



DEPARTMENT OF THE ARMY

SOUTH ATLANTIC DIVISION, CORPS OF ENGINEERS
ROOM 10M15, 60 FORSYTH ST, S.W.
ATLANTA, GEORGIA 30303-3490

REPLY TO
ATTENTION OF.

CESAD-PDM

15 June 2010

MEMORANDUM FOR COMMANDER, JACKSONVILLE DISTRICT

SUBJECT: Approval of Defense Environmental Restoration Program - Formerly Used Defense Sites (DERP-FUDS) Revised Inventory Project Report (INPR) for Property Number I04FL0396, ORLANDO RANGE AND CHEMICAL YARD, ORLANDO, FL

1. Reference memorandum, CESAJ-DP-C, received 11 June 2010, subject: Defense Environmental Restoration Program – Formerly Used Defense Sites (DERP-FUDS) Revised Inventory Project Report (INPR) for Property No. I04FL0396, ORLANDO RANGE AND CHEMICAL YARD, ORLANDO, FL (copy enclosed).
2. South Atlantic Division (SAD) approves the administrative change to revise the former Military Munitions Response Program (MMRP) / Chemical Warfare Materiel (CWM) project on the subject property into Munitions Response Areas (MRA)/Munitions Response Sites (MRS) according to the definitions currently mandated by Department of Defense (DoD). This revision implements the Munitions Response Site (MRS) Prioritization Protocol (MRSPP), a tool to assign a relative priority for munitions response at each site. The DoD promulgated the MRSPP as a Final Rule and is codified at 32 CFR Part 179. According to this protocol, the existing MMRP/CWM project has been realigned into separate MMRP projects as identified in the attached Revised Property Survey Summary. A revision to the original MMRP/CWM project and three new MMRP projects are proposed. Enclosure 4 of the above reference contains the Project Summary Sheets and Munitions Response Site Prioritization Protocol (MRSPP) results (as required) for the existing revised, and the proposed MMRP Projects.
3. Real Estate and Office of Counsel previously concurred with the Findings and Determination of Eligibility for subject property. The ORLANDO RANGE AND CHEMICAL YARD, Property Number I04FL0396 had been previously approved as DERP-FUDS eligible with a signed Findings and Determination of Eligibility (FDE), dated 24 September 1993. The Military Munitions Center of Expertise has concurred with the proposed project revisions. This revision does not change the basic footprint of the property or scope of the project and was performed in accordance with HQUSACE Implementation Guidance for FUDS MMRP Project Realignment, 13 August 2007, so no additional review is required. Accordingly, the revised MMRP/CWM Project Number I04FL039600 and the new MMRP Projects Numbered I04FL039601, I04FL039602, and I04FL039603 are approved.

200-1e

I04FL039600 01.08 0003



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15 June 2010

SUBJECT: Approval of Defense Environmental Restoration Program - Formerly Used Defense Sites (DERP-FUDS) Revised Inventory Project Report (INPR) for Property Number I04FL0396, ORLANDO RANGE AND CHEMICAL YARD, ORLANDO, FL

4. Overall project management of this property is the responsibility of Jacksonville District (SAJ). The SAJ Project Manager must update the DERP-FUDS database (FUDSMIS) to reflect this approval and follow procedures described in the FUDS Program Policy, ER 200-3-1.

5. Questions concerning this should be directed to SAD DERP-FUDS Program Manager, Sharon Taylor, CESAD-PDM, (404) 562-5212.

FOR THE COMMANDER:


TORKILD P. BRUNSO, P.E.
Chief of Military Integration
Division

Encl

CF:

COMMANDER, HQ USACE (CEMP-DE) (wo/encls)

COMMANDER, U S ARMY CORPS OF ENGINEERS ENVIRONMENTAL and MUNITIONS

CENTER of EXPERTISE, PO BOX 1600, HUNTSVILLE, AL, 35807-4301 (w/encls)

Documentation, EMCX HNC@NWO (w/encls)

*Mailed
out
21 June 10*

CESAD-PDM

15 June 2010

MEMORANDUM FOR COMMANDER, JACKSONVILLE DISTRICT

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CESAD-PDM

15 June 2010

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5. Questions concerning this should be directed to SAD DERP-FUDS Program Manager, Sharon Taylor, CESAD-PDM, (404) 562-5212.

FOR THE COMMANDER:

Encl

TORKILD P. BRUNSO, P.E.
Chief of Military Integration
Division

CF:

COMMANDER, HQ USACE (CEMP-DE) (wo/encls)

COMMANDER, U S ARMY CORPS OF ENGINEERS ENVIRONMENTAL and MUNITIONS

CENTER of EXPERTISE, PO BOX 1600, HUNTSVILLE, AL, 35807-4301 (w/encls)

Documentation, EMCX HNC@NWO (w/encls)

W:\PDM\SHARON\INPR\INPR ORLANDO RANGE AND CHEMICAL YARD FL0396
Realign Approve SAJ.docx

S L M-Taylor/404 562 5212

TAYLOR/PDM SLM 14 Jun 10
BRUNSO/PDM _____

ES
ETPS/PDM _____



rec'd
11 JUNE 2010

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
701 San Marco Blvd.
Jacksonville, FL, 32207-8175

REPLY TO
ATTENTION OF:

CESAJ-DP-C

MEMORANDUM FOR Commander, South Atlantic Division, ATTN: CESAD-PD-M (Sharon Taylor), Room 9M15, 60 Forsyth Street SW, Atlanta, GA 30303-8801

SUBJECT: Defense Environmental Restoration Program - Formerly Used Defense Sites (DERP-FUDS) Revised Inventory Project Report (INPR) for Property No. I04FL0396, ORLANDO RANGE AND CHEMICAL YARD, ORLANDO, FL

1. This memorandum, including enclosures, comprises the revised INPR for the Military Munitions Response Program (MMRP) projects at the ORLANDO RANGE AND CHEMICAL YARD. Enclosure 1 is the 2010 Revised Property Survey Summary Sheet. Enclosure 2 is the property map.
2. The Findings and Determination of Eligibility for this property was previously approved in 1993 and is included here as Enclosure 3. The property was determined to be eligible for inclusion into the FUDS Program. The MMRP/CWM project I04FL039600 is the subject of this revision.
3. This is primarily an administrative change to revise the former MMRP/CWM project into Munitions Response Area (MRA)/Munitions Response Site (MRS) definitions currently mandated by DoD. This revision implements HQUSACE Implementation Guidance for FUDS MMRP Project Realignment dated 13 August 2007, to realign the existing MMRP/CWM project into separate MMRP projects as identified in the MMRP SI and accompanying MMRP Project Realignment Summary. Three new MMRP projects and a revision to the original MMRP/CWM project are proposed. Enclosure 4 contains the Project Summary Sheets and Munitions Response Site Prioritizations Protocol (MRSPP) results (as required) for the existing revised and each proposed MMRP Project. Enclosure 5 is the completed MMRP Project Realignment Summary for your reference.

