



**US Army Corps  
of Engineers**

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Defense Environmental Restoration Program  
For  
Formerly Used Defense Sites

# INVENTORY PROJECT REPORT (REVISED)

**Lee Field NAS**  
Green Cove Springs, Clay County, Florida

Property No. I04FL0085

07 March 2011

Original INPRs: 30 November 1989

30 November 1989

Revised INPR: 26 September 1995

Prepared by  
U.S. Army Corps of Engineers St. Louis District  
for the  
U.S. Army Corps of Engineers Jacksonville District

**Inventory Project Report (Revised)**  
**Lee Field Naval Air Station**  
**Green Cove Springs, Florida**  
**Property No. I04FL0085**  
**07 MARCH 2011**

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**REVISED**  
**PROPERTY SURVEY SUMMARY SHEET**  
**FOR**  
**DERP-FUDS PROPERTY No. I04FL0085**  
**LEE FIELD NAVAL AIR STATION**  
**GREEN COVE SPRINGS, FLORIDA**  
**07 MARCH 2011**

**PROPERTY NAME:** Lee Field Naval Air Station (NAS) [aka Green Cove Springs NAS]

**LOCATION:** The former Lee Field NAS covers approximately 1,560 acres on the western bank of the St. Johns River about 1.5 miles southeast of the town of Green Cove Springs, Florida. The property is located at approximately Latitude 29° 58' 36" North; Longitude 81° 39' 30" West in the I. F. Clark Mill Grant, Township 6 South, Range 26 East, Clay County, Florida. The property is located in US Environmental Protection Agency Region 4, Third Congressional District. The property is currently known as the Reynolds Industrial Park.

**PROPERTY HISTORY:** Lee Field NAS was acquired for U.S. use between 1940 and 1943, with additional lands added in 1948 for a berthing area to store fleet ships. The installation was known as the U.S. Naval Station (USNS), Lee Field, during World War II and was utilized by the Navy and Marines for training bomber pilots. After the war, the station continued to be used by the Navy for the storage of fleet ships. Lee Field NAS consisted of runways, taxiways, roads, utility systems, fuel storage tanks, ship mooring facilities, and various structures as hangars, administrative buildings, barracks, mess halls, family housing, etc. In 1961 the entire NAS was declared excess by the Navy and was conveyed, in totality, to the City of Green Cove Springs, Florida. The City of Green Cove Springs sold the property by Special Warranty Deed in 1965 to a private corporation, who transferred the property to the County Port Authority, who, in turn, donated two parcels of less than 1 acre each, containing a sewage treatment plant and two water towers, back to the City of Green Cove Springs. The property is currently owned by Clay County Ports, Inc., which is currently utilizing the property as an industrial park (Reynolds Industrial Park), a small private airport, marine port facilities, and a golf course.

**PROPERTY VISIT:** Beginning in 1993, several property visits have been conducted on the Lee Field NAS by U.S. Army Corps of Engineers (USACE) personnel, as well as by government contractors.

**CATEGORY OF HAZARDS:** HTRW, CON/HTRW, and MMRP.

**PROJECT DESCRIPTION:**

<b>Original Approved Project No.</b>	<b>Original Project Description</b>	<b>Revised INPR Project No.</b>
Project 00	Spill Area (Area 4)	Project 00
	Landfill 2 Area	Project 04
	Pyridine/Burn Area	Project 05
	Fire Training Area	Project 06
	Grease Rack Ditch	Project 07
	Small Arms Range	Project 08
	Landfill 1 Area	Project 09
	Landfill 3 Area	
Project 01	8 USTs, 3 ASTs	Project 01
	PCB Transformers	Project 10
Project 02	Not Used	
Project 03	2 USTs (Area 2)	Project 03
	3 USTs (Area 3)	
	1 UST (Bldg. 9)	
	3,000 feet of pipeline	
	3 USTs (Area 1)	Project 11
	1 UST (Water Treatment Plant No. 1)	Project 12
	1 UST (Water Treatment Plant No. 2)	
	Service Pit Area	Project 13
	Building 19 UST	Project 14
	Incinerator/Disposal Area	Project 15
	Bldg. 245 UST Area	Project 16

**Project 00. HTRW. Landfill Area.** A Hazardous, Toxic, and Radioactive Waste (HTRW) project was approved on 30 November 1989 to address three landfills, the Pyridine/Burn Area (behind the former firing range), the Fire Training Area, and the Grease Rack Ditch Area. Possible materials disposed of at the landfills included decommissioned ship parts, containerized hazardous materials, and various industrial chemicals and other mixed wastes used in the decommissioning process. Fire-fighter training was conducted in the Fire Training Area in the early 1950's. The Grease Rack structure is a pair of concrete ramps onto which vehicles were driven for servicing. Waste oil was discharged to a drain between the ramps. The Pyridine/Burn Area was reportedly used for disposal of excess materials removed from the mothballed ships beginning in 1946. Activities conducted under this project identified a Small Arms Range covering an area of approximately seven acres, and a Spill Area (Area 4) at the current end of the Pier Alpha pipeline. The original HTRW Project 00 is being revised because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

Project 00 is now being limited to the Spill Area (Area 4). Activities conducted under Project 00 identified a spill area at the current end of the Pier Alpha pipeline. Petroleum-contaminated soil

was discovered at the termination point of the 3,000-foot fuel pipeline that had been used to transfer fuel offloaded from ships in the St. Johns River to the bulk fuel storage tanks on land. After the pipeline was no longer used, it was cut off (terminated) before the pier. A release of cleaning fluids and product occurred during cleaning operations at this location. Approximately 20 cubic yards of petroleum-contaminated soil were removed from the spill area. The Florida Department of Environmental Protection (FDEP) is in agreement that Spill Area (Area 4) requires no further action. This project will proceed to the appropriate phase action.

Landfill Area 2 has been broken out into new HTRW Project 04. The Pyridine/Burn Area has been broken out into new HTRW Project 05, the Fire Training Area has been broken out into new HTRW Project 06, and the Grease Rack Ditch Area has been broken out into new HTRW Project 07. The Small Arms Range has been broken out into new MMRP Project 08. The Landfill Areas 1 and 3 has been broken out into new HTRW Project 09. Although Project 00 is limited to Spill Area (Area 4), all areas will be addressed by a combination of Project 00 and new Projects 04, 05, 06, 07, 08, and 09.

**Project 01. CON/HTRW. 8 USTs, 3 ASTs, PCB Transf.** A Containerized HTRW (CON/HTRW) project was approved on 30 November 1989 to address eight underground storage tanks (USTs) and three above-ground storage tanks (ASTs), also known as the Tank Farm Area, and polychlorinated biphenyl (PCB) transformers. This original CON/HTRW project is being revised because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC). The description of this project is now being limited to the Tank Farm Area. The PCB Bunker Area has been broken out into new HTRW Project 10. Although this project is limited to the Tank Farm Area, the integrity of this original project (Project 01) scope will be maintained by a combination of this and new Project 10 project scopes.

The 11 unused USTs and ASTs located the Tanks Farm Area ranged in size from 30,000 to 250,000 gallons. The 11 tanks, associated piping, petroleum contaminated water and sludge, and contaminated soil were removed in 1993. Groundwater monitoring results indicate no residual contamination is present at the Tank Farm Area. Project 01 will be determined as No DoD Action Indicated (NDAI) and proceed to the appropriate phase action.

**Project 02. Not used. Intentionally Left Blank.**

**Project 03. CON/HTRW. 5 USTs, 3000' Pipeline.** A CON/HTRW project was approved in February 1995 to address five USTs and 3,000 feet of pipeline at Area 1 (Building 46, three USTs) and Area 2 (Building 351, two USTs). The project was amended on 26 September 1995 to add three USTs at Building No. 9 (Hangar Building) (UST Area 3), for a total of eight USTs. Activities conducted under this project identified a 500-gallon lube oil UST located just south of Building 9 (Building 9 UST). Additionally, activities conducted under this project identified one UST on the north side of Building No. 12 (Water Treatment Plant No. 1) (another UST is suspected at Water Treatment Plant No. 2); a 500-gallon lube oil tank and petroleum contaminated soil just south of Building 19; a 28-acre Service Pit Area located just south of Buildings 9 and 19; a potential disposal area for incinerated refuse; and potential groundwater contamination associated with UST removed in the area of Building 245.

This original CON/HTRW project is being revised because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC). The description of this project is now being limited to UST Area 2, UST Area 3, Building 9 UST, and the 3,000 feet of pipeline. UST Area 1 has been broken out into new HTRW Project 11. The USTs at Water Treatment Plant Nos. 1 and 2 have been broken out into new CON/HTRW Project 12. The Service Pit Area has been broken out into new HTRW Project 13. The Building 19 UST has been broken out into HTRW Project 14. The incinerator/Disposal Area has been broken out into HTRW Project 15, and the Bldg. 245 UST Area has been broken out into Project 16. Although the description of this project is now being limited to UST Area 2, UST Area 3, Building 9 UST, and the 3,000 feet of pipeline, all of the original project (Project 03) scope will be maintained by a combination of this project and new Projects 11, 12, 13, 14, 15, and Project 16. Project 03 will be determined as NDAI and proceed to the appropriate phase action.

**Project 04. HTRW. Landfill Area 2.** This new project will address a former Public Works Storage area that covers approximately 7.5 acres of land near the west-central edge of the former Lee Field. Surface soil contamination exceeding soil cleanup target levels (SCTLs) was detected for benzo(a)pyrene. Further investigation of soil and groundwater at the Landfill Area 2 will be necessary to determine the degree and extent of contamination and determine if further action is necessary.

**Project 05. HTRW. Pyridine/Burn Area .** This new project will address the Pyridine/Burn Area. The Pyridine/Burn Area was used for disposal of excess materials removed from the mothballed ships beginning in 1946. Investigations conducted by USACE have indicated that vinyl chloride is a contaminant of concern in both groundwater and soils. In addition arsenic has been identified as a contaminant of concern in soils. Additional investigation will be necessary to determine the degree and extent of soil and groundwater contamination at the Pyridine/Burn Area.

