

FINAL

**First Five-Year Review Report
for
Fort Segarra, U.S. Virgin Islands
I02VI097701**

Contract No. W912DY-10-D-0022
Task Order No. 0004

Prepared for:
U.S. Army Engineering & Support Center
CEHNC-CT
4820 University Square
Huntsville, Alabama 35816-1822
and
U.S. Army Corps of Engineers, Jacksonville District
701 San Marco Boulevard
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June 2012

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LIST OF ACRONYMS AND ABBREVIATIONS

ASR	Archives Search Report
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CWM	Chemical warfare materiel
EA	EA Engineering, Science, and Technology, Inc.
EE/CA	Engineering Evaluation/Cost Analysis
EOTI	Explosive Ordnance Technologies, Inc.
FUDS	Formerly Used Defense Site
MEC	Munitions and explosives of concern
MMRP	Military Munitions Response Program
Parsons	Parsons Engineering, Science, Inc
SAJ	Jacksonville District
U.S.	United States
USACE	United States Army Corps of Engineers
USAESCH	United States Army Engineering & Support Center – Huntsville

EXECUTIVE SUMMARY

The United States (U.S.) Army Engineering & Support Center – Huntsville (USAESCH) and the Jacksonville District (SAJ) of the U.S. Army Corps of Engineers (USACE) have conducted the first five-year review of Fort Segarra, St. Thomas Bay in the U.S. Virgin Islands. The goal of this five-year review is to determine if response actions implemented at the site continue to minimize explosives safety risks and remain protective of human health, safety, and the environment. The triggering event for this five-year review was the mobilization of the removal action that specified a response action was needed at this site.

Five-year reviews are a requirement under the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, and the National Contingency Plan. Five-year reviews at sites that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Department of Defense, but which subsequently have been transferred out of Department of Defense control, i.e., Formerly Used Defense Sites (FUDS), are conducted under the Defense Environmental Restoration Program. Fort Segarra is a FUDS (I02VI097701) located on Water Island in St. Thomas Bay, the fourth largest of the U.S. Virgin Islands, approximately 1,800 feet from St. Thomas and directly south from the capital, Charlotte Amalie (Figure 1). The site was utilized for military operations from 1944 until 1946.

Water Island was acquired in 1944 for use as a coastal defense Installation. World War II-era gun emplacements, barracks, watchtowers, underground bunkers, and other military facilities operated on the island. In addition, docks; roads; and water, sewage, and power systems were constructed. The site was closed in 1946 at the end of World War II.

In May 1948 the U.S. Army Chemical Corps began operating at Fort Segarra. The U.S. Army Chemical Corps used portions of Water Island for testing and storage of chemical munitions. As part of the Tropical Test Program, Water Island (Fort Segarra) was used in the evaluation of performance of chemical warfare material in tropical environments. U.S. Army Chemical Corps operations at the site ended in 1950. Fort Segarra encompasses approximately 500 acres acquired in 1944 for construction of a fortification. The site has steep rocky slopes and highly indented coast.

Multiple investigations and/or removal actions were conducted on the FUDS, which resulted in the identification of multiple areas of interest in site documents. The following areas of interest were investigated at the Former Fort Segarra:

- Test Area 4
- Test Area 5
- Test Area 8
- Flamingo Bay Landfill.

The EE/CA Action Memorandum (USACE SAJ 2006) included the directive that USACE maintain its responsibilities for assessing residual risk at the site by periodically evaluating the continued effectiveness and reliability of the implemented remedial actions. Institutional

controls (warning signs and brochures) for the entire FUDS and a 3X removal action¹ for the Flamingo Bay Landfill were selected response actions for this FUDS. The assessment of this five-year review found that the response actions at Test Areas 4, 5, and 8, and Flamingo Bay Landfill have been partially completed in accordance with the requirements of the EE/CA Action Memorandum. A removal action has been performed in Flamingo Bay, and warning signs have been installed and maintained; however, while fact sheets/brochures were printed and distributed to the community prior to the EE/CA field investigation they are no longer being distributed. Although brochures are not currently being distributed, interviews with local residents indicate that the community on Water Island is aware of the site's history and understand how to respond if "suspect" items are identified in the area, as such, the remedy is currently protective of human health and the environment. Furthermore, there have been no reported incidents involving MEC or finds of munitions debris at this FUDS; therefore the remedy has been protective in the short-term. However, in order for the remedy to remain protective in the long-term, community awareness must be fully implemented. The following actions need to be taken to ensure future protectiveness:

- USACE should update the USACE FUDS Website to include Fort Segarra, U.S. Virgin Islands
- This five-year review report should identify the responsible entities, their roles, and the required actions needed to implement the local remedies. USACE should contact and work with local entities to ensure warning signs are maintained.
- A copy of the Final Five-Year Review report should be placed at the reference desk at the Enid M. Baa Library, located at 20 Dronningh Gade, St. Thomas, U.S. Virgin Island 00802 and a copy should be provided to the State Historic Preservation Office, located at 396-1 Anna's Retreat St. Thomas, Virgin Islands 00802
- The two existing warning signs should be maintained.

It is recommended the next five-year review for Fort Segarra, U.S. Virgin Islands be conducted five years from the date of this report.

¹ 3X scrap is defined as material that has been decontaminated and the chemical warfare materiel is no longer detectable at action levels.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION	
Site name: Fort Segarra, U.S. Virgin Islands	
FUDS ID: I02VI097701	
Water Island, U.S. Virgin Islands	
SITE STATUS	
Selected Response Action Description: Community Awareness (Test Areas 4, 5, and 8 and Flamingo Bay Landfill), 3X Removal Action (Flamingo Bay Landfill)	
Response Action Status: Complete	
Initial Date of Onsite Field Work for Response Action Implementation: 3 December 2008	
Completion Date for Response Action Implementation: December 2008 and January 2009	
Does the site include multiple Areas of Interest? Yes Munitions Response Sites? Yes If yes, list the areas included in this Five-Year Review and specify type: <ul style="list-style-type: none"> • Test Area 4 • Test Area 5 • Test Area 8 • Flamingo Bay Landfill 	Has site been put into reuse? Yes
REVIEW STATUS	
Review Type: Discretionary	
Lead agency: USACE	
USACE-SAJ Project Manager name: Frank Araico	CEHNC-OED Project Manager name: John Cook, P.E., P.L.S.
Author: Jim Daffron/Tim Reese	Author affiliation: Explosive Ordnance Technologies, Inc./EA Engineering, Science, and Technology, Inc.
Review period: 28 July 2010 – 30 September 2011	
Review number: 1 (first) <input checked="" type="checkbox"/> 2 (second) <input type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify) _____	
Date(s) of site visit: 18-19 May 2011	
Triggering date: November 2007 (Removal Action – Report 2009)	
Due date (five years after triggering action date): November 2012	

Five-Year Review Summary Form, Continued

Issues:

For Test Areas 4, 5, 8 and Flamingo Bay:

Community awareness program is only being partially implemented as prescribed by the 2006 EE/CA Action Memorandum. Specifically, brochures/fact sheets are not being distributed to the community and visitors.

The responsibilities for implementing the local initiatives for community awareness (i.e. distribution of brochures) were not clearly defined and the entities responsible did not understand their role(s).

For Flamingo Bay Landfill:

No incidents involving MEC or munitions debris have occurred since the removal action, as identified in the 2006 EE/CA Action Memorandum, was completed in December 2008. No issues were identified with the remedy (removal action).

Recommendations and Follow-Up Actions:

For Test Areas 4, 5, 8 and Flamingo Bay:

USACE should update the USACE FUDS Website to include Fort Segarra, U.S. Virgin Islands as an alternative to distributing brochures/factsheets to visitors, and a copy of the Final Five-Year Review report should be placed at the reference desk of the Enid M. Baa Library, located at 20 Dronningh Gade, St. Thomas, U.S. Virgin Islands 00802 and a copy should be provided to the State Historic Preservation Office (SHPO)², located at 396-1 Anna's Retreat St. Thomas, Virgin Islands 00802. The SHPO provides brochures and information on other sites in the area and could potentially be a repository for fact sheets and brochures. Furthermore, the current community awareness program should be maintained and new information dissemination programs should be investigated. As a follow-up USACE SAJ should contact and work with local entities (Enid M. Baa Library and SHPO) to ensure site information is distributed effectively.

² As per an interview with the former USACE Technical Manager, the SHPO was initially selected for replenishing the brochures/fact sheets on the island. As an active, local stakeholder the SHPO may be able to further assist with community awareness by having the most up-to-date information on hand for public reference.

For Flamingo Bay Landfill:

USACE should update the USACE FUDS Website to include Fort Segarra, U.S. Virgin Islands and a copy of the Final Five-Year Review report should be placed at the reference desk at the Enid M. Baa Library, located at 20 Dronningh Gade, St. Thomas, U.S. Virgin Islands 00802 and the SHPO office located on at 396-1 Anna's Retreat St. Thomas, Virgin Islands 00802. Furthermore, the current community awareness program should be maintained (i.e. warning signs). As a follow-up USACE SAJ should contact and work with local entities (Enid M. Baa Library and SHPO) to ensure site information is distributed effectively.

Protectiveness Statement(s):

For Test Areas 4, 5, 8 and Flamingo Bay:

The response action (community awareness) at Test Areas 4, 5, 8, and Flamingo Bay has only been partially implemented (signs were installed but no brochures have been distributed) as prescribed by the 2006 EE/CA Action Memorandum. Even so, there have been no reported incidents involving MEC or munitions debris at this FUDS; therefore the remedy has been protective in the short-term. However, in order for the remedy to remain protective in the long-term, community awareness must be fully implemented.

For Flamingo Bay Landfill:

The response action (removal action) at the Flamingo Bay Landfill has been implemented as prescribed by the 2006 EE/CA Action Memorandum. The remedy is protective of human health and the environment.

Other Comments:

None.

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1. INTRODUCTION

Under contract to United States (U.S.) Army Engineering & Support Center – Huntsville (USAESCH), Explosive Ordnance Technologies, Inc. (EOTI), teamed with EA Engineering, Science, and Technology, Inc. (EA), conducted a five-year review of the Fort Segarra Formerly Used Defense Site (FUDS) under the Military Munitions Response Program (MMRP). The MMRP FUDS is under the direction of the U.S. Army Corps of Engineers (USACE) Jacksonville District (SAJ) as the Life Cycle Project Manager in accordance with ER 200-3-1, and the task order is managed and overseen by USAESCH. The contract to perform this five-year review was awarded under Contract No. W912DY-10-D-0022, Task Order No. 0004, dated 28 July 2010. Future five-year reviews will need to be contracted.

As per the *Final Work Plan for Five-Year Reviews for Six MMRP Sites*, a five-year review of the FUDS is being conducted as determined appropriate by FUDS policy for legacy MMRP projects. This five-year review is considered discretionary. The five-year review focuses on munitions response sites located within the FUDS where a Remedy in Place/Response Complete has been declared. CERCLA guidelines for five-year reviews are being followed to conduct the reviews.

The overall objective of the five-year review at this MMRP site is to evaluate the implementation and performance of the response actions by assessing if the response continues to be protective of human health and the environment, assess the applicability of new technology for addressing previous technical impracticability determinations, and evaluate the maintenance and enforcement as well as the effectiveness of the institutional controls.

A Technical Project Planning meeting was conducted on 27 September 2010 at the SAJ office located in Jacksonville, Florida. The meeting participants included representatives from USACE SAJ, USAESCH, and the EOTI Team. The purpose of the Technical Project Planning meeting was to provide an understanding of the work planned and the methodology to implement the work, discuss safety considerations, and review the steps necessary for completion of the five-year reviews. Based on consensus reached during the Technical Project Planning, it was determined that one Work Plan would be developed for all six FUDS included in the Performance Work Statement. Furthermore, it was determined that six individual Five-Year Review Reports will be developed, one for each of the FUDS identified in the Performance Work Statement (EOTI 2010).

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2. SITE CHRONOLOGY AND DESCRIPTION

This chapter describes the physical characteristics of the site, provides summaries of land and resource use, and the operational history of Fort Segarra, U.S. Virgin Islands. This chapter also describes the initial response actions, provides a summary of site risks, and presents the basis for response actions at the site.

2.1 Site Location

The Former Fort Segarra is located on Water Island, the fourth largest of the U.S. Virgin Islands, approximately 1,800 feet from St. Thomas and directly south from the capital, Charlotte Amalie (Figure 1).

2.2 Site History

Fort Segarra was approved for construction in March 1942 as a battery to be built on the southern tip of Water Island (to defend the Roosevelt Roads Naval Facility on Puerto Rico). Water Island was acquired in 1944 for use as a coastal defense Installation and construction of Fort Segarra. World War II-era gun emplacements, barracks, watchtowers, underground bunkers, and other military facilities operated on the island. In addition, docks, roads, and, water, sewage, and power systems were constructed. However, while the concrete gun positions and supporting buildings were completed, the armament was never installed. In June 1945, it was recommended that the harbor defense units be removed from Fort Segarra leaving only headquarters and service personnel to administer the fort. The site was closed in 1946 at the end of the World War II (USACE 2002).