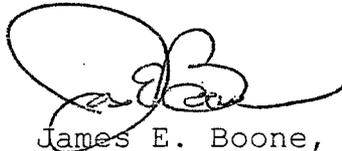
4. This revision does not change the basic footprint of the property or scope of the project and was performed in accordance with HQUSACE Implementation Guidance for FUDS MMRP Project Realignment dated 13 August 2007. The state of Florida was part of the technical project planning team which developed and reviewed the findings of project site inspection report which contained these potential project revisions.

5. I recommend that:

a. South Atlantic Division approve the revised and new MMRP Projects.

b. South Atlantic Division forward a copy of the approval memo and this revised INPR to the Environmental and Munitions Center of Expertise.

6. Please contact me directly if I can be of further assistance. Detailed information desired by your staff can be obtained by contacting the Project Manager, Frank Araico, (904) 232-1804.



James E. Boone, P.E.
Chief, Military/Interagency and
International Services Branch

5 Encls

1. Revised Property Survey Summary Sheet
2. Property Map
3. FDE
4. Revised Project Summary Sheets w/attachments
5. MMRP Project Realignment Summary

REVISED
PROPERTY SURVEY SUMMARY SHEET
FOR
DERP-FUDS PROPERTY NO. I04FL0396
ORLANDO RANGE AND CHEMICAL YARD
ORLANDO, ORANGE County, FL
February 2010 (Revision Date)

PROPERTY NAME: Orlando Range and Chemical Yard (ORCY). Historically, the property was also referred to by a variety of names including: Orlando Air Base Rifle Range, Orlando Army Air Base (OAAB) Toxic Gas and Decontamination Yard, OAAB Chemical Warfare Reservation, Chemical Warfare Range, Chemical Demonstration Range, Narcoosee Road Toxic Gas and Decontamination Yard, Pinecastle AAF Ordnance Storage Area, Orlando Ordnance Storage Area and variations of the same. In the FUDS program it was originally known as Orlando AAF Toxic Gas and Decontamination Yard.

LOCATION: ORCY consisted of 2,111.50 acres in Orange County, Florida. The property lies approximately five and a half miles east, southeast of the City of Orlando's central business district on Florida State Route (SR) 408 (Holland East West Expressway). The southern end of the property is at the intersection of SR 552 and 551 (also known as Curry Ford Road and South Goldenrod Road).

ORCY is divided between the city limits of Orlando and unincorporated areas of Orange County. The western portion of the property includes the City of Orlando's Englewood Park neighborhood, Englewood Park, Leroy Hoequist Park, the Englewood Neighborhood Center and Pool, Stonewall Jackson Middle School and Englewood Elementary School. Capehart Park and Chickasaw Elementary School are in the unincorporated Orange County portions of the property.

The approximate center of the property is at Latitude N28 32' 05" Longitude W81 17' 20" (former location of toxic gas yard). The property is located within EPA Region 4, Florida's 8th Congressional District, and zip codes 32807 and 32822. The property lies within the St. John Water Management District of Orange County.

PROPERTY HISTORY: Orlando Range and Chemical Yard (ORCY) ultimately consisted of 2,111.50 acres near Orlando, Florida located in Orange County. Military use of the property began with a smaller footprint in February 1942 when the Orlando Air Base (FUDS Property I04FL0017) began construction of a rifle range which was completed at the beginning of March. The following year, Army Air Forces approved construction of a toxic gas yard which necessitated adding acreage to bring the total to over 2,000 acres including a 1-mile safety zone as protection in case gas escaped. The government acquired the expanded property in August 1943 but not before the Army Air Forces School of Applied Tactics (AAFSAT) began regular Chemical Warfare (CW) demonstrations on the property in June 1943. The CW demonstrations included field

firing displays of incendiaries, bombs, spray tanks, land mines, smoke pots, smoke grenades and frangible grenades along with the use of Chemical Agent (CA) mustard in decontamination exercises. In addition to the CW demonstrations, there were ordnance demonstrations at the ORCY which used demolition equipment, small arms, rifle grenades, rocket firing, aircraft machine guns and cannons, and simulated 300 pound bomb detonation. Between November 1945 and January 1946, the Army Air Forces Center in Orlando consolidated the ORCY demonstrations with more elaborate ones occurring at Pinecastle Jeep Range (FUDS Property I04FL0405). On 30 April 1946, the Army Air Forces at Orlando Air Base declared most of the lands of the former property excess with the non-excessed portion transferred to Pinecastle Army Air Field (FUDS Property I04FL0320). The War Department classified the remaining property surplus effective 2 December 1946. It is unclear when all the property leases were terminated, as decontamination efforts lingered with the last known clearance effort completed in February 1950.

Military munitions and chemical warfare related uses of ORCY included the following:

- * Two small arms ranges (300 Yard Known Distance Rifle Range and Pistol Range)
- * Storage of various types of conventional munitions in the igloo/magazines and warehouses
- * Field exercises and training for various chemical warfare courses
- * Demonstrations
- * Toxic Gas Yard with storage for bulk chemical agent and filling of spray tanks and bombs
- * Test area for Army Air Forces Board (DDT spray tests and mustard filled bomb surveillance test)

PROPERTY VISIT: The Corps of Engineers and contractor personnel have visited the property on a number of occasions in support of the FUDS program. The first visit on behalf of the Jacksonville District FUDS program occurred in 1993 for completion of the original INPR. Other property visits occurred in association with later investigations (see AVAILABLE STUDIES AND REPORTS below).

CATEGORY OF HAZARDS: The category of hazard for this property is MMRP [Military Munitions Response Program]. No evidence for the other categories of hazards, CON/HTRW, BD/DR, HTRW, and PRP, were found.