**Project 06. HTRW. Fire Training Area.** This new project will address the Fire Training Area. The Fire Training Area (Building 323) is located at the north end of the dock area and consisted of three brick fire circles. Fire-fighter training was conducted in the area in the early 1950's. Investigation activities conducted by several organizations indicate that polychlorinated biphenyls (PCBs) are the only contaminant of concern in soils. Benzene, vinyl chloride, and liquid phase hydrocarbons have been identified as contaminants of concern in the groundwater. Additional investigation will be required to determine the appropriate course of action for this site.

**Project 07. HTRW. Grease Rack Ditch Area.** This new project will address the Grease Rack Ditch Area. The Grease Rack (Building 329) and drainage ditch are known collectively as the Grease Rack Ditch Area. The Grease Rack structure is a pair of concrete ramps onto which vehicles were driven for servicing. Waste oil was discharged to a drain between the ramps. PCBs and polycyclic aromatic hydrocarbons (PAHs) are the contaminants of concern in soils. PCBs were detected in one groundwater monitoring well. Additional soil and groundwater sampling and well installation activities will be necessary to determine the degree and extent of soil and groundwater contamination at the Grease Rack Ditch Area and determine if further action is necessary.

**Project 08. MMRP. Small Arms Range.** This new Military Munitions Response Program (MMRP) project will address the Small Arms Range. Activities conducted under Project 00 identified a Small Arms Range covering an area of approximately seven acres in the southeast portion of the Lee Field NAS. The firing range was used for aircraft target training during WWII and later for small arms fire. Following delineation of soil contamination, excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004. Since the removal of the contaminated soil, numerous bullet fragments have been observed washing out of the berm-face, mostly larger .50-caliber rounds from previous aircraft fire.

**Project 09. HTRW. Landfill Areas 1 and 3.** This new project will address Landfill Area 1 and Landfill Area 3.

**Project 10. HTRW. PCB Bunker Area.** This new project will address the PCB Bunker Area. Eighteen transformers were stored in Building 77 from 1986 until 1993. Investigations conducted in 1995 indicated PCB contamination on the floor inside the building, in the soil in front of the building, and in the groundwater. Five PCB transformers and 1,250 gallons of PCB oil were disposed of and Building 77 was cleaned. Buildings 76 and 77 were demolished in 1997. A total of 1,350 cubic yards (970 tons) of PCB impacted soil was removed. Five drums of unknown content were also removed from the area and properly disposed of in 2008. Results of additional investigation activities conducted by USACE indicated that PCB contamination remains in subsurface soil west and east of Wildwood Road. In addition, PCBs were detected in sediment samples collected from the adjacent intermittent stream to the northwest, which flows toward a wetland area (Three Mile Swamp). No contamination has been noted in groundwater or surface water samples.

**Project 11. HTRW. UST Area 1 and Power Plant.** This new project will address UST Area 1 and the Power Plant. UST Area 1 (Building 46) was formerly occupied by a "Filling Station" beginning in approximately 1943 and later used as an "Automotive Hobby Shop." The three USTs associated with Building 46 and approximately 40 cubic yards of petroleum-contaminated soil were removed during two separate excavations in 1997. It was determined that five ASTs associated with the Power Plant (Building 16) were another source of contamination. The pipeline and petroleum contaminated soil associated with the Power Plant ASTs were removed. In order to reduce contaminant levels at UST Area 1 and the Power Plant, removal of contaminated soil and additional investigation activities will be necessary.

**Project 12. CON/HTRW. Water Treatment Plant Nos. 1 and 2 USTs.** Activities conducted under Project 03 identified one UST of approximately 1,000 gallons located on the north side of Water Treatment Plant No. 1 (Building 12). Water Treatment Plant No. 2 was located just north of what is now Cary Avenue (just south of SR 16). This area is identified on a June 1948 drawing. Based on the features that existed at Water Treatment Plant No. 1, it is possible that a small UST is also present at Water Treatment Plant No. 2. Further investigation will be necessary to determine if USTs are present and what subsequent actions, if any, will be required.

**Project 13. HTRW. Service Pit Area.** This new project will address the Service Pit Area. Activities conducted under Project 03 identified an approximately 28-acre Service Pit Area located just south of Buildings 9 and 19, the western and eastern hanger buildings, respectively. The 41 service pits contained fuel dispensing equipment for the aircraft operated at the former

Lee Field NAS and were connected to the bulk fuel storage system. The service pits and bulk fuel storage system were abandoned in 1993. Standing water, solid debris, and equipment were removed from the pits, the lines were flushed, and the pits were sealed with concrete. Additional soil and groundwater sampling in the Service Pit Area has indicated groundwater exceedances for Volatile Organic Chemicals (VOCs) and ethylene dibromide (EDB). Additional investigation will be necessary to determine the degree and extent of groundwater contamination and if further action is necessary.

**Project 14. HTRW. Building 19 UST Area.** This new project will address the Building 19 UST Area. Activities conducted under Project 03 identified a 500-gallon lube oil tank and petroleum contaminated soil just south of Building 19. The UST and contaminated soil were removed in 2005. Additional contaminated soil was removed in August 2006. Further investigation will be necessary to determine the degree and extent of soil and groundwater contamination and if further action is necessary.

**Project 15. HTRW. Incinerator/Disposal Area.** This new project will address the Incinerator/Disposal Area. This area was identified by the Clay County Port as a potential disposal area for incinerated DoD refuse. Several charred items with USN insignia have been recovered from the soil piles associated with this area. Further investigation will be required to determine if contamination exists and if further action is necessary.

**Project 16. HTRW. Building 245 UST Area.** This new project will address the Building 245 UST Area. In 2008, three USTs were removed from the Building 245 area, which is located near Building 19. Sampling results taken during the excavation indicated potential groundwater contamination associated with these tanks. Additional investigation will be necessary to determine the degree and extent of the contamination and if further action will be necessary.

**AVAILABLE STUDIES AND REPORTS:** Several reports have been completed for the Lee Field NAS and are on file at the District Office. Reports are also available on PIRS (Project Information Retrieval System) at <https://mvrpirs.mvr.usace.army.mil/fuds.cfm>

**POINT OF CONTACT:** Jacksonville District, John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM  
FOR FORMERLY USED SITES  
FINDINGS AND DETERMINATION OF ELIGIBILITY  
REYNOLDS INDUSTRIAL PARK (U.S. NAVAL STATION, LEE FIELD)  
GREEN COVE SPRINGS, FLORIDA  
PROJECT NO. I04FL008500

FINDINGS OF FACT

1. A remedial investigation/feasibility study (RI/FS) is proposed for the former U.S. Naval Station, Lee Field, Green Cove Springs, Fl. The property is located approximately one mile southeast of the City of Green Cove Spring and is now called the Reynolds Industrial Park. The RI/FS will determine rate and extent of contamination of soils and groundwater at three former landfill sites, the site of the suspected location of underground storage tanks (UST's), behind the former firing range area, and other smaller areas. Concurrently a low level hazardous and toxic waste removal project has been requested in the report for project #I04FL008501.
2. Lee Field was acquired for Government use beginning in 1940 through 1943 with additional lands added in 1948 for a berthing area to store fleet ships. Records on file with the Department of the Navy, Southern Division, Naval Facilities Engineering Command, Charleston, South Carolina, confirm that the site is part of 1,559.78 acres acquired by the United States by direct purchase, condemnation, permit and licenses. Of this total 1,512.57 acres were acquired in fee.
3. The site was known as the U.S. Naval Station, Lee Field, during World War II and was utilized by the Navy and Marines for the purpose of training bomber pilots. After the war the site continued to be used by the Navy for the storage of fleet ships. Construction began in 1940 and consisted of runways, taxiways, roads, utility systems, fuel storage tank farms, ship mooring facilities, and various structures (such as hangars, administrative buildings, barracks, mess halls, family housing, etc.) typical of a naval station. There is no evidence that this site was ever placed under other than Department of Defense (DOD) control during the period of DOD usage.
4. In 1961, the property, remaining equipment and improvements, were declared excess by the Navy to the General Services Administration. The United States of America, acting by and through the Administrator of General Services, conveyed the entire former U.S. Naval Station, Lee Field, to the City of Green Cove Springs, Florida, by Quitclaim Deed, dated 17 September 1963 and Corrective Quitclaim Deed, dated 25 July 1967. These disposal instruments did not contain any recapture, restoration or hold harmless clauses. The City of Green Cove subsequently sold the property by Special Warranty Deed, dated 7 September 1965 to Mr. J. Louis Reynolds. Mr. Reynolds transferred his interests to Clay County Port, Inc., by Corrective Deed, dated 25 March 1983. This transaction transferred individual ownership to a corporate ownership now controlled by the J. Louis Reynolds estate. Clay County Port, Inc., donated back to the City of Green Cove Springs two parcels of less than one acre each, containing a sewage treatment plant and two water towers in 1984. There is no evidence to suggest that the intervening owners contributed to the contamination found on this site.

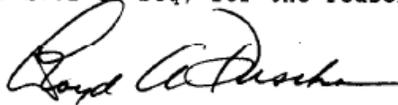
5. The owner is developing the site and is currently utilizing the area as an industrial park, a small private airport, marine port facilities, and a golf course. The items proposed for remedial action have not been subsequently used since the period of DOD disposal of the site. The current owner of the affected portion of the site, the Clay County Port, Inc., has requested that the DERP program provide remedial action on anything that qualifies under the hazardous and toxic waste policies of this program. There is no evidence of qualifying debris safety hazards or unexploded ordnance resulting from DOD use of the site.