The U.S. Army Chemical Corps began using portions of Water Island for testing and storage of chemical munitions beginning in May 1948. As part of the Tropical Test Program, Water Island (Fort Segarra) was used in the evaluation of performance of chemical warfare material (CWM) in tropical environments. Operations at the site ended in 1950 (USACE 2002).

A summary of historical events pertaining to the former Fort Segarra are provided in Table 1.

Table 1: Chronology of Events

Event	Date
Site acquired for use as a coastal defense Installation and construction of Fort Segarra (USACE 2002).	1944
Site closed (USACE 2002)	1946
U.S. Army Chemical Corps began using portions of Water Island for testing and storage of chemical munitions (USACE 2002).	May 1948
Operations at the site end (USACE 2002).	1950
A Naval Ordnance Disposal Detachment at Roosevelt Roads, Puerto Rico, responded to an unearthing of metal objects that appeared to be bombs. The Navy report noted “several” bombs had been unearthed during a dredging operation at the Flamingo Bay Landfill Area (suspected to be Army M70 and M78 chemical bombs) (Parsons Engineering, Science, Inc. [Parsons] 2009).	1966
An Inventory Project Report was completed for the site by USACE.	December 1989
An Archives Search Report (ASR) was completed (Ebasco Environmental, 1991)).	August 1991
A U.S. Army Chemical Materiel Destruction Agency Scoping Study was completed for the site.	December 1993
A Site Characterization Former Fort Segarra, U.S. Virgin Islands – Phase I Remedial Investigation Report was completed for the site by Management Technology Associates, Inc.	January 1995
A Historic Photo Analysis of Water Island was completed by the Topographic Engineering Center.	September 2001
A revised ASR was completed by USACE.	March 2002
An Engineering Evaluation/Cost Analysis (EE/CA) Report was completed for the site by Parsons.	June 2004
An EE/CA Action Memorandum was completed for the site by USACE SAJ.	July 2006
A Site-Specific Final Report documenting the removal action in the Flamingo Bay Landfill is completed by Parsons.	April 2009

2.3 Areas of Interest

The Former Fort Segarra is located on Water Island, the fourth largest of the U.S. Virgin Islands, approximately 1,800 feet from St. Thomas and directly south from the capital, Charlotte Amalie (Figure 1). The site encompasses approximately 500 acres acquired in 1944 for construction of a fortification. The site has steep rocky slopes and highly indented coast.

Multiple investigations and/or removal actions were conducted on the FUDS, which resulted in the identification of multiple areas of interest in site documents. The following areas of interest were investigated at the Former Fort Segarra:

- Test Area 4
- Test Area 5
- Test Area 8
- Flamingo Bay Landfill.

2.4 Land and Resource Use

2.4.1 Current Use

The Former Fort Segarra is currently owned by the U.S. Department of the Interior, the U.S. Virgin Island government, and various private owners (USACE 2002).

2.4.2 Future Use

It is assumed that land uses will not change in the future.

2.5 Previous Investigations/Initial Response

2.5.1 Inventory Project Report (December 1989)

The 1989 Inventory Project Report qualified 500 acres as FUDS-eligible. The site walk/visual survey did not reveal any evidence of toxic chemicals or ordnance hazards. The study recommended that an investigation for ordnance contamination of the site be conducted. This report concluded the site had a Risk Assessment Code score of 1 (USACE 1989).

2.5.2 Archives Search Report (August 1991)

In 1991, an ASR was completed by Ebasco Environmental for the Former Fort Segarra. This report resulted in the installation of a chain link fence around the perimeter of the Flamingo Bay Landfill. The decision to build this fence resulted from the bombs that surfaced in the area in 1966. The 1991 ASR outlined the site history, site description, real estate ownership information, results of a visual site inspection and interviews, and evaluation of potential ordnance contamination based on site information and an archives search (Ebasco Environmental 1991).

2.5.3 U.S. Army Chemical Materiel Destruction Agency Scoping Study (December 1993)

In 1993, the U.S. Army Chemical Materiel Destruction Agency conducted a scoping study on the Former Fort Segarra. This study summarized the background information, recorded disposition of CWM, and potential strategies for remediating potentially buried CWM (Parsons 2009).

2.5.4 Site Characterization Former Fort Segarra, U.S. Virgin Islands – Phase I Remedial Investigation Report (January 1995)

In 1995, a Site Characterization Former Fort Segarra, U.S. Virgin Islands – Phase I Remedial Investigation Report was completed by Management Technology Associates, Inc. Management Technology Associates, Inc. conducted a surface investigation (magnetometer sweeps and select surface soil sampling) of Test Areas 4, 5, 6, and 8; Tamarind Bay; and the Flamingo Bay Landfill area. Test Areas 2, 3, and 7 were not investigated because interviewees indicated that no CWM testing was conducted at the northern end of Water Island. Following the site

characterization Management Technology Associates, Inc. submitted recommendations for an intrusive investigation. Management Technology Associates, Inc. recommended specific anomalies and representative “hot” areas in Test Area 5 for intrusive investigation, as well as 10 percent of the 20-foot by 20-foot grid squares dividing the southern portion of Test Area 4 and the fenced portion of the Flamingo Bay Landfill area. Management Technology Associates, Inc. also recommended sampling of the circular depression in Test Area 4 and the suspected trench area in the Flamingo Bay Landfill area (Parsons 2009).

2.5.5 Historic Photo Analysis of Water Island (September 2001)

In September 2001, the USACE, Engineering Research and Development Center, Topographic Engineering Center, published a report on the historical photo analysis of Water Island. While the report covered all of Water Island, it focused on Test Areas 4 and 5, and the Flamingo Bay Landfill area (Parsons 2009).

2.5.6 Archives Search Report (March 2002)

The USACE–St. Louis District completed a revised ASR for the Former Fort Segarra FUDS in March 2002. The revised ASR updated the 1991 ASR by Ebasco Environmental to include information made available after the previous report (USACE 2002).

2.5.7 Engineering Evaluation/Cost Analysis Report (June 2004)

An EE/CA was conducted from April to June 2003. In the 2004 Draft Final EE/CA Report, site-wide institutional controls were recommended for addressing all of the areas of interest investigated at Fort Segarra (Test Areas 4, 5, and 8, and the Flamingo Bay Landfill). As part of the EE/CA, investigations were conducted at Test Area 4, 5, and 8 and the Flamingo Bay Landfill. Following investigation of these areas the EE/CA recommended a removal action at the Flamingo Bay Landfill (to remove 3X scrap items identified onsite) and site-wide institutional controls be implemented (Parsons 2004).

2.5.8 Engineering Evaluation/Cost Analysis Action Memorandum (July 2006)

In July 2006, an EE/CA Action Memorandum was completed by USACE SAJ. Per the EE/CA Action Memorandum, the following response actions were selected as remedies at the Former Fort Segarra:

- Site-Wide Institutional Controls – Test Area 4 (4.9 acres), Test Area 5 (3.3 acres), and Test Area 8 (3.5 acres), Flamingo Bay Landfill (5.4 acres)
- 3X Scrap Removal Action (of items identified during the EE/CA) – Flamingo Bay Landfill (5.4 acres)³.

³ 3X scrap is defined as material that has been decontaminated and the CWM is no longer detectable at action levels.

2.5.9 Site-Specific Final Report (April 2009)

In 2009, Parsons conducted a removal action to remove, dispose, and document removal of potential 3X scrap that was identified during the EE/CA. Additionally, Parsons designed and installed two informational signs at the Former Fort Segarra as part of the site-wide institutional control response action (Parsons 2009).

2.6 Basis for Taking Action

2.6.1 Summary of Risk from Munitions and Explosives of Concern

Munitions used and/or stored onsite included 6 in., 37 mm and 90 mm projectiles as well as CWM.

In the 1989 INPR a RAC score of 1 was assigned to the entire site (USACE 1989).

This led to the EE/CA investigation and subsequent response actions.

2.6.2 Summary of Preliminary Site Analysis Results for Fort Segarra

According to the EE/CA Action Memorandum site-wide ICs are required for Test Area 4, 5, and 8 and a removal action (which was completed) was required for the Flamingo Bay Landfill. Only Test Areas 4, 5, and 8 and the Flamingo Bay Landfill were evaluated in the 2004 Draft Final EE/CA; therefore these are the only areas that were included in the 2006 EE/CA Action Memorandum and assessed as part of the five-year review process. During the site visit the completion and effectiveness of the ICs (at Test Area 4, 5, and 8) and removal action (at the Flamingo Bay Landfill) were evaluated by interviewing residents and community personnel.

A Preliminary Site Analysis worksheet was completed for Fort Segarra to facilitate the Preliminary Site Analysis process (Attachment A). This worksheet indicates additional data is needed from the field team in order to make a final determination regarding the protectiveness of the response actions at former Fort Segarra. Specifically during the five-year review, the field team addressed the following questions via interviews and a site visit:

- How is the community being made aware of potential ordnance related dangers (i.e. pamphlets, newspapers, signs, etc.)?
- Are signs still intact on the site, indicating the potential hazard? Are these signs being adequately maintained?
- Is the community adequately aware of the potential dangers and how to appropriately respond to them?
- Are fact sheets being distributed with building permits? Are fact sheets being distributed to tourists and divers?
- What was the outcome of the 2009 3X scrap removal action in the Flamingo Bay Landfill and are follow up actions required? Have additional ordnance related items been found or have ordnance related incidents occurred since the EE/CA Action Memorandum was written?

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3. REMEDIAL ACTIONS

The following sections present the remedy selection, remedy implementation, and a summary of systems operations, as specified in the decision document for Fort Segarra, U.S. Virgin Islands.

3.1 Remedy Selection

3.1.1 Community Awareness

Community awareness was selected as the recommended risk reduction alternative for Test Areas 4, 5, and 8 and the Flamingo Bay Landfill. The primary activities associated with community awareness in these areas include the following:

- Installation of signs
- Educational media (including distribution of brochures and educational materials)
- Long-term monitoring (i.e., five-year reviews).

Community awareness was intended to educate and inform the public of the dangers associated with unexploded ordnance/munitions and explosives of concern (MEC) at Fort Segarra. Five-year reviews by the USACE were to be implemented as part of the long-term monitoring program.

3.1.2 3X Scrap Removal Action

A 3X removal action was selected to be implemented for Flamingo Bay Landfill (Figure 2)⁴. The removal of 3X scrap in the Flamingo Bay Landfill was considered a critical safety risk reduction measure as per the EE/CA Action Memorandum.

3.2 Remedy Implementation

3.2.1 Warning Signs

As per the EE/CA Action Memorandum, community awareness consists of providing warnings by posting signs. This action was selected for the entire site. The posting of warning signs was intended to inform the public of the dangers associated with MEC at the Former Fort Segarra. Further details regarding the implementation of community awareness were not outlined in the EE/CA Action Memorandum. As documented in the 2009 Site Specific Final Report two warning signs were installed in January 2009 at Fort Segarra. The signs were installed at the public ferry dock and the deep water dock on Water Island. These locations were selected in order to have the most exposure to visitors arriving on Water Island (Parsons 2009).

3.2.2 Educational Media

As per the EE/CA Action Memorandum, community awareness consists of educating the public through brochures. This action was selected for the entire site. The education of the public via

⁴ 3X scrap is defined as material that has been decontaminated and the CWM is no longer detectable at action levels.

brochures was intended to inform the public of the dangers associated with MEC at the Former Fort Segarra. Further details regarding the implementation of community awareness were not outlined in the EE/CA Action Memorandum.

3.2.3 3X Scrap Removal

The removal action at the Fort Segarra Flamingo Bay Landfill was safely completed in December 2008. During the removal action the 3X scrap was removed and disposed of in accordance with the procedures prescribed in the approved EE/CA Action Memorandum. Items removed from Fort Segarra during the removal action included a 1-ton container and a concrete-filled AN-M79 bomb body. These items were cut into pieces and put into 30 gallon, burnable, DOT-approved polyethylene drums. The scrap was distributed amongst twenty-six drums which were transported via barge to the Tropical Shipping location on St. Thomas and transferred to Veolia Environmental Services. Veolia Environmental Services transported the drums to their incinerator in Port Arthur, Texas where they were destroyed (Parsons 2009).

3.2.4 Long-Term Monitoring

The five-year review process to assess the continued effectiveness and reliability of the implemented alternatives includes, but is not limited to:

- Evaluating if changes have occurred in current/future land uses and their effect, if any, on selected removal actions or controls
- Conducting investigations of reported unexploded ordnance encounters that may have occurred since completion of the removal actions
- Conducting interviews with local agencies regarding effectiveness of educational media
- Conducting visual spot inspections of the site to evaluate:
 - Erosion effects (i.e., storms, fires, vegetation loss)
 - Warning sign condition
 - Adequate supplies and effectiveness of educational media.