PROJECT DESCRIPTION:

Project 00: (MMRP/CWM) - Toxic Gas Yard (TGY): This project was approved on 30 September 1993. This project is being revised to be consistent with current HQUSACE guidance, Implementation Guidance for FUDS MMRP Realignment, dated 13 August 2007. The primary purpose of ORCY was for the storage of bulk chemical agent within a TGY located within the munitions storage portion of the property. The TGY was

where the bulk agent containers were stored in the open. The layout for the TGY included a filling shed where CWS personnel transferred or filled agent from storage containers to spray tanks, chemical bombs or other containers. Potential residue from the agent or decontamination materials used or their breakdown products was investigated as Potential Area Of Interest (PAOI) 4 in the 2009 SI. Based on investigations completed to date, the recommendation is NDAI (No Department of Defense Action Indicated).

Project 01: (MMRP) - Pistol Range Safety Fan: Project 01 is being added as a result of MMRP Realignment and to be consistent with current HQUSACE guidance, Implementation Guidance for FUDS MMRP Realignment, dated 13 August 2007. This project concerns a 194-acre portion of the pistol range safety fan in use between 1943 and 1946. The project consists of the safety fan extent beyond the firing lines and target butt berm of the Pistol Range. The acreage of Project 01 Pistol Range Safety Fan includes only that portion of the Pistol Range that is not included in Project 02, Demonstration Range. The area was investigated in the 2009 SI. Based on investigations completed to date, the recommendation is NDAI (No Department of Defense Action Indicated).

Project 02: Project 02 (MMRP) - Demonstration Range
(MMRP) - Demonstration Range: Project 02 is being added as a result of MMRP Realignment and to be consistent with current HQUSACE guidance, Implementation Guidance for FUDS MMRP Realignment, dated 13 August 2007. With origins in the firing lines and berms for the 1942 300-Yard Known Distance Range and 1943 Pistol Range, the Demonstration Range included static and aerielly disseminated field firing of a variety of munitions and included low-level bombing. The Demonstration Range providing a location for the demonstration of Rifle Grenades, rocket launchers (bazookas), fragmentation grenades, chemical bombs (simulated), chemical smokes (e.g., smoke grenades, smoke pots, spray tanks dispensing FS smoke), and incendiaries (clustered and jellied oil bombs). The area was investigated in the 2009 SI as PAOI 1 - Multipurpose Range Complex and PAOI 2 - Airplane Decontamination Exercise Area and that portion of the Pistol Range (Berm and Borrow Pit Area) within the Demonstration Range area. The 2009 SI located Munitions and Explosives of Concern (MEC) and Munitions Debris (MD). The SI also detected Mmunition Constituents (MC) in soil sediment samples above risk-based screening levels. Based on investigations completed to date, the recommendation is further study to delineate the nature and extent of the MEC and MC presence.

Project 03: (MMRP) - Poten. Disposal Goldenrod Rd Field: Project 03 is being added as a result of MMRP Realignment and to be consistent with current HQUSACE guidance, Implementation Guidance for FUDS MMRP Realignment, dated 13 August 2007. Analysis of historical aerial imagery from the 1940s identified areas of graded or disturbed ground north of the Magazine Area that did not exist prior to the military's acquisition of the land. Although no documentation or maps were identified to confirm

that military items were disposed of or buried on the property, these areas are considered a likely candidate for the "depot graveyard" where surveillance testing. These areas were investigated in the 2009 SI as PAOI 3. During intrusive field investigations at the Potential Disposal Goldman Rd Field, the SI team found MD and detected MC in soil sediment and groundwater samples above risk-based screening levels. Based on investigations completed to date, the recommendation is further study to delineate the nature and extent of the MEC and MC presence.

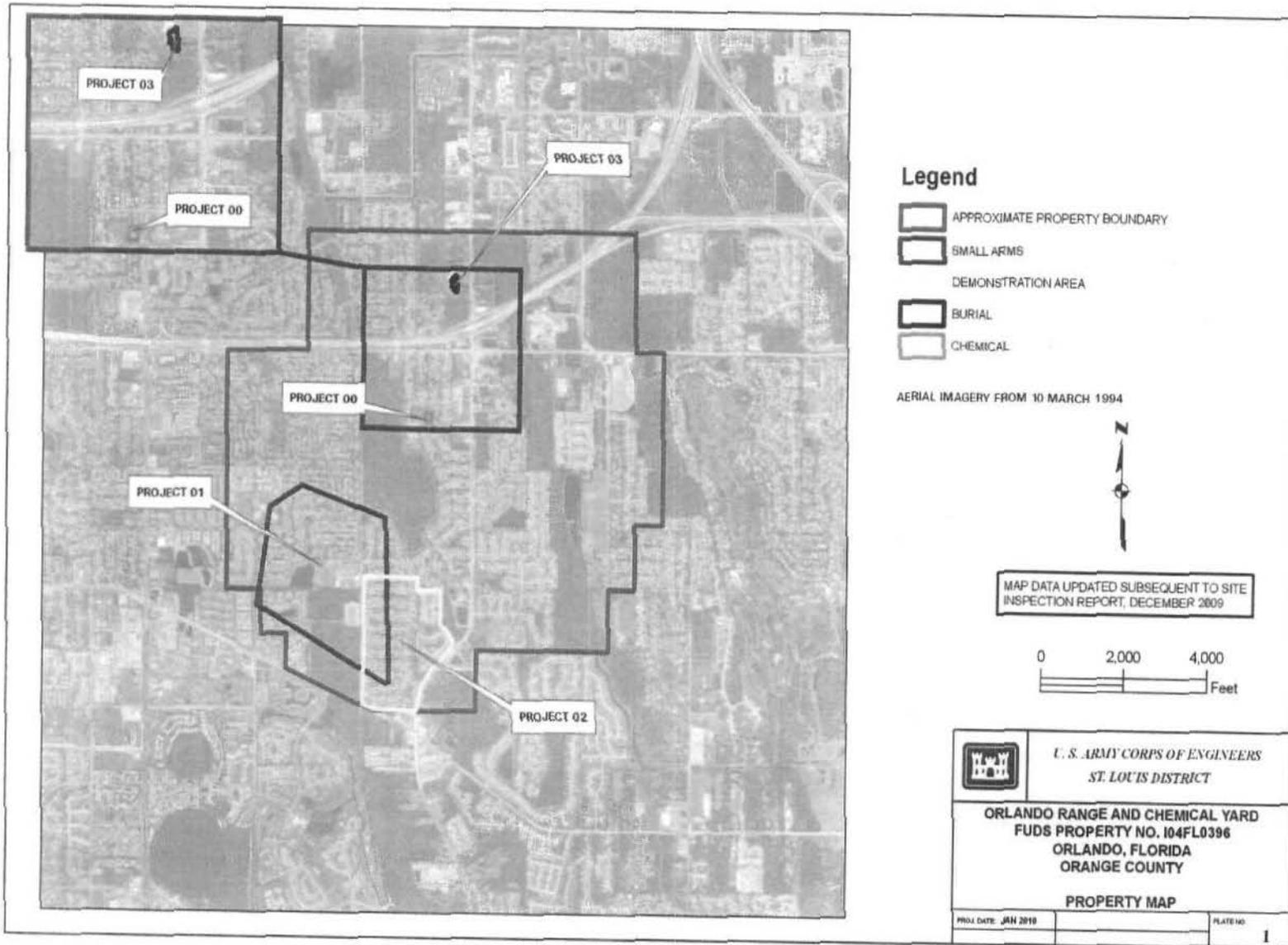
AVAILABLE STUDIES AND REPORTS: The previous Corps of Engineers investigations and reports on this property include:

- * Archives Search Report (ASR) draft 1993 and final 2006
- * CWM Scoping and Security Study Report - August 2007
- * Historical Records Review - 21 January 2009
- * Historical Aerial Photo Analysis: 1943 to 1947 - November 2008
- * Site Inspection - 2009, January 2010 (revised)

These and other reports that have been completed for the property are on file at the Jacksonville District Office. Reports are also available on at the Jacksonville District website at <http://www.saj.usace.army.mil/> under the Orlando Range and Chemical Yard page, PIRS (Project Information Retrieval System) at <https://pirs.usace.army.mil/fuds.cfm> and Virtual Teams at <https://eko.usace.army.mil/virtualteams/>.

POINT OF CONTACT: Jacksonville District, John Keiser, FUDS Program Manager, 904-232-1758.

LEAD REGULATOR: Florida Department of Environmental Protection (FDEP), Eric Nuzie, Federal Facilities Coordinator, 850-245-8978.



DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FORMERLY USED DEFENSE SITES
FINDINGS AND DETERMINATION OF ELIGIBILITY

Orlando Army Air Field Toxic Gas and Decontamination Yard, FL
Site No. I04FL039600

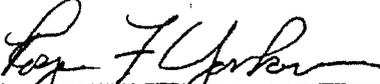
FINDINGS OF FACT

1. Between 1943 and 1945, the United States acquired from various owners, by condemnation and lease, a total of 2,111.50 acres in leasehold for a toxic gas and decontamination yard. The site was developed and named the Orlando Army Air Field Toxic Gas and Decontamination Yard. This facility was located 3.5 miles east of Orlando in Orange County, Florida.
2. The Army Air Force Command used this site to provide a toxic gas and decontamination yard at the Orlando School of Applied Tactics. No information could be located pertaining to any improvements being constructed at the site by the Department of Defense. Therefore, it is unknown whether or not there were any improvements constructed on the site.
3. In December of 1946, the site consisting of 2,111.50 acres in leasehold was determined excess to the needs of the Air Force. Between 1946 and 1947, the entire site consisting of 2,111.50 acres in leasehold was disposed of by lease terminations. The terms and conditions of the leases and termination notices, including whether any restoration was required are unknown as copies of these instruments could not be located and disposal information was taken from the real estate maps and real property management and disposal report.

DETERMINATION

Based on the foregoing Findings of Fact, the Orlando Army Air Field Toxic Gas and Decontamination Yard, Florida, has been determined to be formerly used by the Department of Defense. It is therefore eligible for the Defense Environmental Restoration Program - Formerly Used Defense Sites established under 10 USC 2701 et seq.

28/9/93
DATE



ROGER F. YANKOUBE
Brigadier General, USA
Commanding

REVISED PROJECT SUMMARY SHEET
FOR
DERP-FUDS MMRP/CWM PROJECT NO. I04FL039600
Property No. I04FL0396
Federal Facility ID Number: FL9799F7215
Toxic Gas Yard
ORLANDO RANGE AND CHEMICAL YARD
Orange County, FL
March 2010 (Revision Date)

PROJECT DESCRIPTION: The original MMRP project is being revised in accordance with the recommendations contained in the MMRP SI and MMRP Project Realignment Summary dated 27 January 2010. Although the description of this project is now being limited to a specific geographic area, the integrity of the original scope will be maintained by the combination of all MMRP project scopes.

In 1943, the Army Air Forces School of Applied Tactics (AAFSAT) constructed a Toxic Gas Yard (TGY) by expanding the boundaries of the Orlando Air Base Rifle Range to approximately 2,000 acres. The purpose of the TGY was for the storage of bulk chemical agent in containers (55 or 110-gallon drums or 1-ton containers) stored in the open on the rollways for easy movement. This MRS served as the storage and transfer point of bulk CWS materials including mustard agent, smokes and decontaminating agent but a comprehensive list of equipment and container contents is unavailable. It included standard Mobilization designed decontamination building, a filling shed and open air storage yard with some 230 containers. At the TGY filling shed, CWS personnel transferred or filled agent from storage containers to spray tanks, chemical bombs or other containers. Design of the filling shed provided for draining of agent spills and/or decontamination materials through wooden boards covering a trench to a 6-inch open ditch across a concrete pad floor which then led to ditches draining to swampy areas on property. There are no munitions suspected to have been used or disposed of at this location. The TGY MRS is only an acre with the rest of the ORCY reservation being originally acquired to provide a 1-mile safety zone as protection in case gas escaped. The structures were razed after WWII and the area redeveloped in to residential housing and a water treatment plant by the early 1960s. By 2004, the water treatment plant had been razed and was being redeveloped as a County park (Capehart Park). Toxic Gas Yard use and location is confirmed by historical documents and photographs, maps and aerial imagery (21 January 2009 ORCY Historical Records Review and November 2008 Historical Aerial Photographic Analysis: 1943 to 1947). Potential residue from the agent or decontamination materials used or their breakdown products was investigated as Potential Area Of Interest (PAOI) 4 in the 2009 Site Inspection (SI).