DETERMINATION

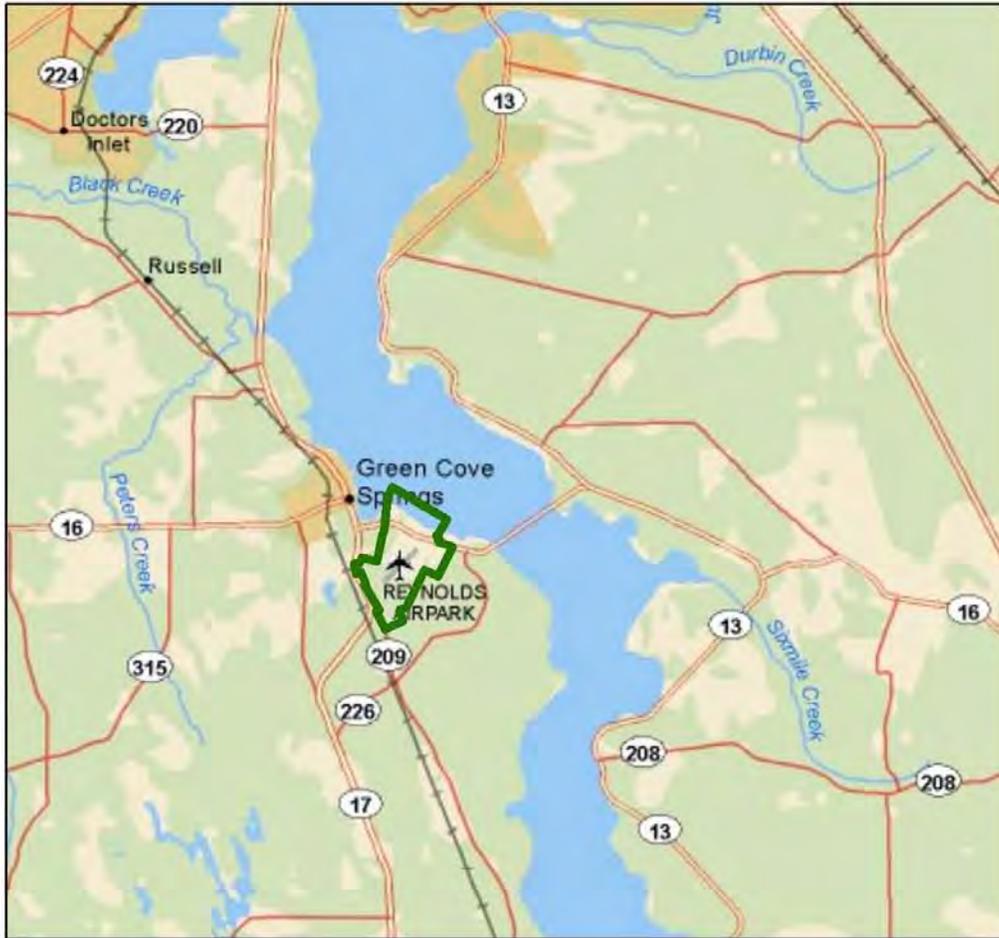
Based on the foregoing findings of fact, the site as described above has been determined to be a formerly used DOD property. Moreover, it is determined that an environmental restoration project, to the extent set out herein, is an appropriate undertaking within the purview of the Defense Environmental Restoration Program, established under 10 U.S.C. 2701 et seq, for the reasons stated above.

11 Oct 89

DATE



LLOYD A. DUSCHA, P.E.  
Deputy Director  
Directorate of Military Programs

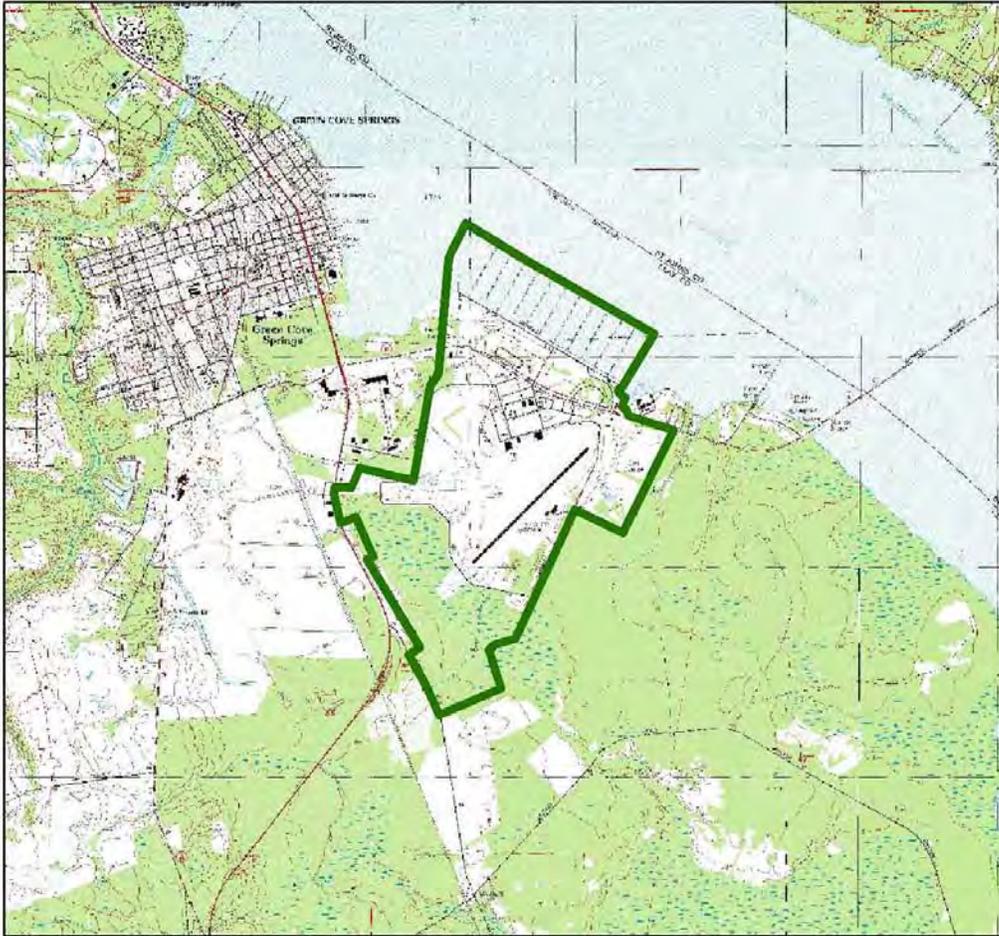


**Legend**

 APPROXIMATE PROPERTY BOUNDARY

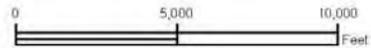


	<p><i>U. S. ARMY CORPS OF ENGINEERS</i> <i>ST. LOUIS DISTRICT</i></p>
<p><b>LEE FIELD (NAS)</b> <b>FUDS PROPERTY NO. I04FL0085</b> <b>GREEN COVE SPRINGS, FLORIDA</b> <b>CLAY COUNTY</b></p>	
<p><b>VICINITY MAP</b></p>	
<p>PROJ. DATE: AUG 2010</p>	<p>PLATE NO. <b>1</b></p>



**Legend**

 APPROXIMATE PROPERTY BOUNDARY



*U. S. ARMY CORPS OF ENGINEERS  
ST. LOUIS DISTRICT*

**LEE FIELD (NAS)  
FUDS PROPERTY NO. I04FL0085  
GREEN COVE SPRINGS, FLORIDA  
CLAY COUNTY**

**PROPERTY MAP**

PROJ. DATE: **AUG 2010**

PLATE NO.

**2**



**Legend**

- APPROXIMATE PROPERTY BOUNDARY
- PROJECT 00
- PROJECT 12
- PROJECT 01
- PROJECT 03
- PROJECT 04
- PROJECT 05
- PROJECT 06
- PROJECT 07
- PROJECT 08
- PROJECT 09
- PROJECT 11
- PROJECT 13
- PROJECT 14
- PROJECT 15
- PROJECT 16



	<p><i>U. S. ARMY CORPS OF ENGINEERS</i> <i>ST. LOUIS DISTRICT</i></p>
<p><b>LEE FIELD (NAS)</b> <b>FUDS PROPERTY NO. I04FL0085</b> <b>GREEN COVE SPRINGS, FLORIDA</b> <b>CLAY COUNTY</b></p>	
<p><b>PROJECT MAP</b></p>	
<p>PROJ. DATE: <b>MAR 2011</b></p>	<p>PLATE NO. <b>3</b></p>

**REVISED PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008500  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 00. HTRW. Spill Area (Area 4).** This original HTRW project addressed three landfills, the Pyridine/Burn Area (behind the former firing range), the Fire Training Area, the Grease Rack Ditch Area and the Small Arms Range. This original HTRW project is being revised because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC). The description of this project is now being limited to Spill Area (Area 4). Landfill Area 2 has been broken out into new HTRW Project 04. The Pyridine/Burn Area has been broken out into new HTRW Project 05, the Fire Training Area has been broken out into new HTRW Project 06, and the Grease Rack Ditch Area has been broken out into new HTRW Project 07. The Small Arms Range has been broken out into new MMRP Project 08. The Landfill Areas 1 and 3 have been broken out into new HTRW Project 09. Although this project is now limited to the Spill Area (Area 4), all areas within the original Project 00 scope will be addressed by a combination of Project 00 and Projects 04, 05, 06, 07, 08, and Project 09 project scopes.

Activities conducted under Project 00 identified a spill area (Area 4) at the current end of the Pier Alpha pipeline. An area of petroleum-contaminated soil (Area 4) was discovered at the termination point of a 3,000-foot fuel pipeline that had been used to transfer fuel offloaded from ships in the St. Johns River to the bulk fuel storage tanks on land. After the pipeline was no longer used, it was cut off (terminated) before the pier. A release of cleaning fluids and product occurred during cleaning operations at this location. Approximately 20 cubic yards of petroleum-contaminated soil were removed from the spill area. The Florida Department of Environmental Protection (FDEP) is in agreement that Area 4 requires no further action. This project will be determined as No Department of Defense Action Indicated (NDAI).

**PROJECT ELIGIBILITY:** The Spill Area (Area 4) was used extensively by the Department of Defense (DoD) and has not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**REVISED PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS CON/HTRW PROJECT NO. I04FL008501  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 01. CON/HTRW. 8 USTs, 3 ASTs, PCB Transf.** The original CON/HTRW project consisted of eight underground storage tanks (USTs), three above-ground storage tanks (ASTs), fuel delivery systems, and a polychlorinated biphenyl (PCB) Bunker Area. This original project is being revised because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC). The description of this project is now being limited to the Tank Farm Area. The PCB Bunker Area has been broken out into new HTRW Project 10. Although this project is limited to the Tank Farm Area, the of the original Project 01 scope will be maintained by a combination of this and Project 10 scopes.