4. PROGRESS SINCE LAST FIVE-YEAR REVIEW

This is the first five-year review for the site.

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5. FIVE-YEAR REVIEW PROCESS

This chapter summarizes activities conducted in preparation of this five-year review. Activities initiated during the five-year review include administrative components, community notification, document review, data review, site inspection, interviews, and a sustainability review.

5.1 Administrative Components

The five-year review team included John Cook, USAESCH, Project Manager; Frank Araico, SAJ, Project Manager; John Keiser, SAJ, Program Manager; Brett Frazier, USAESCH, Project Technical Manager; James Daffron, EOTI, Project Manager; and Tim Reese EA (EOTI Team), Technical Lead; as well as the Virgin Island Environmental Agency. The review team established the review schedule with the following components:

- Document Review
- Data Review
- Site Inspection
- Interviews
- Community Notification.

5.2 Community Notification

As per Technical Project Planning Meeting Minutes and the project Work Plan, no Public Notice was required prior to the start of the five-year review site visits (EOTI 2010).

The final five-year review report will be made available for public review at the Enid M. Baa Library, located at 20 Dronningens Gade, St. Thomas, U.S. Virgin Islands.

5.3 Stakeholder Involvement

The stakeholder role in the five-year review process included the following:

- Reviewing the *Final Work Plan for Five-Year Reviews for Six MMRP Sites*
- Providing input concerning any changes in the future land use that have occurred since the response action was completed
- Providing information regarding MEC or munitions debris encounters since the completion of the response action
- Assisting with the site inspection and providing input regarding the effectiveness of the educational materials.

5.4 Existing Information/Document Review

This five-year review included a review of relevant documents to become familiar with the site history and the implemented response action. The review was conducted to accomplish the following objectives:

- Determine what actions were completed at the site
- Determine where MEC or munitions debris are suspected or were located, if applicable, and document the basis for this determination
- Identify and evaluate the basis for selection of the response action (e.g., land use, site accessibility, etc.)
- Determine if there is an immediate threat to human health, safety, or the environment that requires further response.

This five-year review included a review of relevant documents including the documents summarized in Table 2.

Table 2: List of Documents Reviewed

Document	Author and Date
Inventory Project Report for Site No. I02VI0977010, Fort Segarra, U.S. Virgin Islands	USACE 1989
ASR for Fort Segarra, U.S. Virgin Islands	Ebasco Environmental 1991
Scoping Study	U.S. Army Chemical Materiel Destruction Agency 1993
Site Characterization Former Fort Segarra, U.S. Virgin Islands – Phase I Remedial Investigation Report	Management Technology Associates, Inc. 1995
Historic Photo Analysis of Water Island	Topographic Engineering Center 2001
Revised ASR for Fort Segarra, U.S. Virgin Islands	USACE–St. Louis 2002
EE/CA, Former Fort Segarra, U.S. Virgin Islands	Parsons 2004
EE/CA Action Memorandum, Former Fort Segarra, U.S. Virgin Islands	USACE 2006
Site-Specific Final Report	Parsons 2009

5.5 Site Visit

A site visit was conducted on 18-19 May 2011 by the EOTI field team, including Mike O’Neill (EA) and Wayne Madsen (EOTI). The purpose of the site visit was to confirm the implementation of the response actions and assess the protectiveness of the institutional controls at the site, specifically warning signs and the supplies and distribution of educational media (i.e. brochures or fact sheets) and to meet with local stakeholders (Figure 3). Photographs that were taken during the site visit are presented in Attachment B. The field forms that were completed as part of the field effort are provided in Attachment C. Interview records are presented in Attachment D.

5.5.1 Warning Sign Condition

The field team confirmed that both warning signs had been posted in the specified locations (at the public ferry dock and the deep water dock on Water Island) and that these signs were maintained and in good condition as prescribed by the EE/CA Action Memorandum.

5.5.2 3X Scrap Removal (Flamingo Bay Landfill)

The response action was completed for Flamingo Bay Landfill in December 2008 as documented in the Site Specific Final Report issued by Parsons in April 2009. Items removed from Fort Segarra during the removal action included a 1-ton container and a concrete-filled AN-M79 bomb body. A limited survey of this area noted that a fence encompassed most of this area but no evidence of MEC or munitions debris was noted in this area. It was noted that the area is used by locals for the storage of vehicles awaiting disposal from the island.

5.5.3 Visual Surface Reconnaissance

A visual surface reconnaissance was conducted over a portion of the site. The EOTI field team, including Mike O'Neill (EA) and Wayne Madsen (EOTI), conducted the visual reconnaissance of the site on 18-19 May 2011. The visual surface reconnaissance consisted of the team walking the accessible areas of interest looking for posted warning signs, taking photos, and making general observations of the current areas use. Warning signs were posted at the public ferry dock and the deep water dock on Water Island. The collective uses of the areas of interest have not changed since the EE/CA Action Memorandum was completed.

No MEC or munitions debris was encountered during the visual reconnaissance and none has been reported since the EE/CA investigation.

5.5.4 Adequate Supplies and Effectiveness of Educational Media

The publishing of education materials, brochures, and newspaper articles intended to inform the public of the dangers associated with MEC at Fort Segarra is only being partially implemented. Interviews with personnel associated with the site indicated that brochures/fact sheets were distributed and newspaper articles were published prior to the EE/CA investigation. Since the 2006 EE/CA interviews indicate additional brochures/fact sheets may have been printed, but the distribution of these brochures has not been confirmed. Furthermore, the EE/CA Action Memorandum did not identify the party responsible for implementing and maintaining the community awareness program (i.e. distributing brochures/fact sheets and maintaining warning signs); therefore, it is unclear as to what organization is responsible for implementing and maintaining the remedy at a local level.

Although brochures/fact sheets are not currently being distributed, interviews with local residents indicate that the community on Water Island is aware of the site's history and understand how to respond if "suspect" items are identified in the area.

5.6 Identification of New and Current Site Conditions

One of the tasks of the five-year review is to identify available information regarding the site that has become available since implementation of the response action. New information has been gathered through interviews with persons knowledgeable about the site, including stakeholders such as property owners, local agencies, local community members, and regulators. A list of individuals interviewed is provided in Attachment D. Information was also collected through a search of news articles/releases from the major local newspaper and other outlets, as well as public records.

As part of the five-year review process, a Technical Project Planning meeting was held on 27 September 2010 in Jacksonville, Florida. Attending the meeting were the following:

- Frank Araico, SAJ, Project Manager
- John Keiser, SAJ, Program Manager
- Amanda Ellison, SAJ, Public Affairs Specialist
- John Cook, CEHNC-OED, Project Manager
- Brett Frazier, CEHNC, Project Technical Manager
- James Daffron, EOTI, Project Manger
- Tim Reese, EA (EOTI Team), Technical Lead.

The purpose of the meeting was to kick-off the five-year review for the FUDS being conducted as required by CERCLA and the USACE FUDS Program. A presentation was given to representatives from USACE SAJ, USAESCH, and the EOTI Team and outlined the history of the site, discussed the purpose of the five-year review, identified the long-term monitoring questions outlined in the decision document, and discussed the field effort for the review.

During the Technical Project Planning meeting and site visit, project stakeholders, local citizens, and SAJ representatives were asked various questions to help assess the effectiveness of the alternatives implemented at the site. The responses provided were used to answer the questions below and are summarized in the following subsections.

5.6.1 Have there been any changes in the current and/or future land use and will those changes, if any, have an effect on the selected removal actions or controls?

Current and future land use projections have not changed since the EE/CA Action Memorandum was completed.

5.6.2 Have there been any reported munitions and explosives of concern or munitions debris encounters that have occurred since completion of the removal actions?

No reported MEC or munitions debris encounters have occurred since the completion of the EE/CA investigation and the 3X removal action.

5.6.3 Do the private landowners feel the educational media has been effective?

Although brochures/fact sheets are not currently being distributed, interviews with local residents indicate that the community on Water Island is aware of the site's history and understand how to respond if "suspect" items are identified in the area.

5.6.4 Have there been land ownership changes or transfers that impact the protectiveness of the remedy?

No land ownership changes or transfers have occurred since the EE/CA Action Memorandum; therefore, changes in land ownership have not impacted the protectiveness of the remedy.

5.6.5 Are the responsibilities for implementing the local initiatives clearly defined and do the entities responsible understand their role(s)?

The EE/CA Action Memorandum did not identify the party responsible for implementing and maintaining the community awareness program (i.e. distributing brochures/fact sheets and maintaining warning signs); therefore it is unclear as to what organization is responsible maintaining the remedy at a local level.

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6. TECHNICAL ASSESSMENT

6.1 **Question A: Is the remedy functioning as intended by the decision documents?** (Are the responses functioning as intended?)

Removal Action:

Yes. The removal action at the Flamingo Bay Landfill was completed as prescribed by the 2006 EE/CA Action Memorandum.

Community Awareness:

Yes. The community awareness program has only been partially implemented. Two warning signs have been posted and are being maintained on Water Island. No brochures/fact sheets have been distributed as prescribed by the 2006 EE/CA Action Memorandum. Although brochures/fact sheets are not currently being distributed, interviews with local residents indicate that the community on Water Island is aware of the site's history and understand how to respond if "suspect" items are identified in the area. The community awareness program is functioning as prescribed by the 2006 EE/CA Action Memorandum.

6.2 **Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?** (Are any assumptions used at the time of the response selection still valid?)

Yes. The assumptions made at the time of the response selection are still valid. There have been no changes in land ownership or land use since the issuance of the 2006 EE/CA Action Memorandum.

6.3 **Question C: Has any other information come to light that could call into question the protectiveness of the remedy?** (Does new information indicate that the previously selected response no longer minimizes explosives safety risks and/or is no longer protective of human health, safety, and the environment considering the best available technology?)

No. No new information was identified that would indicate that the previously selected response actions are no longer effective for this site. The removal action at Flamingo Bay Landfill, combined with site-wide community awareness is still valid and effective.

6.4 **Technical Assessment Summary**

One issue was identified during the five-year review process. The following provides a summary of this issue and presents recommendations to resolve them.

6.4.1 Educational Materials

The publishing of education materials, brochures, and newspaper articles intended to inform the public of the dangers associated with MEC at Fort Segarra is only being partially implemented. Interviews with personnel associated with the site indicated that brochures/fact sheets were distributed and newspaper articles were published prior to the EE/CA investigation. Since the 2006 EE/CA additional brochures/fact sheets may have been printed, but the distribution of these brochures has not been confirmed. However, signs were installed and still exist at the public ferry dock and the deep water dock on Water Island. Furthermore, the EE/CA Action Memorandum did not identify the party responsible for implementing and maintaining the community awareness program (i.e. distributing brochures/fact sheets and maintaining warning signs); therefore, it is unclear as to what organization is responsible for implementing and maintaining the remedy at a local level.

It is recommended as an alternative to the distribution of brochures/fact sheets (as recommended in the 2006 EE/CA Action Memorandum) that USACE provide information in local newspapers and update the USACE FUDS Website to include the Fort Segarra. It is also recommended the Final Five-Year Review report be placed at the reference desk at Enid M. Baa Library, located at 20 Dronningh Gade, St. Thomas, U.S. Virgin Islands 00802 and a copy will be provided to the SHPO, located at 396-1 Anna's Retreat St. Thomas, Virgin Islands 00802. The SHPO provides brochures and information on other sites in the area and could potentially be a repository for fact sheets and brochures.

7. ISSUES

Table 3 presents the issues that were raised during the first five-year review at Fort Segarra, U.S. Virgin Islands. Recommendations and follow-up actions are presented in Chapter 8.

Table 3: Issues Raised during the Five-Year Review

Issue		Affects Current Protectiveness? (Y /N)	Affects Future Protectiveness? (Y /N)
1.	Brochures/fact sheets are not being distributed to the community and visitors.	N	Y
2.	The responsibilities for implementing the local initiatives for community awareness (i.e. distributing brochures/fact sheets and maintaining warning signs) were not clearly defined and the entities responsible did not understand their role(s).	N	Y

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8. RECOMMENDATIONS AND FOLLOW-UP ACTIONS

This chapter presents the recommendations (Table 4) for the Fort Segarra, U.S. Virgin Islands along with the recommended follow-up actions in response to the issues presented in Chapter 7.