The SI conducted environmental sampling and intrusive investigations for potential of contaminated soils and groundwater from this past use and for Munitions and

Explosives of Concern (MEC) and Munitions Debris (MD) at the TGY. The SI did not observe any MEC or MD in this area during intrusive investigations or sampling activities. In Capehart Park and adjacent residential properties, ten surface soil samples, subsurface soil samples from 2-ft and 4-ft below ground surface and ground water samples from three locations and a single sediment/surface water sample were collected. "Two PAHs (acenaphthylene and phenanthrene) and three pesticides (DDD, DDE, and DDT) were detected in soil at concentrations above their respective background concentrations, but none of the detected concentrations were above human health screening levels." No significant risks to human health are expected from exposure to MC or Chemicals of Concern (COC) in soil, sediment, surface water, or groundwater at PAOI 4 - Toxic Gas Yard based on the sampling and analysis conducted during the SI.

PROJECT ELIGIBILITY: Toxic Gas Yard use and location is confirmed by historical documents and photographs, maps and aerial imagery (21 January 2009 ORCY Historical Records Review and November 2008 Historical Aerial Photographic Analysis: 1943 to 1947). No subsequent chemical warfare or munition use has been identified. Any ordnance contamination at the property is the result of Department of Defense (DoD) activities and is, therefore, eligible for removal under DERP-FUDS.

POLICY CONSIDERATIONS: This project is being revised to be consistent with current HQUSACE guidance, Implementation Guidance for FUDS MMRP Realignment, dated 13 August 2007.

PROPOSED ACTIVITIES: Based on investigations completed to date, no additional activities with respect to CWM, MEC and MC are proposed.

POINT OF CONTACT: Jacksonville District, John Keiser, FUDS Program Manager, 904-232-1758.

LEAD REGULATOR: Florida Department of Environmental Protection (FDEP), Eric Nuzie, Federal Facilities Coordinator, 850-245-8978.



Legend

× CENTROID
UTM ZONE 17 (NAD 83)
471727.6 m E
3156508.9 m N
28° 32' 06" N
81° 17' 20" W

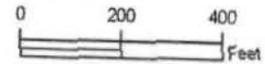
□ APPROXIMATE MRS BOUNDARY
ACREAGE = 1 Ac

□ APPROXIMATE PROPERTY BOUNDARY

AERIAL IMAGERY FROM 10 MARCH 1994



MAP DATA UPDATED SUBSEQUENT TO SITE
INSPECTION REPORT, JANUARY 2010



	U. S. ARMY CORPS OF ENGINEERS ST. LOUIS DISTRICT
ORLANDO RANGE AND CHEMICAL YARD FUDS PROJECT NO. 104FL039600 MUNITIONS RESPONSE MAP	
TOXIC GAS YARD	
PROJ DATE: JAN 2010	PLATE NO: M01

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
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				No Known or Suspected Hazard	

REVISED PROJECT SUMMARY SHEET
FOR
DERP-FUDS MMRP PROJECT NO. I04FL039601
Property No. I04FL0396
Federal Facility ID Number: FL9799F7215
Pistol Range Safety Fan
ORLANDO RANGE AND CHEMICAL YARD
Orange County, FL
March 2010 (Revision Date)

PROJECT DESCRIPTION: The original MMRP project is being added in accordance with the recommendations contained in the MMRP SI and MMRP Project Realignment Summary dated 27 January 2010. Project 01 is being created to address the Pistol Range Safety Fan. Although the description of this project is now being limited to a specific geographic area, the integrity of the original scope will be maintained by the combination of all MMRP project scopes.

In August 1943, the Army Air Forces began construction of a pistol range for use of troops at the Orlando Air Base. Subsequently, the firing lines and berms were used for field firing of various munitions (i.e. Demonstration Range). Use of the Pistol Range ended by 1946.

The 194 acre Pistol Range Safety Fan consists of the extent safety fan beyond the firing lines and target butt berm of the Pistol Range. Project 01 includes only that portion of the original Pistol Range MRS that is not included in Project 02, Demonstration Range.

The Pistol Range is assumed to have accommodated 25 firing positions, and was approximately 30 yards wide by 50 yards deep. It is comprised of an earthen berm, the targets, the firing line(s), safety fan, and an area behind the firing lines, which typically included the ready line, ammunition issue point, and administrative area. Firing lines would have been positioned at 5, 10, 15, and 25 yards in front of the targets. A 5° angle of fire extended from each end of the firing line down range a distance of 1,600 yards; and an additional 25° safety fan, which originated from the same points as the angle of fire, extended down range a distance of 1,200 yards.

The Site Inspection conducted qualitative reconnaissance (QR) and Digital Geophysical Mapping (DGM) and intrusive investigation of anomalies for Munitions and Explosives of Concern (MEC) and Munitions Debris (MD) at this MRS. The SI did not observe any MEC or MD during these activities. Decisions made at the Technical Project Planning (TPP) meetings, determined the locations of biased surface soil samples within the Pistol Range, however no locations were selected from within this MRS.