The 11 unused USTs, ranging in size from 30,000 to 250,000 gallons, were located in a Tank Farm Area. The storage tanks were installed during WWII for the storage of aviation gasoline (AVGAS) and were deactivated shortly after the war. The Tank Farm Area was within 300 feet of a drinking water well for the City of Green Cove Springs. The three larger storage tanks were positioned above grade, with soil backfilled around and over the tanks (ASTs). The eight smaller tanks were true USTs. Piping diagrams of the facility showed the existence of a tank bottoms disposal pit and drain field. This drain field was located in the northeast corner of the Tank Farm Area. Water and possibly sludge from the bottom of the fuel tanks were drained by gravity to the disposal pit. The eight USTs, along with 3,100 linear feet of associated piping, in-situ closure of the three ASTs (1- 50,000 gallon, 1-100,000 gallon, and 1- 250,000 gallon capacity); in-situ closure of approximately 20,000 linear feet of below ground piping; in-situ closure of 41 service pits and removal of exposed piping; removal of approximately 300,000 gallons of petroleum contaminated water and approximately 60,000 gallons of sludge; disposal of 51 cubic yards of contaminated soil; and installation of six monitoring wells was performed in 1993. Groundwater monitoring results indicate no residual contamination is present at the Tank Farm Area. Project 01 will be determined as NDAI and proceed to PCO.

**PROJECT ELIGIBILITY:** The Tank Farm Area constructed and utilized by the Navy. These areas have not been beneficially used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**REVISED PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS CON/HTRWHTRW PROJECT NO. I04FL008503  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 03. CON/HTRW. 5 USTs, 3000' Pipeline.** This original CON/HTRW project is being revised because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC). The description of this project is now being limited to UST Area 2, UST Area 3, Building 9 UST, and the 3000 feet of pipeline. UST Area 1 has been broken out into new HTRW Project 11. The Water Treatment Plant Nos. 1 and 2 USTs have been broken out into new CON/HTRW Project 12. The Service Pit Area has been broken out into new HTRW Project 13. The Building 19 UST has been broken out into new HTRW Project 14. The potential Incinerator/Disposal Area has been broken out into new HTRW Project 15. The potential groundwater contamination associated with the Building 245 UST Area has been broken out into new Project 16. Although the description of Project 03 is now being limited to UST Areas 2 and 3 and the Building 9 UST, all of the original Project 03 scope will be addressed by a combination of this and Projects 11, 12, 13, 14, 15, and 16 project scopes.

UST Area 2 (Building 351) contained two 10,000 gallon USTs and is located at 3971 Reynolds Boulevard. This location was formerly a gasoline station and was most recently used by Advanced Drainage Systems, Inc. Both Area 2 tanks were completely filled with water and one tank had approximately 100 gallons of residual gasoline. The exterior of the tanks and associated piping were not coated with lead based paint, PCBs, or asbestos containing material. The Florida Department of Environmental Protection (FDEP) issued a Site Rehabilitation Completion Order (SRCO) approving No Further Action (NOFA) on 7 April 2003, based on the sampling assessment results. The six existing monitoring wells were abandoned in December 2003 and a brief report was prepared to document the abandonment.

UST Area 3 is located west of the rail car rehabilitation hangar (Building 9, currently occupied by Progress Rail) near the intersection of Bunker Avenue and J. Louis Street. The three USTs associated with Building 9 and approximately 60 cubic yards of petroleum-contaminated soil were removed in 1997. Based on the presence of soil contamination, the FDEP required an assessment of UST Area 3. An initial assessment was conducted and the presence of impacted groundwater was discovered in the vicinity of the former tank pit. A supplemental assessment was conducted to investigate the presence of volatile organic compounds (VOCs). FDEP issued a SRCO approving No Further Action on 24 May 2004. The five existing monitoring wells were abandoned on 23 August 2006 and a letter report dated October 2006 documented the abandonment. Activities conducted under this project identified a 500-gallon lube oil UST located just south of Building 9. The lube oil UST was removed in July 2005. FDEP issued a Clean Closure Letter approving NOFA on 9 November 2005.

The 3,000 feet of pipeline were cleaned of all fluids in 1993-1994 and both ends were sealed off with grout. Project 03 will be determined as NDAI and proceed to the appropriate phase action.

**PROJECT ELIGIBILITY:** Records indicate that the USTs were installed and used by the Navy. The USTs have not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008504  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 04. HTRW. Landfill Area 2.** This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

The Landfill Area 2 is approximately 7.5 acres in size and is located about 700 feet (ft) west of Runway 9. This landfill was reportedly used during WWII and was formerly listed as a “Public Works Storage” area. Surface soil contamination exceeding SCTLs for benzo(a) pyrene and various metals was detected in several soil samples collected from the northern and western portions of Landfill Area 2. Various metals were detected in the groundwater; however, most are believed to be naturally occurring. Further investigation of the soil and groundwater will be necessary to determine the degree and extent of contamination and determine if further action is necessary.

**PROJECT ELIGIBILITY:** Landfill Area 2 was used extensively by the Department of Defense (DoD) and has not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008505  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 05. HTRW. Pyridine/Burn Area.** This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

The Pyridine/Burn Area occupies approximately 7.5 acres of pinewoods between the Small Arms Range berm and Landfill Area 1. The Pyridine/Burn Area was reportedly used for disposal of excess materials removed from the mothballed ships beginning in 1946. According to an employee who worked at Lee Field, materials to be disposed of were first burned in an open air incinerator with an open top located immediately behind the Small Arms Range berm. Items placed inside the incinerator included cans and 55-gallon drums. The materials were ignited by dousing with gasoline and the fire was maintained using compressed air. Materials that would not burn were disposed of at either Landfill Area 1 or what is now the Pyridine/Burn Area. Materials reportedly disposed of in this area included carbon tetrachloride, transformer oils, PCBs, and asbestos. In October 1988, a former tenant using the area for bulldozer training struck a container that released a yellow liquid with a nauseating odor. The pool of liquid spread over an area of approximately 100 square feet. Samples collected from the substance detected pyridine and methylpyridine. Investigations conducted by USACE have indicated that vinyl chloride is a contaminant of concern in both groundwater and soils. In addition arsenic has been identified as a contaminant of concern in soils. Additional investigation will be necessary to determine the degree and extent of soil and groundwater contamination at the Pyridine/Burn Area.

**PROJECT ELIGIBILITY:** The Pyridine/Burn Area was used extensively by the Department of Defense (DoD) and has not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008506  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 06. HTRW. Fire Training Area.** This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

The Fire Training Area (Building 323) is located at the north end of the dock area and consisted of three brick fire circles. The current site tenant is Florida First Coast Shipbuilding, Inc. Fire-fighter training was conducted in the area in the early 1950's. Training was reportedly accomplished by extinguishing diesel and oil fires, which were staged in-an open tank filled with water and fuel or in a scrapped gun housing from a naval ship. Investigation activities conducted by several organizations indicate that PCBs (Aroclor 1260) are the only contaminant of concern in soils. Benzene, vinyl chloride, and liquid phase hydrocarbons have been identified as contaminants of concern in the groundwater. Additional investigation will be required to determine the appropriate course of action for this site.

**PROJECT ELIGIBILITY:** The Fire Training Area was used extensively by the Department of Defense (DoD) and has not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008507  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 07. HTRW. Grease Rack Ditch Area.** This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

The Grease Rack (Building 329) and drainage ditch are known collectively as the Grease Rack Ditch Area. The Grease Rack was also referred to as the Auto Grease Ramp and the Public Works Department Grease Rack. The Grease Rack Ditch Area is located across Sturdevant Street from Buildings 86 and 87 and adjacent to Building 80, which currently houses the Kelsey-Hayes Company maintenance facility. The Grease Rack structure is a pair of concrete ramps onto which vehicles were driven for servicing. Waste oil was discharged to a drain between the ramps. The drain pipe emptied into an adjacent drainage ditch with concrete sides and grassy bottom. A 6-inch-diameter pipe, sealed with concrete, entered the ditch from the direction of the Grease Rack. An 18-inch-diameter pipe on the south side of the ditch appeared to discharge stormwater. Kelsey-Hayes Company employees reported that their company never used the Grease Rack. PCBs (Aroclor 1260) and polycyclic aromatic hydrocarbons (PAHs) are the contaminants of concern in soils. PCBs (Aroclor 1260) were detected in one groundwater monitoring well. Additional soil and groundwater sampling and well installation activities will be necessary to determine the degree and extent of soil and groundwater contamination at the Grease Rack Ditch Area and determine if further action is necessary.

**PROJECT ELIGIBILITY:** The Grease Rack Ditch Area was used extensively by the Department of Defense (DoD) and has not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS MMRP PROJECT NO. I04FL008508  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 08. MMRP. Small Arms Range.** This new MMRP project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

Activities conducted under Project 00 identified a Small Arms Range covering an area of approximately seven acres in the southeast portion of the Lee Field NAS. The firing range was used for aircraft target training during WWII and later for small arms fire. The Small Arms Range consisted of the following main areas: a concrete aircraft firing curb connected to a runway, a flat, open firing line where weapons were fired, an outer earthen bunker and inner soil berm that formed the impact zone, and a skeet range. The concrete curb was connected to a runway spur where aircraft were aligned to fire their .50-caliber machine guns into an earthen berm approximately 1,000 feet away. The berm was approximately 5 feet deep at the crest, 120 feet long, and approximately 25 feet tall.

A comprehensive sampling and analysis program was conducted at the Small Arms Range in 2001. This investigation indicated that the earthen berm and soil directly in front of the berm were contaminated with lead and other metals associated with small arms range activities. The metals of concern included arsenic, copper, selenium, vanadium, antimony, cadmium, chromium, mercury, nickel, and zinc. Following delineation of soil contamination, excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004. FDEP required that a groundwater investigation be conducted. USACE conducted a groundwater investigation in 2005. Metals (Al, Fe, and Mn) were detected in groundwater samples, but a geochemical evaluation indicated these compounds were naturally occurring. Since the removal of the contaminated soil, numerous bullet fragments have been observed washing out of the berm-face, mostly larger .50-caliber rounds from previous aircraft fire. Further assessment will be required to determine the appropriate course of action for this site. The Munitions Response Site Prioritization Protocol (MRSPP) is include in Section 5.