Table 4: Recommendations and Follow-Up Actions

Issue		Recommendations/Follow-Up Actions	Responsible Entity/Oversight Agency	Milestone Date
1.	Brochures/fact sheets are not being distributed to the community and visitors.	As an alternative to the distribution of brochures/fact sheets USACE should update the USACE FUDS Website to include Fort Segarra, U.S. Virgin Islands.	USACE	6/30/2012
2.	The responsibilities for implementing the local initiatives for community awareness were not clearly defined and the entities responsible did not understand their role(s).	USACE should contact and work with local entities to ensure remedies are implemented.	USACE	6/30/2012
3.	Not applicable.	A copy of the Final Five-Year Review report should be placed at the reference desk at the Enid M. Baa Library, located at 20 Dronningh Gade, St. Thomas, U.S. Virgin Islands 00802 and a copy will be provided to the State Historic Preservation Office, located at 396-1 Anna's Retreat St. Thomas, Virgin Islands 00802.	USACE	6/30/2012
4.	Not applicable.	Recommend continued maintenance of warning signs. USACE should contact and work with local entities to ensure maintenance is implemented.	USACE	6/30/2012

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9. PROTECTIVENESS STATEMENT

For Test Areas 4, 5, 8 and Flamingo Bay:

The response action (community awareness) at Test Areas 4, 5, 8, and Flamingo Bay has been only been partially implemented and partially maintained as prescribed by the 2006 EE/CA Action Memorandum (i.e. installation of warning signs but no distribution of brochures/fact sheets). There have been no reported incidents involving MEC or finds of munitions debris at this FUDS; therefore the remedy has been protective in the short-term. However, in order for the remedy to remain protective in the long-term, community awareness must be fully implemented. The following actions are recommended to ensure future protectiveness:

- USACE should update the USACE FUDS Website to include the Fort Segarra as an alternative to the distribution of brochures/fact sheets as specified in the 2006 EE/CA Action Memorandum.
- USACE should contact and work with local entities to ensure warning signs are maintained.
- A copy of the Final Five-Year Review report should be placed at the reference desk at the Enid M. Baa Library, located at 20 Dronningh Gade, St. Thomas, U.S. Virgin Islands 00802 and a copy should be provided to the State Historic Preservation Office, located at 396-1 Anna's Retreat St. Thomas, Virgin Islands 00802.

For the Flamingo Bay Landfill:

The response action at the Flamingo Bay Landfill has been implemented and maintained as prescribed by the 2006 EE/CA Action Memorandum. The remedy is protective of human health and the environment.

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10. NEXT REVIEW

It is recommended the next five-year review for the Former Fort Segarra, U.S. Virgin Islands be conducted five years from the date of this report.

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11. REFERENCES

- Ebasco Environmental. 1991. *Archive Search Report Former Military Properties in the U.S. Virgin Islands: Unexploded Ordnance Potential.*
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- Explosive Ordnance Technologies, Inc. (EOTI). 2010. *Technical Project Planning Memorandum Five-Year Reviews Six Military Munitions Response Program Sites. 27 September.*
- Management Technology Associates, Inc. 1995. *U.S. Army Characterization Former Segarra, U.S. Virgin Islands – Phase 1 Remedial Investigation Report.*
- Parsons Engineering, Science, Inc. (Parsons). 2004. *Draft Final Engineering Evaluation/Cost Analysis for Former Fort Segarra, Water Island, U.S. Virgin Islands.*
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- USACE, St. Louis District. 2002. *Defense Environmental Restoration Program for Formerly Used Defense Sites Ordnance and Explosives Chemical Warfare Materials, Archives Search Report Volume I (Findings-Section 1 of 2) Water Island (Fort Segarra), U.S. Virgin Islands, Project No. I02VI097701.*
- USACE, Jacksonville District (SAJ). 2006. *Engineering Evaluation and Cost Analysis Action Memorandum Former Fort Segarra, Water Island, U.S. Virgin Islands.*

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Figures



**Figure 1- General Location
 Former Fort Segarra (I02VI097701)
 Site Map
 U.S. Virgin Islands**



Data Sources: U.S. Army Installation Data
 Imagery: ESRI, i-cubed, USDA FSA, USGS, AEX,
 GeoEye, Getmapping, Aerogrid, IGP

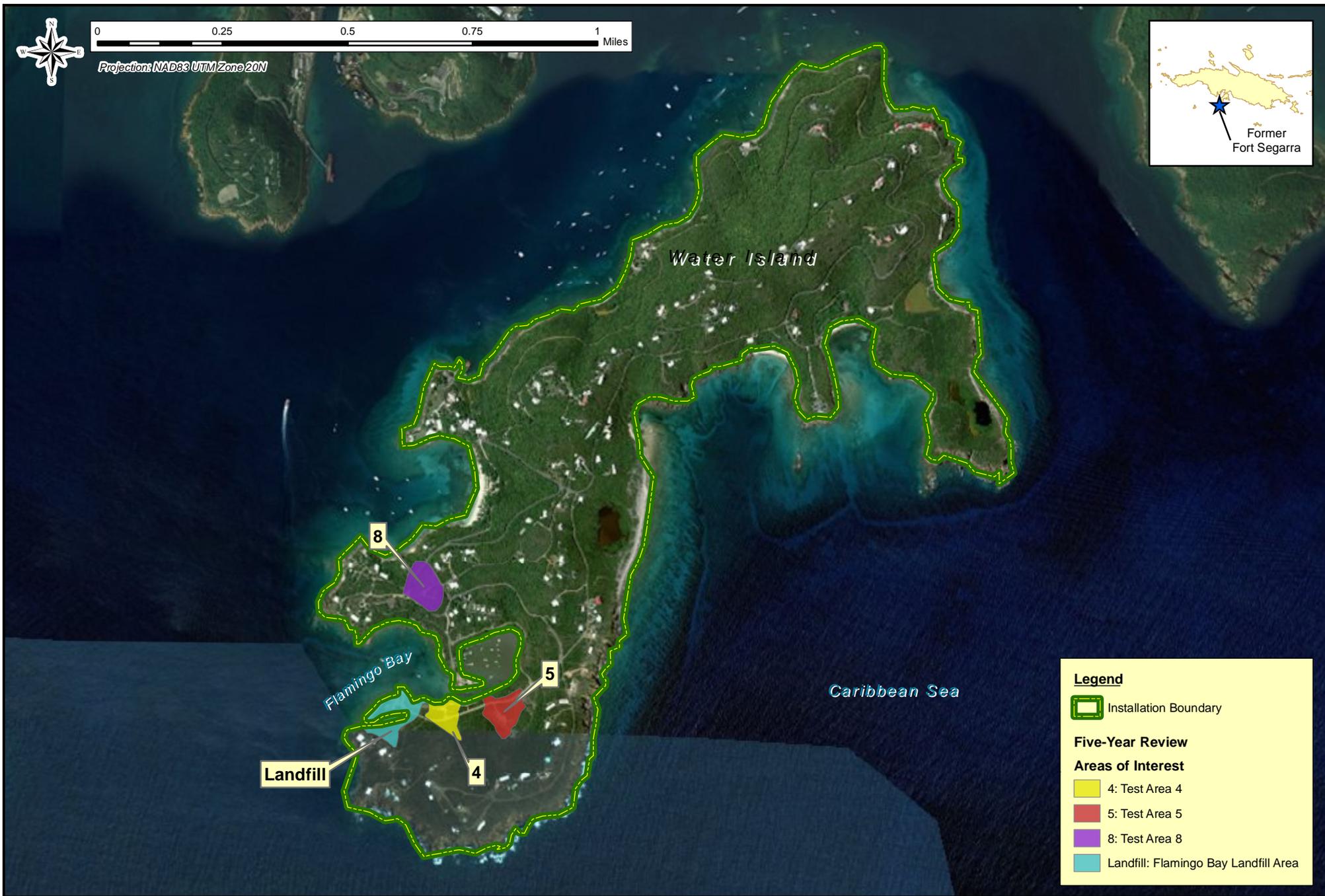
Date: June 2011
 Prepared By: EA Engineering, Science, and Technology, Inc.
 Prepared For: U.S. Army Corps of Engineers

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0 0.25 0.5 0.75 1 Miles

Projection: NAD83 UTM Zone 20N



Legend

- Installation Boundary

Five-Year Review

Areas of Interest

- 4: Test Area 4
- 5: Test Area 5
- 8: Test Area 8
- Landfill: Flamingo Bay Landfill Area

Figure 2- Areas of Interest
Former Fort Segarra (102VI097701)
Site Map
U.S. Virgin Islands



Data Sources: U.S. Army Installation Data
 Imagery: ESRI, i-cubed, USDA FSA, USGS, AEX,
 GeoEye, Getmapping, Aerogrid, IGP

Date:June 2011
 Prepared By: EA Engineering, Science, and Technology, Inc.
 Prepared For:U.S. Army Corps of Engineers

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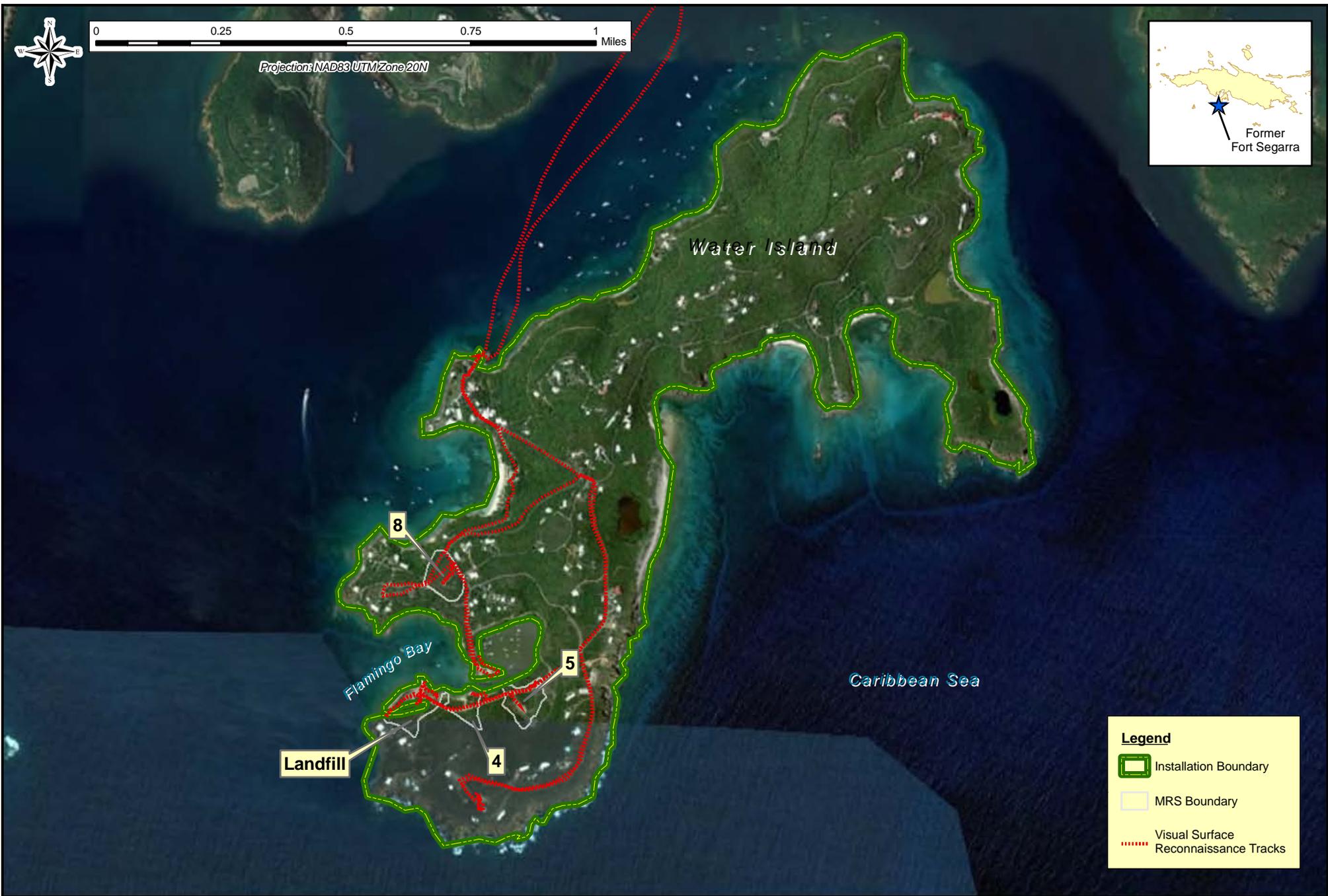


Figure 3- Visual Surface Reconnaissance Tracks
Former Fort Segarra (102VI097701)
Site Map
U.S. Virgin Islands

Data Sources: U.S. Army Installation Data
 Imagery: ESRI, i-cubed, USDA FSA, USGS, AEX,
 GeoEye, Getmapping, Aerogrid, IGP

Date:.....June 2011
 Prepared By: EA Engineering, Science, and Technology, Inc.
 Prepared For:.....U.S. Army Corps of Engineers