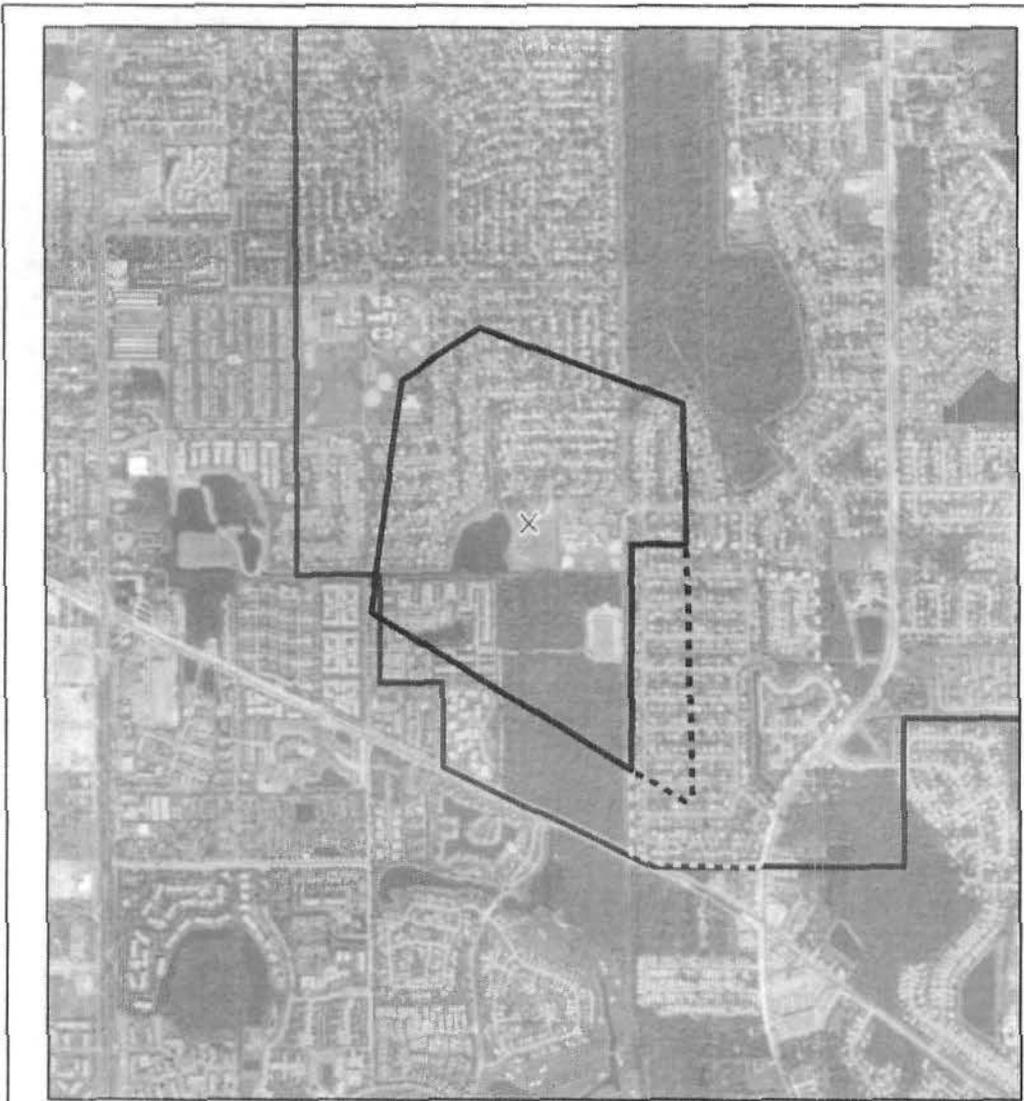
PROJECT ELIGIBILITY: Pistol Range use and location is confirmed by historical documents and photographs, maps and aerial imagery (21 January 2009 ORCY Historical Records Review and November 2008 Historical Aerial Photographic Analysis: 1943 to 1947). No subsequent munition use has been identified. Any ordnance contamination at the property is the result of Department of Defense (DoD) activities and is, therefore, eligible for removal under DERP-FUDS.

POLICY CONSIDERATIONS: This project is being created to be consistent with current HQUSACE guidance, Implementation Guidance for FUDS MMRP Realignment, dated 13 August 2007.

PROPOSED ACTIVITIES: Based on investigations completed to date, no additional activities with respect to CWM, MEC and MC are proposed.

POINT OF CONTACT: Jacksonville District, John Keiser, FUDS Program Manager, 904-232-1758.

LEAD REGULATOR: Florida Department of Environmental Protection (FDEP), Eric Nuzie, Federal Facilities Coordinator, 850-245-8978.



Legend

X CENTROID
UTM ZONE 17 (NAD 83)
470938.2m E
3155482.7 m N
28° 31' 33\"/>

APPROXIMATE MRS BOUNDARY
ACREAGE = 194 Ac

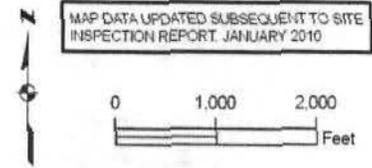
APPROXIMATE PROPERTY BOUNDARY

ASSOCIATED WITH PROJECT 02, DEMONSTRATION RANGE

SMALL ARMS

MULTIPLE COMBINED USE

AERIAL IMAGERY FROM 10 MARCH 1994



MAP DATA UPDATED SUBSEQUENT TO SITE INSPECTION REPORT, JANUARY 2010

	U. S. ARMY CORPS OF ENGINEERS ST. LOUIS DISTRICT
ORLANDO RANGE AND CHEMICAL YARD FUDS PROJECT NO. 104FL039601 MUNITIONS RESPONSE MAP	
PISTOL RANGE SAFETY FAN	
PROJ DATE: JAN 2010	PLAT NO: R01

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
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				No Longer Required	

Comments: 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 from the 8 as presented in the SI to No Known or Suspected Explosive Hazard. Additionally, the HHE module and overall priority have been revised to No Longer Required in support of the NDAI recommendation.

REVISED PROJECT SUMMARY SHEET
FOR
DERP-FUDS MMRP PROJECT NO. I04FL039602
Property No. I04FL0396
Federal Facility ID Number: FL9799F7215
Demonstration Range
ORLANDO RANGE AND CHEMICAL YARD
Orange County, FL
March 2010 (Revision Date)

PROJECT DESCRIPTION: The original MMRP project is being revised in accordance with the recommendations contained in the MMRP SI and MMRP Project Realignment Summary dated 27 January 2010. Although the description of this project is now being limited to a specific geographic area, the integrity of the original scope will be maintained by the combination of all MMRP project scopes.

In June 1943, the Army Air Forces School of Applied Tactics (AAFSAT) in Orlando began regular Chemical Warfare (CW) demonstrations in the field. The location of these demonstrations was on the firing lines and berm of the Orlando Air Base Rifle Range constructed in 1942. AAFSAT also constructed a pistol range in this area in 1943, as well as bleachers for observers and a low level bomb target(s) for the demonstrations. The CW demonstrations included incendiaries, bombs, spray tanks, smoke pots, smoke grenades and frangible grenades, along with the use of mustard in decontamination exercises. Additionally there were ordnance demonstrations which used small arms, rifle grenades, rocket firing, aircraft machine guns and cannons, and simulated 300 pound bomb detonation. Use of the Demonstration Range lasted through November 1945, when it was moved about 4 miles away at a separate FUDS (Pinecastle Jeep Range. I04FL0405).