**PROJECT ELIGIBILITY:** The Small Arms Range was used extensively by the Department of Defense (DoD) and has not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008509  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 09. HTRW. Landfill Area 1 and Landfill Area 3.**

This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

Landfill Areas 1 and 3 were formerly used by the DoD and found to have contamination of soils and groundwater when tested during the 1987 Confirmation Study. Landfill Area 1 is approximately 6.2 acres in size and is located southwest of the skeet range. This landfill was used primarily during and just after WWII; however, some unauthorized disposal was reported up to the early 1980s. Building demolition debris and fiberglass products wastes were also deposited at the landfill by the current owner and site tenants. Soil contamination exceeding soil cleanup target levels (SCTLs) was detected at various locations across the landfill, including PCBs, PAHs, VOCs, SVOCs, TRPHs, pesticides, and metals. Vinyl chloride was detected in groundwater samples in excess of the groundwater cleanup target levels (GCTLs). Various metals were detected in the groundwater; however, most are believed to be naturally occurring. This landfill is expected to proceed to a Feasibility Study.

Landfill Area 3 is located off State Road (SR) 209 in the southwest corner of the property and is approximately 4 acres in size. This landfill is bordered by Three Mile Swamp and is covered by a stand of planted pine trees. This landfill was reportedly used by DoD exclusively. Contamination was noted in surface soil samples at various locations across the landfill. Chlorinated hydrocarbons were the main compounds of concern detected at Landfill Area 3. Various metals were detected in the groundwater; however, most are believed to be naturally occurring. This landfill is expected to proceed to a Feasibility Study.

**PROJECT ELIGIBILITY:** Landfill Areas 1 and 3 were used extensively by the Department of Defense (DoD) and have not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008510  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 10. HTRW. PCB Bunker Area.** This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

Buildings 76 and 77 originally served as a pyrotechnics magazine and fuse and detonator/high explosives magazine, respectively. Eighteen transformers were stored in Building 77 from 1986 until 1993. One large transformer was determined to be sufficiently corroded to cause concern of a possible rupture. The oil was drained and contained in 55 gallon drums. Oil in five of the 18 transformers was contaminated by PCBs at concentrations between 50 parts per million (ppm) and 500 ppm. Oil in two of the transformers contained PCBs in excess of 500 ppm. Investigations conducted in 1995 indicated PCB contamination on the floor inside the building, in the soil in front of the building, and in the groundwater. Five PCB transformers and 1,250 gallons of PCB oil were disposed of and Building 77 was cleaned. Buildings 76 and 77 were demolished in 1997. A total of 1,350 cubic yards (970 tons) of PCB impacted soil was removed. Five drums of unknown content were also removed from the area and properly disposed of in 2008. Results of additional investigation activities conducted by USACE indicated that PCB contamination remains in subsurface soil west and east of Wildwood Road. In addition, PCBs were detected in sediment samples collected from the adjacent intermittent stream to the northwest, which flows toward a wetland area (Three Mile Swamp). No contamination has been noted in groundwater or surface water samples.

**PROJECT ELIGIBILITY:** The transformers stored in the PCB Bunker area were used by the Department of Defense (DoD) and were not used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008511  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 11. HTRW. UST Area 1 and Power Plant.** This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

UST Area 1 (Building 46) is located at the northwest corner of the intersection of Reynolds Boulevard and Roland Avenue. This location was formerly occupied by a "Filling Station" (Building 46) beginning in approximately 1943 and later used as an "Automotive Hobby Shop." Building 46 (Area 1) contained one 1,200 gallon UST and two 900 gallon USTs. One tank had approximately 20 gallons of free product. These three tanks and associated piping were not found to be coated with lead-based paint, PCBs, or asbestos. The three USTs associated with Building 46 and approximately 40 cubic yards of petroleum-contaminated soil were removed during two separate excavations in 1997. Based on the presence of soil and groundwater contamination, an initial assessment was conducted. The presence of impacted groundwater was discovered in the vicinity and up gradient of the former UST pits. A supplemental assessment defined the extent of groundwater contamination and confirmed that a contaminant source upgradient of UST Area 1 existed. It was determined that five ASTs associated with the Power Plant (Building 16), located approximately 150 feet west (upgradient) of UST Area 1, were another source of contamination. The pipeline and petroleum contaminated soil associated with the Power Plant ASTs were removed. In order to reduce contaminant levels at UST Area 1 and the Power Plant, removal of contaminated soil and additional investigation activities will be necessary.

**PROJECT ELIGIBILITY:** The USTs and associated piping were installed by the Navy and used extensively by the Department of Defense (DoD). The USTs were not used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to remedy RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008512  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 12. CON/HTRW. Water Treatment Plants Nos. 1 and 2 USTs.** This new CON/HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

Activities conducted under Project 03 identified one UST of approximately 1,000 gallons located on the north side of Water Treatment Plant No. 1 (Building 12). Water Treatment Plant No. 2 was located just north of what is now Cary Avenue (just south of SR 16). This area is identified on a June 1948 drawing. Based on the features that existed at Water Treatment Plant No. 1, it is possible that a small UST is present at Water Treatment Plant No. 2. Further investigation will be necessary to determine if USTs are present and what subsequent actions, if any, will be required.

**PROJECT ELIGIBILITY:** The Water Treatment Plants and associated USTs were installed by the Navy and used extensively by the Department of Defense (DoD). These USTs have not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS CON/HTRW PROJECT NO. I04FL008513  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 13. HTRW. Service Pit Area.** This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

Activities conducted under this project identified an approximately 28-acre Service Pit Area located just south of Buildings 9 and 19, the western and eastern hanger buildings, respectively. The 41 service pits contained fuel dispensing equipment for the aircraft operated at the former Lee Field NAS, and were connected to the bulk fuel storage system. The service pits and bulk fuel storage system were abandoned in 1993. Standing water, solid debris, and equipment were removed from the pits, the lines were flushed, and the pits were sealed with concrete. Upon review of the closure report and comment responses, the FDEP issued a closure completion letter. In January 2002, FDEP issued a letter requesting a groundwater assessment in the vicinity of the service pits. Subsequent to the assessment, FDEP approved "Clean Closure" for the Service Pit Area. Additional soil and groundwater sampling was conducted and several isolated groundwater exceedances were detected. In December 2007, preliminary data from sampling performed by a consultant to the Clay County Port detected contamination at service pit locations not previously sampled by the Corps. Additional groundwater sampling will be necessary to determine the degree and extent of the contamination and determine if further action is necessary.

**PROJECT ELIGIBILITY:** The Service Pit Area was installed by the Navy and used extensively by the Department of Defense (DoD). The USTs have not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008514  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 14. HTRW. Building 19 UST Area.** This new HTRW project is being proposed because changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

Activities conducted under Project 03 identified a 500-gallon lube oil tank and petroleum contaminated soil just south of Building 19. The UST and contaminated soil were removed in 2005. Additional contaminated soil was removed in August 2006. In March 2008, the Florida Department of Environmental Protection (FDEP) stated that the well in which an oil sheen was discovered did not have the correct screened interval and requested new well installation and submission of an assessment report. Additional investigation will be necessary to determine the degree and extent of the contamination and if further action will be necessary.

**PROJECT ELIGIBILITY:** The Building 19 UST was installed by the Navy and used extensively by the Department of Defense (DoD). The UST has not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to RIP/RC.

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008515  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 15. HTRW. Incinerator/Disposal Area.** This new HTRW project is being proposed to address the Incinerator/Disposal Area located west of the Fire Training Area. This area was brought to the attention of USACE by the Clay County Port as a potential disposal area for incinerated DoD refuse. Several charred items with USN insignia have been recovered from soil piles associated with this disposal area. Further investigation will be required to determine if contamination exists and if further action is necessary.

**PROJECT ELIGIBILITY:** The Incinerator/Disposal Area was installed by the Navy and used extensively by the Department of Defense (DoD). The Incinerator/Disposal Area has not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**PROJECT SUMMARY SHEET  
FOR  
DERP-FUDS HTRW PROJECT NO. I04FL008516  
DERP-FUDS PROPERTY No. I04FL0085  
LEE FIELD NAS  
GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA  
07 MARCH 2011**

**PROJECT DESCRIPTION: Project 16. HTRW. Building 245 UST Area.** This new HTRW project is being proposed to address the Building 245 UST Area. In 2008, the Clay County Port notified USACE that they had discovered an UST believed to have only been used by the DoD. Further investigation revealed the presence of two additional USTs at this location. The three USTs were removed in 2008. Sampling results taken during the excavation indicated potential groundwater contamination associated with these tanks. Additional investigation will be necessary to determine the degree and extent of the contamination and if further action will be necessary.

**PROJECT ELIGIBILITY:** The three UST located at Building 245 were installed by the Navy and used extensively by the Department of Defense (DoD). The USTs have not been used by subsequent owners.

**POLICY CONSIDERATIONS:** Changed conditions at the property have necessitated the subdivision of existing projects into more manageable operable units. This should facilitate faster movement of projects to Remedy In Place/Response Complete (RIP/RC).

**PROPOSED ACTIVITIES:** The U.S. Army Corps of Engineers Environmental and Munitions Center of Expertise (EMCX) should provide recommendations regarding further actions to the Jacksonville District.

**POINT OF CONTACT:** Jacksonville District, Mr. John Keiser, FUDS Project Manager, (904) 232-1758.

**LEAD REGULATOR:** Florida Department of Environmental Protection (FDEP), Mr. Eric Nuzie, Federal Facilities Coordinator, (850) 245-8979.

**Table 1**

**EHE Module: Munitions Type Data Element Table**

**DIRECTIONS:** Below are 11 classifications of munitions and their descriptions. Circle the score(s) that correspond with all munitions types known or suspected to be present at the MRS.