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Attachment A

Preliminary Site Analysis Worksheet

PRELIMINARY SITE ANALYSIS WORKSHEET Fort Segarra	
What changes have occurred that may affect prior decisions concerning the site?	<p>Physical Changes: Possible erosion along the beaches.</p> <p>Accessibility to Public: None.</p> <p>Land Use: None.</p> <p>Technology Changes: None.</p> <p>Other:</p>
How do these changes affect previous decisions for this site?	These changes do not affect previous decisions at the site.
What is the status of any Land Use Controls implemented at the site?	Signs have been installed on Water Island. Both signs remain and are in good condition.
What additional information is needed to develop a conclusion regarding the continued protectiveness of the response?	<p>The following questions should be addressed:</p> <p><i>How is the community being made aware of potential ordnance related dangers (i.e., pamphlets, newspapers, signs, etc.)? Signs are located around the FUDS.</i></p> <p><i>Are signs still intact on the site, indicating the potential hazard? Are these signs being adequately maintained? The signs which indicate the potential hazards are still intact and maintained.</i></p> <p><i>Is the community adequately aware of the potential dangers and how to appropriately respond to them? Based on interviews, the community is adequately aware of potential dangers.</i></p> <p><i>Was the removal action completed in 2009 effective? Do OE hazards still remain? No OE hazards were found during the removal action, but the action was still effective as it removed munitions debris and addressed the question of what potential hazards are present in the landfill.</i></p> <p><i>Have additional ordnance-related items been found or have ordnance-related incidents occurred since the EE/CA Action Memorandum was written? No ordnance-related items or ordnance related incidents have occurred since the EE/CA Action Memorandum.</i></p>

PRELIMINARY SITE ANALYSIS WORKSHEET Fort Segarra	
Recommendations for follow-up action.	Recommend USACE update the USACE FUDS Website to include Fort Segarra, U.S. Virgin Islands. Recommend the Final Five-Year Review report be placed at the reference desk at the local library (Enid M. Baa Library, located at 20 Dronningh Gade, St. Thomas, U.S. Virgin Islands 00802) and the State Historic Preservation Office (Foster Plaza, 396-1 Anna's Retreat St. Thomas, Virgin Islands 00802) Recommend continued maintenance of warning signs.
List documents, resources used.	1989 INPR, 1991 ASR, 1993 Scoping Study, 1995 Site Characterization, 2001 Historical Photo Analysis, 2002 Revised ASR, 2004 EE/CA, 2006 EE/CA Action Memorandum, and 2009 Site-Specific Final Report.

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Attachment B

Site Photographs

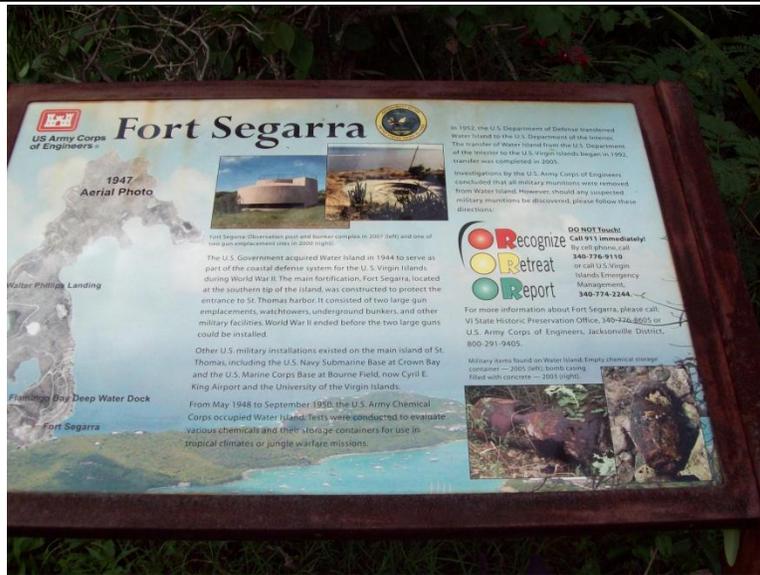


Photo 1: View of the warning sign located at the public ferry dock.



Photo 2: View of Test Area 4 looking towards deep water dock.



Photo 3: View of general debris in Test Area 4 along shoreline (sand filled suspect water tank).



Photo 4: View of general debris in Test Area 4 along shoreline (suspect air cylinder/tank).



Photo 5: View of fence surrounding Flamingo Bay Landfill



Photo 6: View of Test Area 5 which contains an active junk/debris storage area.



Photo 7: View of Test Area 4 along beach.



Photo 8: View of Test Area 8, overgrown with piles of debris.

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Attachment C

Field Forms

EOTI DAILY SITE REPORT							
EOTI EXPLOSIVE ORDNANCE TECHNOLOGIES, INC.		5 YEAR REVIEW FORMER Project Name: FORT SEGARCA					
Explosive Ordnance Technologies, Inc. (EOTI) 105 W. Tennessee Ave. Oak Ridge, TN 37830				Project Location: US VIRGIN ISLANDS Project #: Report #: Date: 5/18/11			
Weather Conditions:		Sun / Clouds 80°					
Major Equipment Items on Site							
ITEM	Quantity	Hrs Used	ITEM	Quantity	Hrs Used		
SCHWENST ORP LOC	1	8					
GARMIN GPS	1	8					
DIGITAL CAMERA	1	8					
Personnel on Site				Personnel on Site			
Name	Position	Hrs (today)	Name	Position	Hrs (today)		
MIKE O'NEIL	EA ENG	8					
WANNIS WADSON	EOTI	8					
Exposure Data							
Previous Hours	0	Hours Today	0	Hours to Date	0		
Previous Accidents	0	Accidents Today	0	Accidents to Date	0		
Prev. Lost Work Days	0	Lost Workdays Today	0	Lost Work Days to Date	0		
Ordnance Data							
Previous UXO Found	0	# UXO Today	0	# UXO to Date	0		
Note: See UXO Log for description / disposition of ordnance items.							
Anomaly Clearance Data							
Prev. Anomalies Reaquired	0	# Anomalies Reaq Today	0	# Anomalies Reaq to Date	0		
Prev. Digs Completed	0	Digs Completed Today	0	Digs Completed to Date	0		
QC Inspections / Results:				QA Inspections / Results:			
Verbal Instructions Received or Given: (Instructions received from client or given by EOTI and corresponding action taken.) Site Safety Brief Given Concerning Potential UXO							
Changed Conditions/Delays/Conflicts Encountered: (List conditions which have hindered ID removal or disposal of UXO.)							
Other comments, additional information, and / or lessons learned:							
Work performed today. Indicate location and include equipment used. TRAVEL TO ISLANDS BY AIR. PICK UP RENTAL CAR LOCATE HOTEL / CHECK IN. BRIEF RECONNAISSANCE OF AREA TO FAMILIARIZE BEFORE END OF DAY							
Contractor's Verification: The above report is complete and correct. All equipment used and work performed during this reporting period are in compliance with the plans and specifications except as noted above.							
Original Signed		On site Representative: <i>Wadson</i>		Date: 5/18/11		01/00/00	

**U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE (USAESCH)
ABBREVIATED ACCIDENT PREVENTION PLAN (AAPP)**

**SITE VISIT TEAM STATEMENT AND SIGN-IN-PAGE
FOR
Water Island (Former Fort Segarra)**

NOTE: This statement is the record to be maintained in the government/Contractor's on-site files through the entire life of the task order or project. The statement should only be completed just prior to the actual visit taking place. It does not have to accompany this AAPP when submitted for review.

1. Team members will sign this statement:
 - a. Prior to the start of the site visit.
 - b. When a change is made to this AAPP.

2. I have read, or have had read to me, and understand the general and specific safety and environmental requirements, and will abide by the contents contained in the AAPP. I have been briefed and trained in, and am familiar with, my requirements to conduct the site visit.

Name (Print)	Affiliation	Signature	Date MM/DD/YR
Michael O'Neill	EA Engineering	<i>[Handwritten Signature]</i>	5/19/11

Team Leader or Site Safety Officer presenting briefing:

Wayne A. MADSEN *[Handwritten Signature]* 05/19/11
(Name) (Signature) (Date)
MM/DD/YR

Attachment D

Interview Records

- David Brewer, Former Archaeologist with U.S. Virgin Islands State Historic Preservation Office
- Frank Araico, U.S. Army Corps of Engineers Jacksonville District Project Manager for Five-Year Reviews
- Kim Meacham, Former Technical Manager for Parsons
- Patton Mulford, State Historic Preservation Office for Water Island
- Tom Roth, Former Project Manager for Parsons
- Chuck Gidley, Private Citizen

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: IO2VI0977

Person being interviewed: David Brewer,
former archaeologist with the U.S. Virgin Islands
State Historic Preservation Office

Date: 12 May 2011

1. What is your relationship to the project area?

I was the local archaeologist with the U.S. Virgin Islands State Historic Preservation Office up until a couple years ago (2009).

2. Are you aware that there is an MMRP FUDS project site in your vicinity and/or what is your current impression of the MMRP FUDS project site in your area?

Yes, very aware. I was there when the canisters were removed and during the development and production of the signs, although I left before they were installed.

3. Are you aware of any events, incidents, or activities at the FUDS such as emergency responses regarding munitions findings from local authorities? If so, please give details.

No, I am not aware of any incidents relating to military munitions.

4. Have there been routine communications or activities regarding the FUDS (site visits, inspections, reporting activities, etc.) that you are aware of? If so, please give details.

I found USACE was very responsive and communication was good when I worked at the U.S. Virgin Islands State Historic Preservation Office.

5. Do you feel well informed about the FUDS and past activities and progress?

I was generally well informed, except on one occasion when a contractor was brought in to dig trenches and conduct some soil sampling and the State Historic Preservation Office was not notified until after the digging took place. I would have preferred to have been notified in advance, so that I may have watched the process.

6. Do you have any questions regarding the FUDS's past history and uses and/or suggestions, or recommendations regarding current and future plans?

As it stands, the Fort is very dangerous. It is poorly lit (no lighting inside) and has holes in the floors that drop several levels. Additionally, the existing ladders are rusted and the large metal doors present their own hazards. I think it is USACE's responsibility to make it safe for public use. Once it is made safe, the VI could give historic tours, after all there are very few World War II fortresses in the U.S.

7. Do you know if a pamphlet/brochure/fact sheet was generated and distributed?

I think there may have been pamphlets or posters made at some point, but I am not sure. I do not know of any pamphlets/fact sheets/brochures being distributed. In fact, I don't think pamphlets/fact sheets/brochures should be distributed, bringing attention to the area, until the Fort is in better condition.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
David Brewer	Former Archaeologist with the U.S. Virgin Islands State Historic Preservation Office	N/A	5/12/2011	407-422-5009 Cell 340-344-2442

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I01VI0977

Person being interviewed: Frank Araico

Date: 25 April 2011

1. What was your involvement with this project (i.e., project manager)?

I am the Jacksonville Project Manager for the 5-year reviews.

2. Do you know if there have been any EOD responses or calls related to munitions discoveries since the 2004 EE/CA Memorandum?

This is a low risk site and there have been no EOD calls or munitions/CWM discovered since the EE/CA was signed in 2004.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Frank Araico	USACE– Jacksonville District		4/25/2011	904-232-1804

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: IO1VI0977

Person being interviewed: Kim Meacham

Date: 22 April 2011

1. What was your involvement with this project (i.e., project manager)?

I was the USACE-Huntsville District technical manager (project engineer).

2. We have reviewed a 2009 Site-Specific Final Report that was completed by Parson. That report indicates the removal action was completed. Additionally, two signs, as part of the Institutional Controls, were installed. Do you know if brochures have been or are being distributed?

I know that we printed up lots of brochures and discussed where they would be placed but am not aware of any follow through. This question should also be asked of the District.

3. Do you know if an Institutional Control Plan was developed?

Section 7 of the Final EE/CA Report is the Institutional Control Plan.

4. Do you know who is responsible for maintaining and implementing the institutional controls?

It was my understanding that David Brewer¹ at the U.S. Virgin Islands State Historic Preservation Office would periodically place the brochures at the selected location.

5. Do you know if there have been any EOD responses or calls related to munitions discoveries since the 2004 EE/CA Memorandum?

I do not know if EOD has been called to the site.

6. Do you think the public is adequately aware of the dangers?

This site is considered extremely low risk for the public to come in contact with CWM and, therefore, the signs were determined to be the best alternative during the EE/CA.

¹ As a follow-up measure, EA called the U.S. Virgin Islands State Historic Preservation Office (on St. Thomas - 340-776-8605) to talk with David Brewer and was informed he had left the organization 2 years ago. He was an archaeologist and his replacement is located at the St. Croix office.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Kim Meacham	USACE–Huntsville District	U.S. Army Engineering and Support Center, Huntsville 4820 University Square Huntsville, Alabama 35816-1822	4/22/2011	256-895-1667 Cell 256-307-2227

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I01VI0977

Person being interviewed: Patton Mulford

Date: 5 April 2011

Interviewers: Tim Reese and Ivy Harvey

Interview Type: Phone (340-776-8605)

1. What is your connection to Fort Segarra?

I work at the State Historic Preservation Office and live on Water Island.