The boundaries for this Munition Response Site (MRS) are based on ground scars and use areas identified in the Historical Aerial Photographic Analysis: 1943 to 1947. The southern end correlates to the bleachers (current Leighton Way). Demonstrations were conducted to the north of the bleachers. It is ~1350 feet from bleachers to the known bombing target (Stockholm Way). In between, lie the berm and burrow area for the Pistol Range (Pender Way) and the Rifle Range (Hershey Way).

Given that munitions were dropped from minimal altitudes on the bombing target and the fact that they would not destroy the plane used in decontamination exercises with incendiary bombs, it is assumed that the radial impact of bombing from the target is approximately 850 feet (i.e. the distance between the target and plane). Also within this MRS is the Cypress Run Apartments complex, which is east of an additional potential bombing target. The northeast corner of the MRS includes the Garwood Drive

Subdivision, which has a few tracts were within 800 feet of the confirmed bombing target. Given the practice of subdivision developers in the area moving fill dirt in and around prior to construction, there is potential migration of any previously in-situ material.

The 2009 Site Inspection (SI) investigated the Demonstration Range MRS as part of three areas: SI PAOI 1 - Multipurpose Range Complex, SI PAOI 2 - Airplane Decontamination Exercise Area and a portion of the Pistol Range MRS (Berm and Borrow Pit Area). The 2009 SI conducted Digital Geophysical Mapping (DGM) and intrusive investigation of anomalies for Munitions and Explosives of Concern (MEC) and Munitions Debris (MD); sampled for contaminated soils and groundwater from past use. During intrusive investigation, the SI team located MEC (AN-M54 4-lb. incendiary bomblet) and MD from M50 series incendiary bomblets. The SI also detected Munition Constituents (MC) in soil sediment samples above risk-based screening levels, though none of the detected concentrations of MC posed imminent threats to human health. Sample data from the SI PAOI 2 does not support any chemical agent there and a pathway and risk assessment determined that no significant health risks to human receptors are anticipated.

PROJECT ELIGIBILITY: The Demonstration Range use and location is confirmed by historical documents and photographs, maps and aerial imagery (21 January 2009 ORCY Historical Records Review and November 2008 Historical Aerial Photographic Analysis: 1943 to 1947). No subsequent munition use has been identified. Any ordnance contamination at the property is the result of Department of Defense (DoD) activities and is, therefore, eligible for removal under DERP-FUDS.

POLICY CONSIDERATIONS: This project is being created to be consistent with current HQUSACE guidance, Implementation Guidance for FUDS MMRP Realignment, dated 13 August 2007.

PROPOSED ACTIVITIES: Based on investigations completed to date, additional activities to determine the nature and extent of munitions and explosives of concern (MEC) and munitions constituents (MC) are proposed at the Demonstration Range.

POINT OF CONTACT: Jacksonville District, John Keiser, FUDS Program Manager, 904-232-1758.

LEAD REGULATOR: Florida Department of Environmental Protection (FDEP), Eric Nuzie, Federal Facilities Coordinator, 850-245-8978.



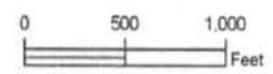
Legend

- ✕ CENTROID
UTM ZONE 17 (NAD 83)
471519.7 m E
3154992.3 m N
28° 31' 17" N
81° 17' 28" W
- APPROXIMATE MRS BOUNDARY
ACREAGE = 115 Ac
- APPROXIMATE PROPERTY BOUNDARY
- ⋯ SMALL ARMS

AERIAL IMAGERY FROM 10 MARCH 1994



MAP DATA UPDATED SUBSEQUENT TO SITE
INSPECTION REPORT, JANUARY 2010



	U. S. ARMY CORPS OF ENGINEERS ST. LOUIS DISTRICT
ORLANDO RANGE AND CHEMICAL YARD FUDS PROJECT NO. 104FL039602 MUNITIONS RESPONSE MAP	
DEMONSTRATION RANGE	
PROJ DATE: JAN 2010	PLATE NO: R01

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
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY					2

REVISED PROJECT SUMMARY SHEET
FOR
DERP-FUDS MMRP PROJECT NO. I04FL039603
Property No. I04FL0396
Federal Facility ID Number: FL9799F7215
Poten. Disposal Goldenrod Rd Field
ORLANDO RANGE AND CHEMICAL YARD
Orange County, FL
March 2010 (Revision Date)

PROJECT DESCRIPTION: The original MMRP project is being revised in accordance with the recommendations contained in the MMRP SI and MMRP Project Realignment Summary dated 27 January 2010. Project 03 is being created to address the Poten. Disposal Goldenrod Rd Field. Although the description of this project is now being limited to a specific geographic area, the integrity of the original scope will be maintained by the combination of all MMRP project scopes.

Analysis of historical aerial imagery from the 1940s identified areas of graded or disturbed ground north of the Magazine Area that did not exist prior to the military's acquisition of the land. Although no documentation or maps were identified to confirm that military items were disposed of or buried on the property, these areas are considered a likely candidate for the "depot graveyard" where surveillance testing occurred (21 January 2009 ORCY Historical Records Review and November 2008 Historical Aerial Photographic Analysis: 1943 to 1947). This project concerns a potential disposal or burial area identified in an open field adjacent to Goldenrod Road north of high Highway 408 in an area that has been developed in recent years (i.e. subdivisions to the west, a gas station to the north and a hotel to the south in the last decade).

The 2009 Site Inspection (SI) investigated this area as part of Potential Area of Interest (PAOI) PAOI 3. The 2009 SI conducted Digital Geophysical Mapping (DGM) and intrusive investigation of anomalies for Munitions and Explosives of Concern (MEC) and Munitions Debris (MD); sampled for contaminated soils and groundwater from past use. During intrusive investigation (digging) at the Poten. Disposal Goldenrod Rd Field, the SI team found MD from a variety of items: 75mm casing, end caps for M50 series bomblets; expended M4 burster tubes from M47 bombs plus other pieces from M47s. Additionally MC detected in soil sediment and groundwater samples were above risk-based screening levels. The SI conducted additional DGM of the ground scars, identifying a north-south trending lineation of anomalies over 300 feet long within the former disturbed ground area, where the majority of the MD was found. Only a fraction of the anomalies identified through DGM were intrusively investigated during the SI.