**Note:** The terms *practice munitions*, *small arms*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	<ul style="list-style-type: none"> <li>◆ All UXO that are considered likely to function upon any interaction with exposed persons [e.g., submunitions, 40mm high-explosive (HE) grenades, white phosphorus (WP) munitions, high-explosive antitank (HEAT) munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions].</li> <li>◆ All hand grenades containing energetic filler.</li> <li>◆ Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.</li> </ul>	30
High explosive (used or damaged)	<ul style="list-style-type: none"> <li>◆ All UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive."</li> <li>◆ All DMM containing a high-explosive filler that have:                             <ul style="list-style-type: none"> <li>▪ Been damaged by burning or detonation</li> <li>▪ Deteriorated to the point of instability.</li> </ul> </li> </ul>	25
Pyrotechnic (used or damaged)	<ul style="list-style-type: none"> <li>◆ All UXO containing pyrotechnic fillers other than white phosphorous (e.g., flares, signals, simulators, smoke grenades).</li> <li>◆ All DMM containing pyrotechnic fillers other than white phosphorous (e.g., flares, signals, simulators, smoke grenades) that have:                             <ul style="list-style-type: none"> <li>▪ Been damaged by burning or detonation</li> <li>▪ Deteriorated to the point of instability.</li> </ul> </li> </ul>	20
High explosive (unused)	<ul style="list-style-type: none"> <li>◆ All DMM containing a high explosive filler that:                             <ul style="list-style-type: none"> <li>▪ Have not been damaged by burning or detonation</li> <li>▪ Are not deteriorated to the point of instability.</li> </ul> </li> </ul>	15
Propellant	<ul style="list-style-type: none"> <li>◆ All UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor).</li> <li>◆ All DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are:                             <ul style="list-style-type: none"> <li>▪ Damaged by burning or detonation</li> <li>▪ Deteriorated to the point of instability.</li> </ul> </li> </ul>	15
Bulk secondary high explosives, pyrotechnics, or propellant	<ul style="list-style-type: none"> <li>◆ All DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor), that are deteriorated.</li> <li>◆ Bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.</li> </ul>	10
Pyrotechnic (not used or damaged)	<ul style="list-style-type: none"> <li>◆ All DMM containing a pyrotechnic fillers (i.e., red phosphorous), other than white phosphorous filler, that:                             <ul style="list-style-type: none"> <li>▪ Have not been damaged by burning or detonation</li> <li>▪ Are not deteriorated to the point of instability.</li> </ul> </li> </ul>	10
Practice	<ul style="list-style-type: none"> <li>◆ All UXO that are practice munitions that are not associated with a sensitive fuze.</li> <li>◆ All DMM that are practice munitions that are not associated with a sensitive fuze and that have not:                             <ul style="list-style-type: none"> <li>▪ Been damaged by burning or detonation</li> <li>▪ Deteriorated to the point of instability</li> </ul> </li> </ul>	5
Riot control	<ul style="list-style-type: none"> <li>◆ All UXO or DMM containing a riot control agent filler (e.g., tear gas).</li> </ul>	3
Small arms	<ul style="list-style-type: none"> <li>◆ All used munitions or DMM that are categorized as small arms ammunition [Physical evidence or historical evidence that no other types of munitions (e.g., grenades, subcaliber training rockets, demolition charges) were used or are present on the MRS is required for selection of this category].</li> </ul>	2
Evidence of no munitions	<ul style="list-style-type: none"> <li>◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.</li> </ul>	0
MUNITIONS TYPE	<p><b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).</p>	2

**DIRECTIONS:** Document any MRS-specific data used in selecting the Munitions Type classifications in the space provided. Historical evidence indicates that only small arms were used on the Small Arms Range. Aircraft were aligned to fire their .50-caliber machine guns into an earthen berm. In accordance with Army Policy Memo dated 20 Feb 2009, small arms ammunition does not pose a unique explosive hazard. Therefore, the EHE module is revised to No Known or Suspected Explosive Hazard.

## Table 2

### EHE Module: Source of Hazard Data Element Table

**DIRECTIONS:** Below are 11 classifications describing sources of explosive hazards. Circle the score(s) that correspond with all sources of explosive hazards known or suspected to be present at the MRS.

**Note:** The terms *former range*, *practice munitions*, *small arms*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	♦ The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include: impact or target areas, associated buffer and safety zones, firing points, and live-fire maneuver areas.	10
Former munitions treatment (i.e., OB/OD) unit	♦ The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	♦ The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	♦ The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	5
Former burial pit or other disposal area	♦ The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	♦ The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	♦ The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	♦ The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	♦ The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	♦ The MRS is a former military range where only small arms ammunition was used [There must be evidence that no other types of munitions (e.g., grenades) were used or are present to place an MRS into this category.].	1
Evidence of no munitions	♦ Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	<b>1</b>

**DIRECTIONS:** Document any MRS-specific data used in selecting the *Source of Hazard* classifications in the space provided. Historical evidence indicates that the MRS was a small arms range. The MRS is currently owned by Clay County Ports, Inc.

### Table 3

#### EHE Module: Location of Munitions Data Element Table

**DIRECTIONS:** Below are eight classifications of munitions locations and their descriptions. Circle the score(s) that correspond with all locations where munitions are located or suspected of being found at the MRS.

**Note:** The terms *surface*, *subsurface*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
<b>Confirmed surface</b>	<ul style="list-style-type: none"> <li>◆ Physical evidence indicates that there are UXO or DMM on the surface of the MRS</li> <li>◆ Historical evidence (e.g., a confirmed incident report or accident report) indicates there are UXO or DMM on the surface of the MRS.</li> </ul>	25
<b>Confirmed subsurface, active</b>	<ul style="list-style-type: none"> <li>◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.</li> <li>◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost, heat heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.</li> </ul>	20
<b>Confirmed subsurface, stable</b>	<ul style="list-style-type: none"> <li>◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.</li> <li>◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.</li> </ul>	15
<b>Suspected (physical evidence)</b>	<ul style="list-style-type: none"> <li>◆ There is physical evidence (e.g., munitions debris, such fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.</li> </ul>	10
<b>Suspected (historical evidence)</b>	<ul style="list-style-type: none"> <li>◆ There is historical evidence indicating that UXO or DMM may be present at the MRS.</li> </ul>	5
<b>Subsurface, physical constraint</b>	<ul style="list-style-type: none"> <li>◆ There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.</li> </ul>	2
<b>Small arms (regardless of location)</b>	<ul style="list-style-type: none"> <li>◆ The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability [There must be evidence that no other types of munitions (e.g., grenades) were used or are present at the MRS to place an MRS into this category.].</li> </ul>	1
<b>Evidence of no munitions</b>	<ul style="list-style-type: none"> <li>◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.</li> </ul>	<b>0</b>
<b>LOCATION OF MUNITIONS</b>	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 25).	<b>0</b>

**DIRECTIONS:** Document any MRS-specific data used in selecting the *Location of Munitions* classifications in the space provided.

Excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004.

**Table 4**

**EHE Module: Ease of Access Data Element Table**

**DIRECTIONS:** Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to any explosive material. Circle the score that corresponds with the ease of access to the MRS.

**Note:** The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	♦ There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	♦ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	♦ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	♦ There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0
EASE OF ACCESS	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 10).	10

**DIRECTIONS:** Document any MRS-specific data used in selecting the *Ease of Access* classification in the space provided.

The property has been redeveloped for commercial and recreational uses. Groundskeepers, construction workers, and golfers have access to the MRS.

**Table 5**

**EHE Module: Status of Property Data Element Table**

**DIRECTIONS:** Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
<b>Non-DoD control</b>	♦ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies.	<b>5</b>
<b>Scheduled for transfer from DoD control</b>	♦ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the rule is applied.	3
<b>DoD control</b>	♦ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
<b>STATUS OF PROPERTY</b>	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	<b>5</b>

**DIRECTIONS:** Document any MRS-specific data used in selecting the *Status of Property* classification in the space provided.

Currently, the FUDS property is owned and utilized by Clay County Ports, Inc.

**Table 6**

**EHE Module: Population Density Data Element Table**

**DIRECTIONS:** Below are three classifications of population density and their descriptions. Determine the population density per square mile in the vicinity of the MRS and circle the score that corresponds with the associated population density.

**Note:** If an MRS is located in more than one county, use the largest population density value among the counties. If the MRS is within or borders a city or town, use the population density for the city or town, rather than that of the county.

Classification	Description	Score
> 500 persons per square mile	◆ There are more than 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	5
100–500 persons per square mile	◆ There are 100 to 500 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	3
< 100 persons per square mile	◆ There are fewer than 100 persons per square mile in the county in which the MRS is located, based on U.S. Census Bureau data.	1
POPULATION DENSITY	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	<b>3</b>

**DIRECTIONS:** Document any MRS-specific data used in selecting the *Population Density* classification in the space provided.

According to US Census Data from the year 2000, there are 234.3 persons per square mile in Clay County, Florida.

**Table 7**

**EHE Module: Population Near Hazard Data Element Table**

**DIRECTIONS:** Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the population near the hazard. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the associated population near the known or suspected hazard.

**Note:** The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	♦ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	♦ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	♦ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	♦ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	♦ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	♦ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	<b>5</b>

**DIRECTIONS:** Document any MRS-specific data used in selecting the *Population Near Hazard* classification in the space provided.

The Clay County Ports, Inc. currently utilizes the property as an industrial park (Reynolds Industrial Park), a small private airport, marine port facilities, and a golf course. There are over 26 buildings within 2 miles of the MRS.

**Table 8**

**EHE Module: Types of Activities/Structures Data Element Table**

**DIRECTIONS:** Below are five classifications of activities and/or inhabited structures near the hazard and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and circle the score(s) that correspond with all the activities/structure classifications at the MRS.

**Note:** The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	5
Parks and recreational areas	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	◆ There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	<b>5</b>

**DIRECTIONS:** Document any MRS-specific data used in selecting the *Types of Activities/Structures* classifications in the space provided.

The Clay County Ports, Inc. currently utilizes the property as an industrial park (Reynolds Industrial Park), a small private airport, marine port facilities, and a golf course.

## Table 9

### EHE Module: Ecological and/or Cultural Resources Data Element Table

**DIRECTIONS:** Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and circle the score that corresponds with the ecological and/or cultural resource classifications at the MRS.

**Note:** The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
<b>Ecological and cultural resources present</b>	♦ There are both ecological and cultural resources present on the MRS.	5
<b>Ecological resources present</b>	♦ There are ecological resources present on the MRS.	3
<b>Cultural resources present</b>	♦ There are cultural resources present on the MRS.	3
<b>No ecological or cultural resources present</b>	♦ There are no ecological resources or cultural resources present on the MRS.	0
<b>ECOLOGICAL AND/OR CULTURAL RESOURCES</b>	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 5).	<b>0</b>

**DIRECTIONS:** Document any MRS-specific data used in selecting the *Ecological and/or Cultural Resources* classification in the space provided.

*The applicable federal and state agencies were not specifically contacted concerning potential ecological or cultural resources present on the property. Previous investigations, however, have not identified any ecological or cultural resources.*

# Table 10

## Determining the EHE Module Rating

Source    Score    Value

**DIRECTIONS:**

1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **EHE Module Total** box below.
4. Circle the appropriate range for the **EHE Module Total** below.
5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

**Note:**

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	2	3
Source of Hazard	Table 2	1	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	0	15
Ease of Access	Table 4	10	
Status of Property	Table 5	5	
Receptor Factor Data Elements			
Population Density	Table 6	3	13
Population Near Hazard	Table 7	5	
Types of Activities/Structures	Table 8	5	
Ecological and /or Cultural Resources	Table 9	0	
<b>EHE MODULE TOTAL</b>			<b>31</b>
EHE Module Total	EHE Module Rating		
92 to 100	A		
82 to 91	B		
71 to 81	C		
60 to 70	D		
48 to 59	E		
38 to 47	F		
less than 38	G		
Alternative Module Ratings	Evaluation Pending		
	No Longer Required		
	<b>No Known or Suspected Explosive Hazard</b>		
EHE MODULE RATING	<b>No Known or Suspected Explosive Hazard</b>		

**Table 11**  
**CHE Module: CWM Configuration Data Element Table**

**DIRECTIONS:** Below are seven classifications of CWM configuration and their descriptions. Circle the score(s) that correspond to all CWM configurations known or suspected to be present at the MRS.

**Note:** The terms *CWM/UXO*, *CWM/DMM*, *physical evidence*, and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, explosive configuration either UXO or damaged DMM	The CWM known or suspected of being present at the MRS is: <ul style="list-style-type: none"> <li>◆ Explosively configured CWM that are UXO (i.e., CWM/UXO).</li> <li>◆ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.</li> </ul>	30
CWM mixed with UXO	<ul style="list-style-type: none"> <li>◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged, or nonexplosively configured CWM/DMM, or CWM not configured as a munition, that are commingled with conventional munitions that are UXO.</li> </ul>	25
CWM, explosive configuration that are undamaged DMM	<ul style="list-style-type: none"> <li>◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.</li> </ul>	20
CWM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS is: <ul style="list-style-type: none"> <li>◆ Nonexplosively configured CWM/DMM.</li> <li>◆ Bulk CWM/DMM (e.g., ton container).</li> </ul>	15
CAIS K941 and CAIS K942	<ul style="list-style-type: none"> <li>◆ The CWM/DMM known or suspected of being present at the MRS is CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.</li> </ul>	12
CAIS (chemical agent identification sets)	<ul style="list-style-type: none"> <li>◆ Only CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.</li> </ul>	10
Evidence of no CWM	<ul style="list-style-type: none"> <li>◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.</li> </ul>	0
CWM CONFIGURATION	<b>DIRECTIONS:</b> Record <u>the single highest score</u> from above in the box to the right (maximum score = 30).	<b>0</b>

**DIRECTIONS:** Document any MRS-specific data used in selecting the *CWM Configuration* classifications in the space provided.

Investigations to date have not uncovered any evidence that the Navy used or stored CWM at the MRS. Therefore, Tables 12-19 are intentionally omitted per Army guidance.

## Table 20

### Determining the CHE Module Rating

	Source	Score	Value	
<p><b>DIRECTIONS:</b></p> <p>1. From Tables 11–19, record the data element scores in the <b>Score</b> boxes to the right.</p> <p>2. Add the <b>Score</b> boxes for each of the three factors and record this number in the <b>Value</b> boxes to the right.</p> <p>3. Add the three <b>Value</b> boxes and record this number in the <b>CHE Module Total</b> box below.</p> <p>4. Circle the appropriate range for the <b>CHE Module Total</b> below.</p> <p>5. Circle the <b>CHE Module Rating</b> that corresponds to the range selected and record this value in the <b>CHE Module Rating</b> box found at the bottom of the table.</p> <p><b>Note:</b> An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.</p>	<b>CWM Hazard Factor Data Elements</b>			
	CWM Configuration	Table 11	0	0
	Sources of CWM	Table 12		
	<b>Accessibility Factor Data Elements</b>			
	Location of CWM	Table 13		
	Ease of Access	Table 14		
	Status of Property	Table 15		
	<b>Receptor Factor Data Elements</b>			
	Population Density	Table 16		
	Population Near Hazard	Table 17		
	Types of Activities/Structures	Table 18		
	Ecological and /or Cultural Resources	Table 19		
	<b>CHE MODULE TOTAL</b>			<b>0</b>
	<b>CHE Module Total</b>	<b>CHE Module Rating</b>		
	92 to 100	A		
	82 to 91	B		
	71 to 81	C		
	60 to 70	D		
	48 to 59	E		
	38 to 47	F		
less than 38	G			
Alternative Module Ratings	Evaluation Pending			
	No Longer Required			
	<b>No Known or Suspected CWM Hazard</b>			
<b>CHE MODULE RATING</b>	<b>No Known or Suspected CWM Hazard</b>			

**Table 21**  
**HHE Module: Groundwater Data Element Table**

**Contaminant Hazard Factor (CHF)**

**DIRECTIONS:** Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional groundwater contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record **CHF Value**. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
<b>CHF Scale</b>	<b>CHF Value</b>	<b>Sum the Ratios</b>	
<b>CHF &gt; 100</b>	<b>H (High)</b>	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
<b>100 &gt; CHF &gt; 2</b>	<b>M (Medium)</b>		
<b>2 &gt; CHF</b>	<b>L (Low)</b>		
<b>CONTAMINANT HAZARD FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the CHF Value</u> from above in the box to the right (maximum value = H).		
<b> Migratory Pathway Factor</b>			
<b>DIRECTIONS:</b> Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.			
<b>Classification</b>	<b>Description</b>	<b>Value</b>	
<b>Evident</b>	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.	H	
<b>Potential</b>	Contamination in groundwater has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M	
<b>Confined</b>	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls.)	L	
<b>MIGRATORY PATHWAY FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
<b> Receptor Factor</b>			
<b>DIRECTIONS:</b> Circle the value that corresponds most closely to the groundwater receptors at the MRS.			
<b>Classification</b>	<b>Description</b>	<b>Value</b>	
<b>Identified</b>	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H	
<b>Potential</b>	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M	
<b>Limited</b>	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L	
<b>RECEPTOR FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
No Known or Suspected Groundwater MC Hazard			<input checked="" type="checkbox"/>

Metals (Al, Fe, and Mn) were detected in groundwater samples, but a geochemical evaluation indicated these compounds were naturally occurring.

**Table 22**  
**HHE Module: Surface Water – Human Endpoint Data Element Table**

**Contaminant Hazard Factor (CHF)**

**DIRECTIONS:** Record the maximum concentrations of all contaminants in the MRS's surface water and their comparison values (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the ratios for each contaminant by dividing the maximum concentration by the comparison value. Determine the CHF by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the CHF, use the CHF Scale to determine and record CHF Value. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
<b>CHF Scale</b>	<b>CHF Value</b>		
<b>CHF &gt; 100</b>	<b>H (High)</b>	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
<b>100 &gt; CHF &gt; 2</b>	<b>M (Medium)</b>		
<b>2 &gt; CHF</b>	<b>L (Low)</b>		
<b>CONTAMINANT HAZARD FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the CHF Value</u> from above in the box to the right (maximum value = H).		

**Migratory Pathway Factor**

**DIRECTIONS:** Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
<b>Evident</b>	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
<b>Potential</b>	Contamination in surface water has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
<b>Confined</b>	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls.)	L
<b>MIGRATORY PATHWAY FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).	

**Receptor Factor**

**DIRECTIONS:** Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
<b>Identified</b>	Identified receptors have access to surface water to which contamination has moved or can move.	H
<b>Potential</b>	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
<b>Limited</b>	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
<b>RECEPTOR FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Water (Human Endpoint) MC Hazard

Excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004.

**Table 23**  
**HHE Module: Sediment – Human Endpoint Data Element Table**

**Contaminant Hazard Factor (CHF)**

**DIRECTIONS:** Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **contaminant ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant Ratios	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	
<b>CHF Scale</b>	<b>CHF Value</b>	<b>Sum the Ratios</b>	
<b>CHF &gt; 100</b>	<b>H (High)</b>	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
<b>100 &gt; CHF &gt; 2</b>	<b>M (Medium)</b>		
<b>2 &gt; CHF</b>	<b>L (Low)</b>		
<b>CONTAMINANT HAZARD FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the CHF Value</u> from above in the box to the right (maximum value = H).		
<b>Migratory Pathway Factor</b>			
<b>DIRECTIONS:</b> Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.			
<b>Classification</b>	<b>Description</b>	<b>Value</b>	
<b>Evident</b>	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H	
<b>Potential</b>	Contamination in sediment has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M	
<b>Confined</b>	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls.)	L	
<b>MIGRATORY PATHWAY FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
<b>Receptor Factor</b>			
<b>DIRECTIONS:</b> Circle the value that corresponds most closely to the sediment receptors at the MRS.			
<b>Classification</b>	<b>Description</b>	<b>Value</b>	
<b>Identified</b>	Identified receptors have access to sediment to which contamination has moved or can move.	H	
<b>Potential</b>	Potential for receptors to have access to sediment to which contamination has moved or can move.	M	
<b>Limited</b>	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L	
<b>RECEPTOR FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
No Known or Suspected Sediment (Human Endpoint) MC Hazard			<input checked="" type="checkbox"/>

Excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004.

**Table 24**  
**HHE Module: Surface Water – Ecological Endpoint Data Element Table**

**Contaminant Hazard Factor (CHF)**

**DIRECTIONS:** Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant ratios together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (µg/L)	Comparison Value (µg/L)	Ratios
<b>CHF Scale</b>	<b>CHF Value</b>	<b>Sum the Ratios</b>	
<b>CHF &gt; 100</b>	<b>H (High)</b>	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
<b>100 &gt; CHF &gt; 2</b>	<b>M (Medium)</b>		
<b>2 &gt; CHF</b>	<b>L (Low)</b>		

<b>CONTAMINANT HAZARD FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the CHF Value</u> from above in the box to the right (maximum value = H).
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**Migratory Pathway Factor**

**DIRECTIONS:** Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
<b>Evident</b>	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
<b>Potential</b>	Contamination in surface water has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
<b>Confined</b>	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls.)	L

<b>MIGRATORY PATHWAY FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).
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**Receptor Factor**

**DIRECTIONS:** Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
<b>Identified</b>	Identified receptors have access to surface water to which contamination has moved or can move.	H
<b>Potential</b>	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
<b>Limited</b>	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L

<b>RECEPTOR FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).
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No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard



Excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004.

**Table 25**  
**HHE Module: Sediment – Ecological Endpoint Data Element Table**

**Contaminant Hazard Factor (CHF)**

**DIRECTIONS:** Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **contaminant ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
<b>CHF Scale</b>	<b>CHF Value</b>	<b>Sum the Ratios</b>	
<b>CHF &gt; 100</b>	<b>H (High)</b>	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
<b>100 &gt; CHF &gt; 2</b>	<b>M (Medium)</b>		
<b>2 &gt; CHF</b>	<b>L (Low)</b>		
<b>CONTAMINANT HAZARD FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the CHF Value</u> from above in the box to the right (maximum value = H).		
<b><u>Migratory Pathway Factor</u></b>			
<b>DIRECTIONS:</b> Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.			
<b>Classification</b>	<b>Description</b>	<b>Value</b>	
<b>Evident</b>	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H	
<b>Potential</b>	Contamination in sediment has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M	
<b>Confined</b>	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls.)	L	
<b>MIGRATORY PATHWAY FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
<b><u>Receptor Factor</u></b>			
<b>DIRECTIONS:</b> Circle the value that corresponds most closely to the sediment receptors at the MRS.			
<b>Classification</b>	<b>Description</b>	<b>Value</b>	
<b>Identified</b>	Identified receptors have access to sediment to which contamination has moved or can move.	H	
<b>Potential</b>	Potential for receptors to have access to sediment to which contamination has moved or can move.	M	
<b>Limited</b>	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L	
<b>RECEPTOR FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).		
No Known or Suspected Sediment (Ecological Endpoint) MC Hazard			<input checked="" type="checkbox"/>

Excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004.

**Table 26**  
**HHE Module: Surface Soil Data Element Table**

**Contaminant Hazard Factor (CHF)**

**DIRECTIONS:** Record the **maximum concentrations** of all contaminants in the MRS's surface soil and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the **contaminant ratios** together, including any additional surface soil contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record **CHF Value**. If there is no known or suspected MC hazard with present in the surface soil, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
<b>CHF Scale</b>	<b>CHF Value</b>	<b>Sum the Ratios</b>	
<b>CHF &gt; 100</b>	<b>H (High)</b>	$CHF = \sum \frac{[\text{Maximum Concentration of Contaminant}]}{[\text{Comparison Value for Contaminant}]}$	
<b>100 &gt; CHF &gt; 2</b>	<b>M (Medium)</b>		
<b>2 &gt; CHF</b>	<b>L (Low)</b>		

<b>CONTAMINANT HAZARD FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the CHF Value</u> from above in the box to the right (maximum value = H).	
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**Migratory Pathway Factor**

**DIRECTIONS:** Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.

Classification	Description	Value
<b>Evident</b>	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.	H
<b>Potential</b>	Contamination in surface soil has moved only slightly beyond the source (i.e. tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
<b>Confined</b>	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls.)	L

<b>MIGRATORY PATHWAY FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).	
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**Receptor Factor**

**DIRECTIONS:** Circle the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
<b>Identified</b>	Identified receptors have access to surface soil to which contamination has moved or can move.	H
<b>Potential</b>	Potential for receptors to have access to surface soil to which contamination has moved or can move.	M
<b>Limited</b>	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	L

<b>RECEPTOR FACTOR</b>	<b>DIRECTIONS:</b> Record <u>the single highest value</u> from above in the box to the right (maximum value = H).	
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No Known or Suspected Surface Soil MC Hazard



Excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004.



**Table 28**  
**Determining the HHE Module Rating**

**DIRECTIONS:**

1. Record the letter values (H, M, L) for the **Contaminant Hazard, Migration Pathway, and Receptor Factors** for the media (from Tables 21-26) in the corresponding boxes below.
2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
3. Using the **HHE Ratings** provided below, determine each media's rating (A-G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)					
Surface Water/Human Endpoint (Table 22)					
Sediment/ Human Endpoint (Table 23)					
Surface Water/Ecological Endpoint (Table 24)					
Sediment/Ecological Endpoint (Table 25)					
Surface Soil (Table 26)					

<p><b>DIRECTIONS (cont.):</b></p> <p>4. Select the single highest Media Rating (A is the highest; G is the lowest) and enter the letter in the <b>HHE Module Rating</b> box.</p> <p><b>Note:</b>            An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.</p>	<b>HHE MODULE RATING</b>	
	<b>HHE Ratings (for reference only)</b>	
	<b>Combination</b>	<b>Rating</b>
	HHH	A
	HHM	B
	HHL	C
	HMM	
	HML	D
	MMM	
	HLL	E
MML	F	
MLL	G	
Alternative Module Ratings	Evaluation Pending	
	No Longer Required	
	No Known or Suspected MC Hazard	

**Table 29**  
**MRS PRIORITY**

**DIRECTIONS:** In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS priority is the single highest priority; record this number in the **MRS or Alternative Priority** box at the bottom of the table.

**Note:** An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		<b>A</b>	<b>1</b>		
<b>A</b>	<b>2</b>	<b>B</b>	<b>2</b>	<b>A</b>	<b>2</b>
<b>B</b>	<b>3</b>	<b>C</b>	<b>3</b>	<b>B</b>	<b>3</b>
<b>C</b>	<b>4</b>	<b>D</b>	<b>4</b>	<b>C</b>	<b>4</b>
<b>D</b>	<b>5</b>	<b>E</b>	<b>5</b>	<b>D</b>	<b>5</b>
<b>E</b>	<b>6</b>	<b>F</b>	<b>6</b>	<b>E</b>	<b>6</b>
<b>F</b>	<b>7</b>	<b>G</b>	<b>7</b>	<b>F</b>	<b>7</b>
<b>G</b>	<b>8</b>			<b>G</b>	<b>8</b>
Evaluation Pending		Evaluation Pending		<b>Evaluation Pending</b>	
No Longer Required		No Longer Required		No Longer Required	
<b>No Known or Suspected Explosive Hazard</b>		<b>No Known or Suspected CWM Hazard</b>		No Known or Suspected MC Hazard	
<b>MRS or ALTERNATIVE PRIORITY</b>				<b>Evaluation Pending</b>	

Excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004. Since the removal of the contaminated soil, numerous bullet fragments have been observed washing out of the berm face, mostly .50 cal rounds from aircraft fire. Therefore, further assessment will be required to determine the appropriate course of action for this site. Because the MRSP is a project prioritization tool, the Draft MRSP EHE, CHE, and HHE reflect an overall alternative rating of "Evaluation Pending".

## Table A MRS Background Information

**DIRECTIONS:** Record the background information below for the MRS to be evaluated. Much of this information is available from DoD databases, such as RMIS. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the MRS summary, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental non-munitions related contaminants found at the MRS (e.g., benzene, trichloroethylene), and any potentially exposed human and ecological receptors. Include a map of the MRS, if one is available.

Munitions Response Site Name: Small Arms Range  
 Component: U.S. Army Corps of Engineers Formerly Used Defense Sites (FUDS) Program  
 Installation/Property Name: Lee Field NAS  
 Location (City, County, State): Green Cove Springs, Clay County, Florida  
 Site Name (RMIS ID)/Project Name (Project No.): Small Arms Range (Project No. I04FL008508)

Date Information Entered/Updated: 6 January 2009  
 Point of Contact (Name/Phone): Deborah McKinley 314-331-8842/ U.S. Army Corps of Engineers, St. Louis District CEMVS-EC-P  
 Project Phase (check only one):

<input type="checkbox"/> PA (INPR)	<input type="checkbox"/> SI	<input checked="" type="checkbox"/> RI	<input type="checkbox"/> FS	<input type="checkbox"/> RD
<input type="checkbox"/> RA-C	<input type="checkbox"/> RIP	<input type="checkbox"/> RA-O	<input type="checkbox"/> RC	<input type="checkbox"/> LTM

**Media Evaluated (check all that apply):**

<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Sediment (human receptor)
<input checked="" type="checkbox"/> Surface Soil	<input type="checkbox"/> Surface Water (ecological receptor)
<input type="checkbox"/> Sediment (ecological receptor)	<input type="checkbox"/> Surface Water (human receptor)

**MRS Summary:**

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM (by type of munition, if known) or munitions constituents (by type, if known) known or suspected to be present): In accordance with Army Policy Memo dated 20 Feb 2009, small arms ammunition does not pose a unique explosive hazard. Therefore, the EHE module is revised to No Known or Suspected Explosive Hazard. The Small Arms Range covered an area of approximately seven acres. The firing range was used for aircraft target training during WWII and later for small arms fire. The Small Arms Range consisted of the following main areas: a concrete aircraft firing curb connected to a runway, a flat, open firing line where weapons were fired, an outer earthen bunker and inner soil berm that formed the impact zone, and a skeet range. The concrete curb was connected to a runway spur where aircraft were aligned to fire their .50-caliber machine guns into an earthen berm approximately 1,000 feet away. The berm was approximately 5 feet deep at the crest, 120 feet long, and approximately 25 feet tall. A comprehensive sampling and analysis program was conducted in 2001. This investigation indicated that the earthen berm and soil directly in front of the berm were contaminated with lead and other metals associated with small arms range activities. Excavation and on-site stabilization was conducted for 2,067 tons of affected soil in January 2004. USACE conducted a groundwater investigation in 2005. Metals (Al, Fe, and Mn) were detected in groundwater samples, but a geochemical evaluation indicated these compounds were naturally occurring. Nation.

Description of Pathways for Human and Ecological Receptors: Groundwater and surface and subsurface soil were sampled after removal actions were conducted.

Description of Receptors (Human and Ecological): The property has been redeveloped for commercial and recreational uses. Groundskeepers, construction workers, employees, and golfers have access to the MRS. The applicable federal and state agencies were not specifically contacted concerning potential ecological resources present on the property. Previous investigations, however, have not identified any ecological resources.