2. Have there been any emergency responses or calls related to munitions discoveries since the number was posted on the two signs?

No, not that I know of; back in 1998, an investigation was conducted and nothing was found.

3. Do you think the public is adequately aware of the dangers?

Yes. The history of the Island is common knowledge. Historic structures (including a former hotel) are a constant reminder of the Island's history. Furthermore, the signs that were posted (which are still intact) adequately remind the public of the site's history and what to do if a munitions-related discovery is made. Initially, residents were weary of these signs in that they might cause undue fear, but they are worded appropriately.

4. Would you be willing to go on a site visit when we are in the area?

Yes, I would like that.

5. Are the Test Areas 4, 5, and 8 and the Flamingo Bay Landfill accessible to the general public?

Yes. You shouldn't have any issues visiting these areas.

6. Is the Flamingo Bay Landfill an active landfill?

The term landfill is not the proper term for the area. The Flamingo Bay Landfill is currently used for the staging of dumpsters where trash is deposited and picked up weekly.

7. Do you know where we could get a ferry schedule that goes to and from Water Island?

I can provide you with a copy of the ferry schedule if you want to email me your request at Patton_mulford@vishpo.com.

8. Is there anyone else you would recommend we contact who may have additional information regarding this site?

Sean Skraigger is knowledgeable. Email me and I will try to get his contact information for you.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Patton Mulford	State Historic Preservation Office	#17 Kongens Gade Charlotte Amalie St. Thomas, V.I. 00802	4/5/2011	340-776-8605

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I02VI097701

Person being interviewed: Patton Mulford

Date: 5/19/11

1. Are you aware that there is a MMRP FUDS project site in your vicinity and/or what is your current impression of the MMRP FUDS project site in your area?

Patton is aware of the history of the site and area and he feels that he knows more about the site than most people do because of the reports in his office (he is affiliated with the State Historic Preservation Office for last 6-7 years). He is also aware of the site because of the ongoing Archeology work on the island where they monitor and document sites/findings. His impression is that the area is cleaned up and history of the site is common knowledge to residents of Water Island.

2. Are you aware of any events, incidents, or activities at the FUDS such as emergency responses regarding munitions findings from local authorities? If so, please give details.

No, he is not aware of any incidents on the island involving munitions. He is a member of the Water Island Rescue and doesn't recall any calls for UXO only slips trips and falls.

3. Have there been routine communications or activities regarding the FUDS (site visits, inspections, reporting activities, etc.) that you are aware of? If so, please give details.

No, he is not aware of routine communications or activities regarding the FUDS.

4. Do you feel well informed about the FUDS and past activities and progress?

Yes – everyone that lives on Water Island knows the site history and the status if the previous investigations and removals.

5. Do you have any questions regarding the FUDS's past history and uses and/or suggestions, or recommendations regarding current and future plans?

He had no questions or recommendations. He mentioned that people at the National Park Service (Ken Wild and Doug Anderson may have additional information on the site based on their 1998 and 2002 archeology work.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Patton Mulford	SHPO	#17 Kongens Gade Charlotte Amalie St. Thomas, V.I. 00802	19 May 2011	340-776-8605

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I02VI097701

Person being interviewed: Patton Mulford

Date: 6/22/11

1. Do you know if any fact sheets/brochures about the FUDS (Fort Segarra) are being distributed in the area?

No. I am not aware of any fact sheets having been or that are currently being distributed.

2. Do you know who is responsible for maintaining the two educational signs on Water Island?

No. I do not know who is responsible for maintaining these signs, not that there is much to maintain.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Patton Mulford	SHPO	#17 Kongens Gade Charlotte Amalie St. Thomas, V.I. 00802	19 May 2011	340-776-8605

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: IOVI0977

Person being interviewed: Tom Roth

Date: 26 April 2011

1. What was your involvement with this project (i.e., project manager)?

I was the project manager at Parsons until 2004. I essentially worked on the project up through the EE/CA. I believe Clay Edmonson took over as the Project Manager at Parsons when I left.

2. Do you know who the USACE Project Manager was?

Roger Fitzpatrick (Roger.A.Fitzpatrick@hnd01.usace.army.mil). Office: 256-895-1555. I did a quick Google search and found a newsletter from last August saying he was deploying to Iraq, so he may not be in Huntsville anymore. He worked for Chuck Twing (Charles.L.Twing@usace.army.mil), so you might try him.

3. We have reviewed a 2009 Site-Specific Final Report that was completed by Parsons. That report indicates the removal action was completed. Additionally, two signs, as part of the Institutional Controls, were installed. Do you know if brochures have been or are being distributed?

We prepared brochures that were distributed as part of a public meeting prior to the start of the field investigation (for the EE/CA).

4. Do you know if an Institutional Control Plan was developed?

Not while I was Project Manager.

5. Do you know who is responsible for maintaining and implementing the institutional controls?

That would have decided after I left Parsons. When I was on the project, I worked primarily with the Department of Public Works.

6. Do you think the public is adequately aware of the dangers?

Yes, definitely. Fact sheets and public notices were in the paper. Several public meetings were held around the time of the removal action.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number/Email
Tom Roth	CH2M Hill (formerly Parsons)	Principal Project Manager CH2M HILL Atlanta, Georgia	4/26/2011	404-474-7640 Cell 404-259-6674 Tom.Roth@CH2M.com

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I02VI097701

Person being interviewed: Chuck Gidley

Date: 5/19/11

1. Are you aware that there is a MMRP FUDS project site in your vicinity and/or what is your current impression of the MMRP FUDS project site in your area?

He is aware of the history of the site and area and he was the on-island coordinator when they cleaned the island. He feels that they are cleaned up. We asked about the Flamingo Bay Landfill and why there were cars/vehicles are present in the landfill. He indicated that the area was fenced in the 1990's and he has the key. He indicated that cars are parked there (people pay to have them there) and no one else is allowed in the fenced area.

2. Are you aware of any events, incidents, or activities at the FUDS such as emergency responses regarding munitions findings from local authorities? If so, please give details.

No, he is not aware of any incidents on the island involving munitions and he is not aware of anyone finding anything in the area. He stated that people would call him if anything was found to come deal with it but nothing has been found.

3. Have there been routine communications or activities regarding the FUDS (site visits, inspections, reporting activities, etc.) that you are aware of? If so, please give details.

No, but he recalled that the signs were put up about a year after the USACE left. He knows that people stop and look at the signs so they are aware/informed of what was on the island. He is not aware of routine communications or activities regarding the FUDS.

4. Do you feel well informed about the FUDS and past activities and progress?

Yes he feels well informed because he was coordinating operations with Jacksonville District during the removal action and he was kept in the loop by USACE.

5. Do you have any questions regarding the FUDS's past history and uses and/or suggestions, or recommendations regarding current and future plans?

No he said he was well informed.

Additional information

The field team asked about the disposal area located in former Testing Area No. 4. He stated that it was a temporary solid waste transfer site sanctioned by the VI government. This site is cleared every 6 months.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Chuck Gidley	Private citizen	Flamingo Point Road Thomas, V.I. 00802	19 May 2011	340-690-0181

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Figures



**Figure 1- General Location
Former Fort Segarra (I02VI097701)
Site Map
U.S. Virgin Islands**



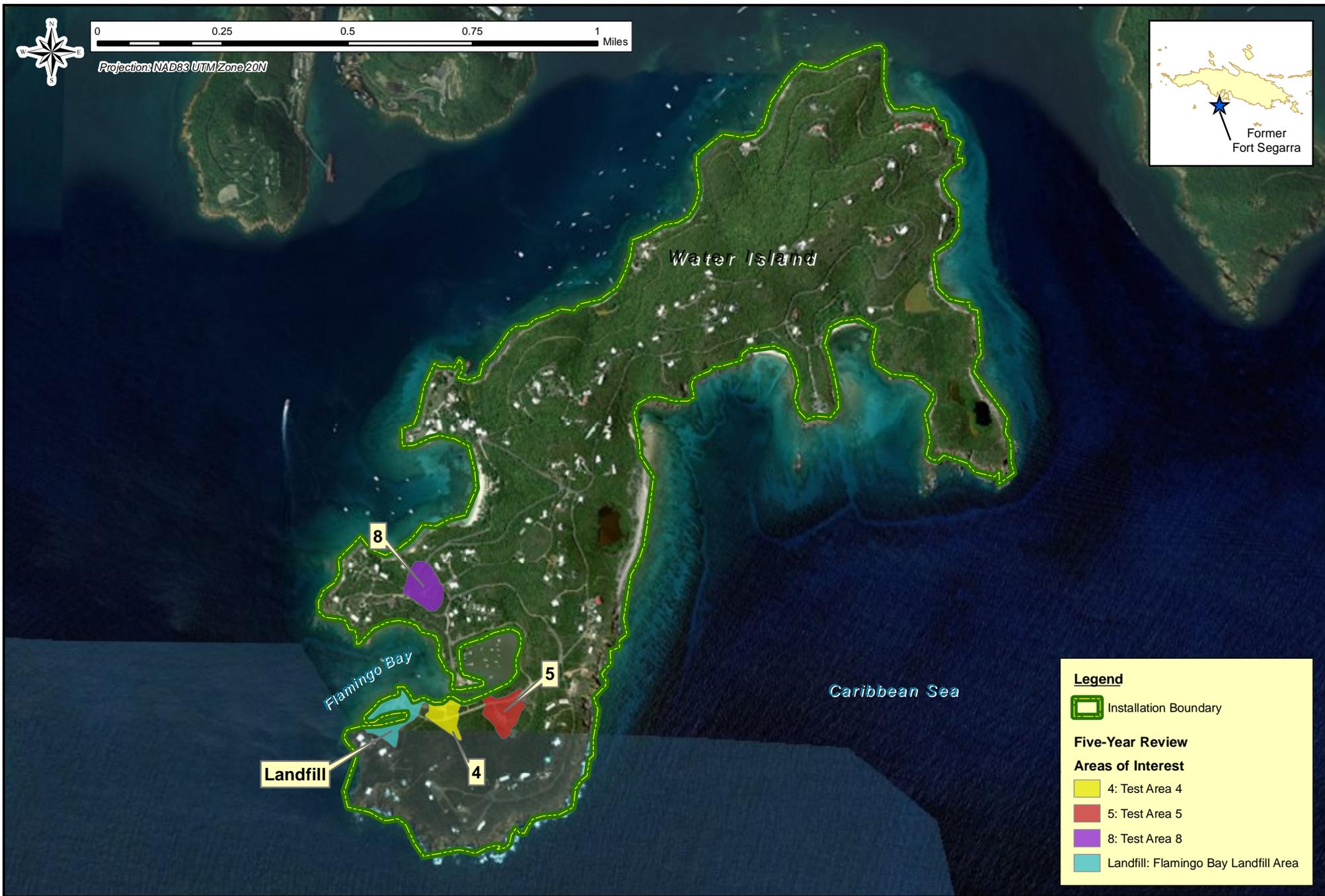
Data Sources: U.S. Army Installation Data
Imagery: ESRI, i-cubed, USDA FSA, USGS, AEX,
GeoEye, Getmapping, Aerogrid, IGP

Date: June 2011
Prepared By: EA Engineering, Science, and Technology, Inc.
Prepared For: U.S. Army Corps of Engineers



0 0.25 0.5 0.75 1 Miles

Projection: NAD83 UTM Zone 20N



Legend

- Installation Boundary

Five-Year Review

Areas of Interest

- 4: Test Area 4
- 5: Test Area 5
- 8: Test Area 8
- Landfill: Flamingo Bay Landfill Area

Figure 2- Areas of Interest
Former Fort Segarra (102VI097701)
Site Map
U.S. Virgin Islands



Data Sources: U.S. Army Installation Data
 Imagery: ESRI, i-cubed, USDA FSA, USGS, AEX,
 GeoEye, Getmapping, Aerogrid, IGP

Date: June 2011
 Prepared By: EA Engineering, Science, and Technology, Inc.
 Prepared For: U.S. Army Corps of Engineers