PROJECT ELIGIBILITY: The location and probable use is confirmed by historical documents and photographs, maps and aerial imagery (21 January 2009 ORCY Historical Records Review and November 2008 Historical Aerial Photographic Analysis: 1943 to 1947). No subsequent munition use has been identified. Any ordnance contamination at the property is the result of Department of Defense (DoD) activities and is, therefore, eligible for removal under DERP-FUDS.

POLICY CONSIDERATIONS: This project is being created to be consistent with current HQUSACE guidance, Implementation Guidance for FUDS MMRP Realignment, dated 13 August 2007.

PROPOSED ACTIVITIES: Based on investigations completed to date, additional activities to determine the nature and extent of munitions and explosives of concern (MEC) potential and munitions constituents (MC) are proposed.

POINT OF CONTACT: Jacksonville District, John Keiser, FUDS Program Manager, 904-232-1758.

LEAD REGULATOR: Florida Department of Environmental Protection (FDEP), Eric Nuzie, Federal Facilities Coordinator, 850-245-8978.



Legend

× CENTROID
UTM ZONE 17 (NAD 83)
471913.0m E
3157421.7 m N
28° 32' 36" N
81° 17' 14" W

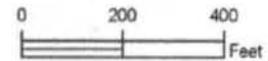
□ APPROXIMATE MRS BOUNDARY
ACREAGE = 1 Ac

□ APPROXIMATE PROPERTY BOUNDARY

AERIAL IMAGERY FROM 10 MARCH 1994



MAP DATA UPDATED SUBSEQUENT TO SITE
INSPECTION REPORT, JANUARY 2010



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

ORLANDO RANGE AND CHEMICAL YARD
FUDS PROJECT NO. 104FL039603
MUNITIONS RESPONSE MAP

POTENTIAL DISPOSAL/BURIAL AREA
GOLDENROD ROAD FIELD

PROJ DATE: JAN 2010

PLATE NO.

M01

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
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS or ALTERNATIVE PRIORITY				4	

MMRP PROJECT REALIGNMENT SUMMARY

(Version 5 – 19 Oct 2007)

FUDS Property No: I04FL0396	FUDS Property Name: Orlando Range and Chemical Yard
MMRP Project Phase: Site Inspection	FUDS PM District: CESAJ MMDC: CEHNC

CURRENT FUDSMIS CONFIGURATION

No. of MMRP Projects: 1		No of MRAs: 1			No. of MRSs: 1	
Proj. No.	Project Name	MRA ID - MRS No.	MRS Name	MRSP	Acres	
1	00	CWM DECONTAMINATION AND RANGES	I04FL039600R01 - 1	Pistol Range	N/A	223
2						
3						
4						
5						
6						
<i>(if additional lines needed, attach another form* - also explain all acreage changes on back)</i>					Total Acres:	223

NEW MMRP PROJECT DESIGNATION RECOMMENDATION

No. of MMRP Projects: 4	No of MRAs: 4	No. of MRSs: 4
-------------------------	---------------	----------------

Default Selected: Yes

(Default is one MMRP Project per MRA, if No is selected, complete justification below)

Proj. No.	Project Name	MRA ID - MRS No.	MRS Name	Next Phase	MEC	MC	MRSP	Acres	
1	00	Toxic Gas Yard	I04FL039600M01-1	Toxic Gas Yard	PCO	No	No	No Known or Suspected Hazard	1
2	01	Pistol Range Safety Fan	I04FL039600R01-1	Pistol Range Safety Fan	PCO	No	No	No Longer Required	194
3	02	Demonstration Range	I04FL039602R01-1	Demonstration Range	RI/FS	Yes	Yes	2	115
4	03	Poten. Disposal Goldenrod Rd Field	I04FL039603M01-1	Poten. Disposal Goldenrod Rd Field	RI/FS	Yes	Yes	4	1
5									
6									
<i>(if additional lines needed, attach another form - also explain all acreage changes on back)</i>							Total Acres:	311	

MMRP PROJECT DESIGNATION RECOMMENDATION AUTHORS

FUDS District PM Name: Frank Araico	Org. Code: CESAJ-DP-S	Date: 27 January 2010
MMDC POC Name: Becky Terry	Org. Code: CEHNC-OE	Date: 27 January 2010

MMRP PROJECT DESIGNATION APPROVAL

(only required if Default not selected)

RBC FUDS PgM Name: Sharon Taylor	Org. Code: CESAD-PDM	Signature: <i>Sharon Taylor</i>
Approved: (if No, explain below)		Date: 27 January 2010

Justification for MMRP Project Designation Recommendation:

(Clear and convincingly justification must be provided using the eight Modifying Criteria in the MMRP Project Splitting Policy - The eight modifying criteria are 1) Geographic Setting, 2) Anticipated Response, 3) Management Efficiency, 4) Land Use, 5) Stakeholder Input, 6) Risk Management, 7) Performance Goals, and 8) Project Complexity)

The recommendations of the Final Site Inspection (SI) Report revised 27 January 2010 were accepted and the MMRP Project Design Recommendations for Projects 00 through 03 reflect the recommendations of the SI Report.

Project 00 relates to Potential Area of Interest (PAOI 4) – Toxic Gas Yard and the CWM potential remaining. The SI recommended for NDAI (No Department of Defense Action Indicated).

Project 01, Pistol Range Safety Fan, includes that portion of the original MMRP MRS that lies outside Project 02.

Project 02, Demonstration Range includes SI PAOI 1 – Multipurpose Range Complex; SI PAOI 2 – Airplane Decontamination Exercise Area and that portion of the Pistol Range MRS (Berm and Borrow Pit Area) within the Demonstration Range area. The Demonstrations occurred in the area of the firing lines and berms of the pistol and rifle ranges. These all share the same geographic area, land use and have similar anticipated response (criteria 1, 2 & 4)

Project 03, includes SI PAOI 3 – Poten. Disposal Goldenrod Rd Field.

Explanation of Acreage Changes

The acreage of Project 01 Pistol Range Safety Fan (194 acres) includes only that portion of the original Pistol Range MRS (223 acres) that is not included in Project 02, Demonstration Range. Project 02 includes 115 acres total of which only 29 acres was part of the original Pistol Range MRS (223-194 acres). The remaining 86 acres are additional area beyond the original Pistol Range MRS. Overall MMRP acreage increase is also due to the addition of SI PAOI3 (Project 03) and PAOI4 (Project 00).

Reasons for RBC FUDS PgM Non-Concurrence: