing Activities</b></p> <p>Field work started in November 2011. MEC was found in periphery grids; therefore, additional munitions response is required to the west and south of current MRA. The MEC items that were recovered during fieldwork activities are currently stored in a magazine onsite and are scheduled to be disposed of by demolition in February 2012. The After Action Report is scheduled for submittal in March 2012, pending field work completion.</p>				

## 2.0 ACTIVITIES PERFORMED DURING THE PREVIOUS QUARTER

### 2.1 FIELD WORK

The following field activities were conducted during the fourth quarter of CY 2011.

#### IR Program

- OU9, Sites 36 & 37 – long-term groundwater monitoring event, first quarter source area Year 12.
- OU9, Site 59 – long-term groundwater monitoring event, first semi-annual Year 4.
- OU9, Site 59 – remedial system operation (Hot Spot 2A area only).

#### MRP

- Building 365 – munitions response fieldwork activities.
- Hangar 860 – munitions response fieldwork activities.

#### Petroleum Program

- Building 271 – groundwater monitoring event, third quarter 2011.
- BP Wells – ORC injection activities.
- JETC – groundwater monitoring event, fourth quarter 2011.
- NFF – groundwater monitoring event, fourth quarter 2011.
- NFF – air sparge system operation.
- Tanks 81 A, B, and C – groundwater monitoring event, first semi-annual Year 2.
- Tank G82 – groundwater monitoring event, first semi-annual Year 4.

### 2.2 DELIVERABLES

The following deliverables were submitted during the fourth quarter of CY 2011.

#### IR Program

- OU1, Sites 1 and 2 – Final Technical Memorandum for MEC Site Walk.
- OU1, Sites 1 and 2 – Final Groundwater Monitoring Report, annual Year 14.
- OU2, Site 5 – Final Groundwater Monitoring Report, annual Year 13.
- OU2, Site 17 – Final Groundwater Monitoring Report, annual Year 14.
- OU5, Site 15 – Final Remedial Action Completion Report.

- OU7, Site 16 – Final Groundwater Monitoring Report, annual Year 12.
- OU8, Site 3 – Draft Pilot Study Work Plan for Solar Powered Low Volume Air Sparge Treatment Curtain.
- OU9, Site 59 – Final Groundwater Monitoring Report, annual Year 2.
- OU10, Site 21 – Final Groundwater Monitoring Report, annual Year 10.
- OU11, Site 45 – Draft Groundwater Monitoring Report, annual Year 10.

**MRP**

- OU5, Site 15 – Final Supplemental MEC Remedial Investigation.
- OU5, Site 15 – Draft Feasibility Study for Munitions Removal.

**Petroleum Program**

- BP Wells – Implementation Report for Chemical Injection Using Direct Push Technology.
- Ocala Crash Site – Final Groundwater Monitoring Report, first semi-annual Year 7.
- SFF – Draft Final Site Assessment Report.

**2.3 MEETINGS**

The following meetings were held during the fourth quarter of CY 2011:

- Partnering Meeting: November 9, 2011.

### 3.0 UPCOMING ACTIVITIES SCHEDULED FOR THE CURRENT QUARTER

#### 3.1 FIELD WORK

The following field activities are scheduled to be conducted during the first quarter of CY 2012.

##### IR Program

- OU9, Sites 36 & 37 – long-term groundwater monitoring event, first semi-annual Year 12.
- OU9, Site 57 – long-term groundwater monitoring event, annual Year 9.
- OU9, Site 58 – long-term groundwater monitoring event, annual Year 9.
- OU9, Site 59 – long-term groundwater monitoring event, third quarter system expansion area Year 4.
- OU9, Site 59 – remedial system operation (Hot Spot 2A area only).

##### MRP

- Building 365 – disposal of MEC items by demolition.
- Hangar 860 – continued munitions response fieldwork activities and disposal of MEC items by demolition.

##### Petroleum Program

- Building 271 – groundwater monitoring event, fourth quarter 2011.
- Building 46 – groundwater monitoring event, first semi-annual 2012.
- Day Tank 1 – groundwater monitoring event, first semi-annual 2012.
- Hangar 815 Wash Rack – groundwater monitoring event, annual Year 4.
- JETC – groundwater monitoring event, first quarter 2012
- NFF – groundwater monitoring event, first quarter 2012.
- NFF – air sparge system operation.
- NSAP – groundwater monitoring event, first semi-annual year 7.
- Ocala Crash Site – groundwater monitoring event, second semi-annual Year 7.
- SFF – groundwater monitoring event, first semi-annual Year 1 under new monitoring program.

#### 3.2 DELIVERABLES

The following deliverables are scheduled to be submitted during the first quarter of CY 2012.

**IR Program**

- OU2, Site 5 – Final Groundwater Monitoring Report, annual Year 14.
- OU2, Site 17 – Final Groundwater Monitoring Report, annual Year 15.
- OU7, Site 16 – Final Groundwater Monitoring Report, annual Year 13.
- OU8, Site 3 – Final Groundwater Monitoring Report, annual year 13.
- OU9, Sites 36 and 37 – Final Groundwater Monitoring Report, annual Year 11.
- OU9, Site 59 – draft Groundwater Monitoring Report, annual Year 3
- OU10, Site 21 – Final Groundwater Monitoring Report, annual Year 11.
- Sitewide – LUC Inspections (FOSTs)
- Sitewide – LUC Inspections (MOA)

**MRP**

- OU 5, Site 15 – Final Supplement MEC Feasibility Study.
- Building 365 – After Action Report for munitions response fieldwork.
- Hangar 860 – After Action Report for munitions response fieldwork.

**Petroleum Program**

- Tanks 81 A, B, and C – Final letter report, first semi-annual Year 2.
- Tank G82 – Final letter report, first semi-annual Year 4.
- NSAP – Final letter report, first semi-annual Year 7.
- Hangar 815 Wash Rack – Final letter report, annual Year 4.

**3.3 MEETINGS**

The following meetings are scheduled to be held during the first quarter of CY 2012:

- Partnering Meeting: February 15, 2012.