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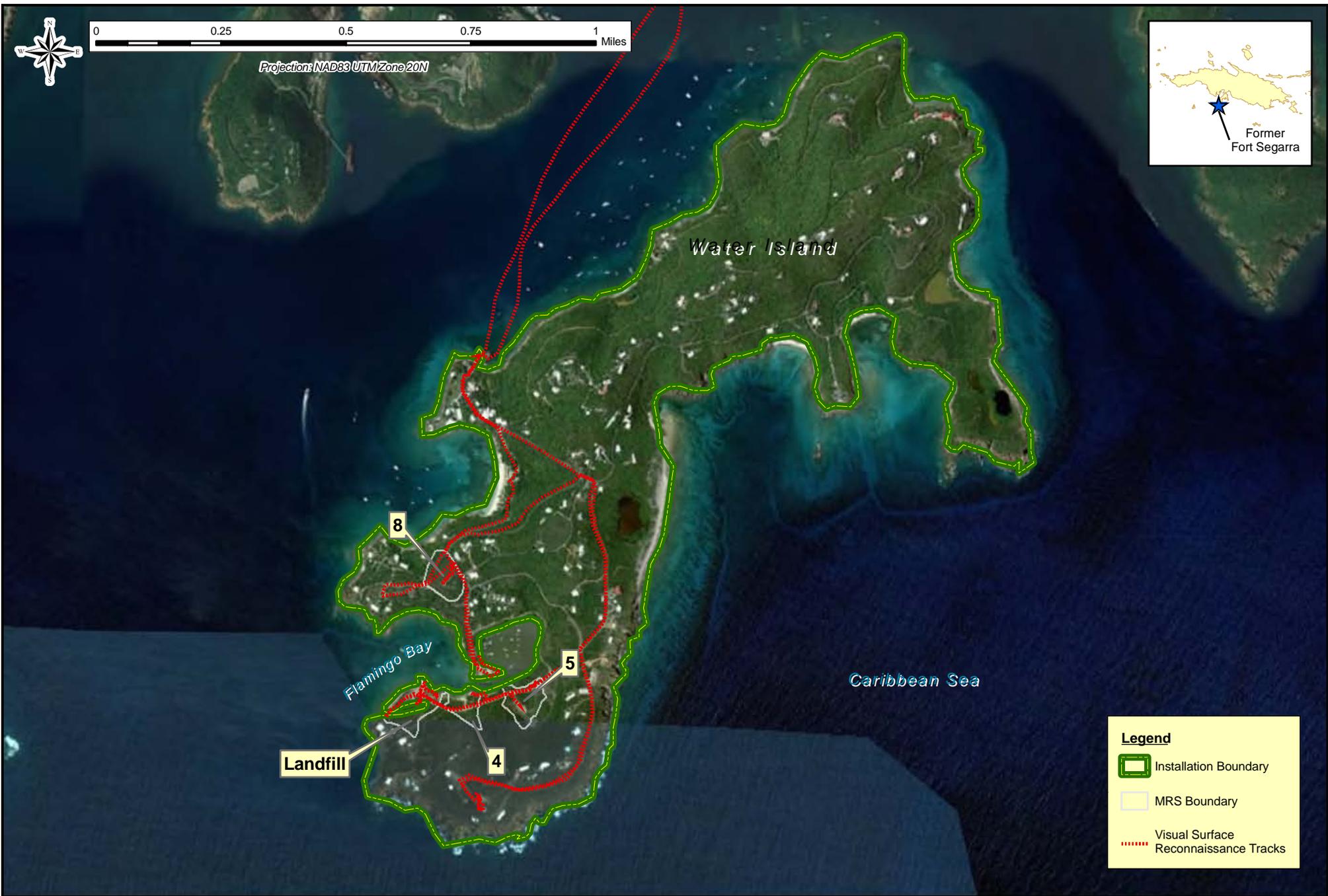


Figure 3- Visual Surface Reconnaissance Tracks
Former Fort Segarra (I02VI097701)
Site Map
U.S. Virgin Islands

Data Sources: U.S. Army Installation Data
 Imagery: ESRI, i-cubed, USDA FSA, USGS, AEX,
 GeoEye, Getmapping, Aerogrid, IGP

Date:.....June 2011
 Prepared By: EA Engineering, Science, and Technology, Inc.
 Prepared For:.....U.S. Army Corps of Engineers



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Attachment A

Preliminary Site Analysis Worksheet

PRELIMINARY SITE ANALYSIS WORKSHEET Fort Segarra	
What changes have occurred that may affect prior decisions concerning the site?	<p>Physical Changes: Possible erosion along the beaches.</p> <p>Accessibility to Public: None.</p> <p>Land Use: None.</p> <p>Technology Changes: None.</p> <p>Other:</p>
How do these changes affect previous decisions for this site?	These changes do not affect previous decisions at the site.
What is the status of any Land Use Controls implemented at the site?	Signs have been installed on Water Island. Both signs remain and are in good condition.
What additional information is needed to develop a conclusion regarding the continued protectiveness of the response?	<p>The following questions should be addressed:</p> <p><i>How is the community being made aware of potential ordnance related dangers (i.e., pamphlets, newspapers, signs, etc.)? Signs are located around the FUDS.</i></p> <p><i>Are signs still intact on the site, indicating the potential hazard? Are these signs being adequately maintained? The signs which indicate the potential hazards are still intact and maintained.</i></p> <p><i>Is the community adequately aware of the potential dangers and how to appropriately respond to them? Based on interviews, the community is adequately aware of potential dangers.</i></p> <p><i>Was the removal action completed in 2009 effective? Do OE hazards still remain? No OE hazards were found during the removal action, but the action was still effective as it removed munitions debris and addressed the question of what potential hazards are present in the landfill.</i></p> <p><i>Have additional ordnance-related items been found or have ordnance-related incidents occurred since the EE/CA Action Memorandum was written? No ordnance-related items or ordnance related incidents have occurred since the EE/CA Action Memorandum.</i></p>

PRELIMINARY SITE ANALYSIS WORKSHEET Fort Segarra	
Recommendations for follow-up action.	Recommend USACE update the USACE FUDS Website to include Fort Segarra, U.S. Virgin Islands. Recommend the Final Five-Year Review report be placed at the reference desk at the local library (Enid M. Baa Library, located at 20 Dronningh Gade, St. Thomas, U.S. Virgin Islands 00802) and the State Historic Preservation Office (Foster Plaza, 396-1 Anna's Retreat St. Thomas, Virgin Islands 00802) Recommend continued maintenance of warning signs.
List documents, resources used.	1989 INPR, 1991 ASR, 1993 Scoping Study, 1995 Site Characterization, 2001 Historical Photo Analysis, 2002 Revised ASR, 2004 EE/CA, 2006 EE/CA Action Memorandum, and 2009 Site-Specific Final Report.

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Attachment B

Site Photographs

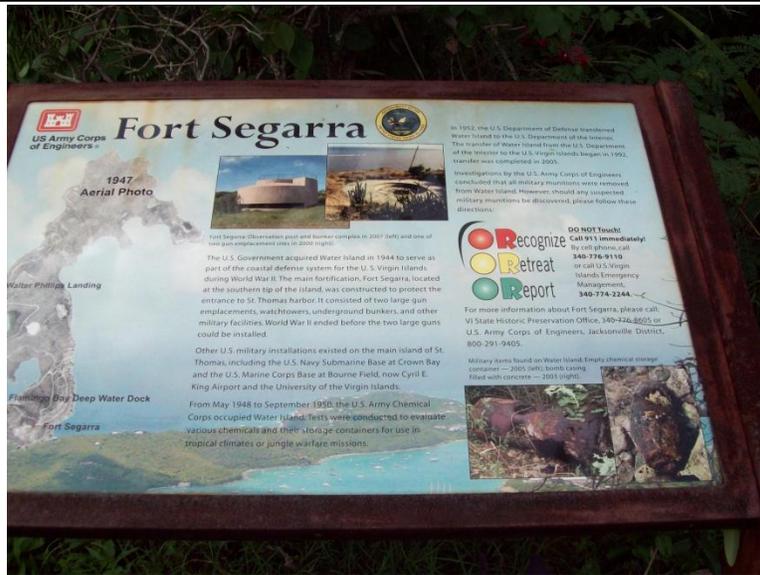


Photo 1: View of the warning sign located at the public ferry dock.



Photo 2: View of Test Area 4 looking towards deep water dock.



Photo 3: View of general debris in Test Area 4 along shoreline (sand filled suspect water tank).



Photo 4: View of general debris in Test Area 4 along shoreline (suspect air cylinder/tank).



Photo 5: View of fence surrounding Flamingo Bay Landfill



Photo 6: View of Test Area 5 which contains an active junk/debris storage area.



Photo 7: View of Test Area 4 along beach.



Photo 8: View of Test Area 8, overgrown with piles of debris.

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Attachment C

Field Forms

EOTI DAILY SITE REPORT						
		5 YEAR REVIEW FORMER Project Name: FORT SEGARCA				
Explosive Ordnance Technologies, Inc. (EOTI) 105 W. Tennessee Ave. Oak Ridge, TN 37830			Project Location: US VIRGIN ISLANDS Project #: Report #: Date: 5/18/11			
Weather Conditions: SUN / CLOUDS 80°						
Major Equipment Items on Site						
ITEM	Quantity	Hrs Used	ITEM	Quantity	Hrs Used	
SCHWENST ORP LOC	1	8				
GARMIN GPS	1	8				
DIGITAL CAMERA	1	8				
Personnel on Site			Personnel on Site			
Name	Position	Hrs (today)	Name	Position	Hrs (today)	
MIKE O'NEIL	EA ENG	8				
WANNIS WADSON	EOTI	8				
Exposure Data						
Previous Hours	0	Hours Today	0	Hours to Date	0	
Previous Accidents	0	Accidents Today	0	Accidents to Date	0	
Prev. Lost Work Days	0	Lost Workdays Today	0	Lost Work Days to Date	0	
Ordnance Data						
Previous UXO Found	0	# UXO Today	0	# UXO to Date	0	
Note: See UXO Log for description / disposition of ordnance items.						
Anomaly Clearance Data						
Prev. Anomalies Reaquired	0	# Anomalies Reaq Today	0	# Anomalies Reaq to Date	0	
Prev. Digs Completed	0	Digs Completed Today	0	Digs Completed to Date	0	
QC Inspections / Results:			QA Inspections / Results:			
Verbal Instructions Received or Given: (Instructions received from client or given by EOTI and corresponding action taken.)						
Site Safety Brief Given Concerning Potential UXO						
Changed Conditions/Delays/Conflicts Encountered: (List conditions which have hindered ID removal or disposal of UXO.)						
Other comments, additional information, and / or lessons learned:						
Work performed today. Indicate location and include equipment used.						
TRAVEL TO ISLANDS BY AIR. PICK UP RENTAL CAR LOCATE HOTEL / CHECK IN. BRIEF RECONNAISSANCE OF AREA TO FAMILIARIZE BEFORE END OF DAY						
Contractor's Verification: The above report is complete and correct. All equipment used and work performed during this reporting period are in compliance with the plans and specifications except as noted above.						
Original Signed						
On site Representative: <i>Wadson</i>					Date: 5/18/11	01/00/00

**U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE (USAESCH)
ABBREVIATED ACCIDENT PREVENTION PLAN (AAPP)**

**SITE VISIT TEAM STATEMENT AND SIGN-IN-PAGE
FOR
Water Island (Former Fort Segarra)**

NOTE: This statement is the record to be maintained in the government/Contractor's on-site files through the entire life of the task order or project. The statement should only be completed just prior to the actual visit taking place. It does not have to accompany this AAPP when submitted for review.

1. Team members will sign this statement:
 - a. Prior to the start of the site visit.
 - b. When a change is made to this AAPP.

2. I have read, or have had read to me, and understand the general and specific safety and environmental requirements, and will abide by the contents contained in the AAPP. I have been briefed and trained in, and am familiar with, my requirements to conduct the site visit.

Name (Print)	Affiliation	Signature	Date MM/DD/YR
Michael O'Neill	EA Engineering	<i>[Handwritten Signature]</i>	5/19/11

Team Leader or Site Safety Officer presenting briefing:

Wayne A. Madsen *[Handwritten Signature]* 05/19/11
(Name) (Signature) (Date)
MM/DD/YR

EOTI DAILY SITE REPORT							
		5 YEAR REVIEW FORMER Project Name: FORT SEGARCA					
Explosive Ordnance Technologies, Inc. (EOTI) 105 W. Tennessee Ave. Oak Ridge, TN 37830				Project Location: US VIRGIN ISLANDS Project #: Report #: Date: 5/18/11			
Weather Conditions:		SUN / CLOUDS 80°					
Major Equipment Items on Site							
ITEM	Quantity	Hrs Used	ITEM	Quantity	Hrs Used		
SCHWENST ORP LOC	1	8					
GARMIN GPS	1	8					
DIGITAL CAMERA	1	8					
Personnel on Site				Personnel on Site			
Name	Position	Hrs (today)	Name	Position	Hrs (today)		
MIKE O'NEIL	EA ENG	8					
WANNIS WADSON	EOTI	8					
Exposure Data							
Previous Hours	0	Hours Today	0	Hours to Date	0		
Previous Accidents	0	Accidents Today	0	Accidents to Date	0		
Prev. Lost Work Days	0	Lost Workdays Today	0	Lost Work Days to Date	0		
Ordnance Data							
Previous UXO Found	0	# UXO Today	0	# UXO to Date	0		
Note: See UXO Log for description / disposition of ordnance items.							
Anomaly Clearance Data							
Prev. Anomalies Reaquired	0	# Anomalies Reaq Today	0	# Anomalies Reaq to Date	0		
Prev. Digs Completed	0	Digs Completed Today	0	Digs Completed to Date	0		
QC Inspections / Results:				QA Inspections / Results:			
Verbal Instructions Received or Given: (Instructions received from client or given by EOTI and corresponding action taken.)							
Site Safety Brief Given Concerning Potential UXO							
Changed Conditions/Delays/Conflicts Encountered: (List conditions which have hindered ID removal or disposal of UXO.)							
Other comments, additional information, and / or lessons learned:							
Work performed today. Indicate location and include equipment used.							
TRAVEL TO ISLANDS BY AIR. PICK UP RENTAL CAR LOCATE HOTEL / CHECK IN. BRIEF RECONNAISSANCE OF AREA TO FAMILIARIZE BEFORE END OF DAY							
Contractor's Verification: The above report is complete and correct. All equipment used and work performed during this reporting period are in compliance with the plans and specifications except as noted above.							
Original Signed		On site Representative: <i>Wadson</i>		Date: 5/18/11		01/00/00	

EOTI DAILY SITE REPORT					
EOTI EXPLOSIVE ORDNANCE TECHNOLOGIES, INC.		5 YEAR REVIEW FORMER Project Name: FORT SEGARRA			
Explosive Ordnance Technologies, Inc. (EOTI) 105 W. Tennessee Ave. Oak Ridge, TN 37830			Project Location: US VIRGIN ISLANDS Project #: Report #: Date: 5/19/11		
Weather Conditions: Sun / Clouds / RAIN 83°					
Major Equipment Items on Site					
ITEM	Quantity	Hrs Used	ITEM	Quantity	Hrs Used
Sidenstadi ORN Loc	1	8			
Garmin GPS	1	8			
Digital Camera	1	8			
Personnel on Site			Personnel on Site		
Name	Position	Hrs (today)	Name	Position	Hrs (today)
MIKE ONGIL	EA ENG	8			
WARNE MADSEN	EOTI	8			
Exposure Data					
Previous Hours	0	Hours Today	0	Hours to Date	0
Previous Accidents	0	Accidents Today	0	Accidents to Date	0
Prev. Lost Work Days	0	Lost Workdays Today	0	Lost Work Days to Date	0
Ordnance Data					
Previous UXO Found	0	# UXO Today	0	# UXO to Date	0
Note: See UXO Log for description / disposition of ordnance items.					
Anomaly Clearance Data					
Prev. Anomalies Required	0	# Anomalies Reaq Today	0	# Anomalies Reaq to Date	0
Prev. Digs Completed	0	Digs Completed Today	0	Digs Completed to Date	0
QC Inspections / Results:			QA Inspections / Results:		
Verbal Instructions Received or Given: (Instructions received from client or given by EOTI and corresponding action taken.) Site Safety Brief Given concerning potential UXO					
Changed Conditions/Delays/Conflicts Encountered: (List conditions which have hindered ID removal or disposal of UXO.)					
Other comments, additional information, and / or lessons learned:					
Work performed today. Indicate location and include equipment used. MEET WITH DEPT OF PLANNING & NATURAL RESOURCES TO DISCUSS HISTORY AND COMMUNITY AWARENESS. TAKE WATER TAXI TO WATER ISLAND (SITE OF FT SEGARRA) TO TOUR / INSPECT SITES. RETURN TO MAIN ISLAND FOR RETURN TO MAIN LAND.					
Contractor's Verification: The above report is complete and correct. All equipment used and work performed during this reporting period are in compliance with the plans and specifications except as noted above.					
Original Signed On site Representative- W. [Signature] Date: 5/19/11 Date: 01/00/00					

**U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE (USAESCH)
ABBREVIATED ACCIDENT PREVENTION PLAN (AAPP)**

**SITE VISIT TEAM STATEMENT AND SIGN-IN-PAGE
FOR
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1. Team members will sign this statement:
 - a. Prior to the start of the site visit.
 - b. When a change is made to this AAPP.

2. I have read, or have had read to me, and understand the general and specific safety and environmental requirements, and will abide by the contents contained in the AAPP. I have been briefed and trained in, and am familiar with, my requirements to conduct the site visit.

Name (Print)	Affiliation	Signature	Date MM/DD/YR
Michael O'Neill	EA Engineering	<i>[Handwritten Signature]</i>	5/19/11

Team Leader or Site Safety Officer presenting briefing:

Wayne A. MADSEN *[Handwritten Signature]* 05/19/11
(Name) (Signature) (Date)
MM/DD/YR

Attachment D

Interview Records

- David Brewer, Former Archaeologist with U.S. Virgin Islands State Historic Preservation Office
- Frank Araico, U.S. Army Corps of Engineers Jacksonville District Project Manager for Five-Year Reviews
- Kim Meacham, Former Technical Manager for Parsons
- Patton Mulford, State Historic Preservation Office for Water Island
- Tom Roth, Former Project Manager for Parsons
- Chuck Gidley, Private Citizen

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: IO2VI0977

Person being interviewed: David Brewer,
former archaeologist with the U.S. Virgin Islands
State Historic Preservation Office

Date: 12 May 2011

1. What is your relationship to the project area?

I was the local archaeologist with the U.S. Virgin Islands State Historic Preservation Office up until a couple years ago (2009).

2. Are you aware that there is an MMRP FUDS project site in your vicinity and/or what is your current impression of the MMRP FUDS project site in your area?

Yes, very aware. I was there when the canisters were removed and during the development and production of the signs, although I left before they were installed.

3. Are you aware of any events, incidents, or activities at the FUDS such as emergency responses regarding munitions findings from local authorities? If so, please give details.

No, I am not aware of any incidents relating to military munitions.

4. Have there been routine communications or activities regarding the FUDS (site visits, inspections, reporting activities, etc.) that you are aware of? If so, please give details.

I found USACE was very responsive and communication was good when I worked at the U.S. Virgin Islands State Historic Preservation Office.

5. Do you feel well informed about the FUDS and past activities and progress?

I was generally well informed, except on one occasion when a contractor was brought in to dig trenches and conduct some soil sampling and the State Historic Preservation Office was not notified until after the digging took place. I would have preferred to have been notified in advance, so that I may have watched the process.

6. Do you have any questions regarding the FUDS's past history and uses and/or suggestions, or recommendations regarding current and future plans?

As it stands, the Fort is very dangerous. It is poorly lit (no lighting inside) and has holes in the floors that drop several levels. Additionally, the existing ladders are rusted and the large metal doors present their own hazards. I think it is USACE's responsibility to make it safe for public use. Once it is made safe, the VI could give historic tours, after all there are very few World War II fortresses in the U.S.

7. Do you know if a pamphlet/brochure/fact sheet was generated and distributed?

I think there may have been pamphlets or posters made at some point, but I am not sure. I do not know of any pamphlets/fact sheets/brochures being distributed. In fact, I don't think pamphlets/fact sheets/brochures should be distributed, bringing attention to the area, until the Fort is in better condition.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
David Brewer	Former Archaeologist with the U.S. Virgin Islands State Historic Preservation Office	N/A	5/12/2011	407-422-5009 Cell 340-344-2442

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I01VI0977

Person being interviewed: Frank Araico

Date: 25 April 2011

1. What was your involvement with this project (i.e., project manager)?

I am the Jacksonville Project Manager for the 5-year reviews.

2. Do you know if there have been any EOD responses or calls related to munitions discoveries since the 2004 EE/CA Memorandum?

This is a low risk site and there have been no EOD calls or munitions/CWM discovered since the EE/CA was signed in 2004.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Frank Araico	USACE– Jacksonville District		4/25/2011	904-232-1804

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: IO1VI0977

Person being interviewed: Kim Meacham

Date: 22 April 2011

1. What was your involvement with this project (i.e., project manager)?

I was the USACE-Huntsville District technical manager (project engineer).

2. We have reviewed a 2009 Site-Specific Final Report that was completed by Parson. That report indicates the removal action was completed. Additionally, two signs, as part of the Institutional Controls, were installed. Do you know if brochures have been or are being distributed?

I know that we printed up lots of brochures and discussed where they would be placed but am not aware of any follow through. This question should also be asked of the District.

3. Do you know if an Institutional Control Plan was developed?

Section 7 of the Final EE/CA Report is the Institutional Control Plan.

4. Do you know who is responsible for maintaining and implementing the institutional controls?

It was my understanding that David Brewer¹ at the U.S. Virgin Islands State Historic Preservation Office would periodically place the brochures at the selected location.

5. Do you know if there have been any EOD responses or calls related to munitions discoveries since the 2004 EE/CA Memorandum?

I do not know if EOD has been called to the site.

6. Do you think the public is adequately aware of the dangers?

This site is considered extremely low risk for the public to come in contact with CWM and, therefore, the signs were determined to be the best alternative during the EE/CA.

¹ As a follow-up measure, EA called the U.S. Virgin Islands State Historic Preservation Office (on St. Thomas - 340-776-8605) to talk with David Brewer and was informed he had left the organization 2 years ago. He was an archaeologist and his replacement is located at the St. Croix office.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Kim Meacham	USACE–Huntsville District	U.S. Army Engineering and Support Center, Huntsville 4820 University Square Huntsville, Alabama 35816-1822	4/22/2011	256-895-1667 Cell 256-307-2227

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I01VI0977

Person being interviewed: Patton Mulford

Date: 5 April 2011

Interviewers: Tim Reese and Ivy Harvey

Interview Type: Phone (340-776-8605)

1. What is your connection to Fort Segarra?

I work at the State Historic Preservation Office and live on Water Island.

2. Have there been any emergency responses or calls related to munitions discoveries since the number was posted on the two signs?

No, not that I know of; back in 1998, an investigation was conducted and nothing was found.

3. Do you think the public is adequately aware of the dangers?

Yes. The history of the Island is common knowledge. Historic structures (including a former hotel) are a constant reminder of the Island's history. Furthermore, the signs that were posted (which are still intact) adequately remind the public of the site's history and what to do if a munitions-related discovery is made. Initially, residents were weary of these signs in that they might cause undue fear, but they are worded appropriately.

4. Would you be willing to go on a site visit when we are in the area?

Yes, I would like that.

5. Are the Test Areas 4, 5, and 8 and the Flamingo Bay Landfill accessible to the general public?

Yes. You shouldn't have any issues visiting these areas.

6. Is the Flamingo Bay Landfill an active landfill?

The term landfill is not the proper term for the area. The Flamingo Bay Landfill is currently used for the staging of dumpsters where trash is deposited and picked up weekly.

7. Do you know where we could get a ferry schedule that goes to and from Water Island?

I can provide you with a copy of the ferry schedule if you want to email me your request at Patton_mulford@vishpo.com.

8. Is there anyone else you would recommend we contact who may have additional information regarding this site?

Sean Skraigger is knowledgeable. Email me and I will try to get his contact information for you.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Patton Mulford	State Historic Preservation Office	#17 Kongens Gade Charlotte Amalie St. Thomas, V.I. 00802	4/5/2011	340-776-8605

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I02VI097701

Person being interviewed: Patton Mulford

Date: 5/19/11

1. Are you aware that there is a MMRP FUDS project site in your vicinity and/or what is your current impression of the MMRP FUDS project site in your area?

Patton is aware of the history of the site and area and he feels that he knows more about the site than most people do because of the reports in his office (he is affiliated with the State Historic Preservation Office for last 6-7 years). He is also aware of the site because of the ongoing Archeology work on the island where they monitor and document sites/findings. His impression is that the area is cleaned up and history of the site is common knowledge to residents of Water Island.

2. Are you aware of any events, incidents, or activities at the FUDS such as emergency responses regarding munitions findings from local authorities? If so, please give details.

No, he is not aware of any incidents on the island involving munitions. He is a member of the Water Island Rescue and doesn't recall any calls for UXO only slips trips and falls.

3. Have there been routine communications or activities regarding the FUDS (site visits, inspections, reporting activities, etc.) that you are aware of? If so, please give details.

No, he is not aware of routine communications or activities regarding the FUDS.

4. Do you feel well informed about the FUDS and past activities and progress?

Yes – everyone that lives on Water Island knows the site history and the status if the previous investigations and removals.

5. Do you have any questions regarding the FUDS's past history and uses and/or suggestions, or recommendations regarding current and future plans?

He had no questions or recommendations. He mentioned that people at the National Park Service (Ken Wild and Doug Anderson may have additional information on the site based on their 1998 and 2002 archeology work.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Patton Mulford	SHPO	#17 Kongens Gade Charlotte Amalie St. Thomas, V.I. 00802	19 May 2011	340-776-8605

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I02VI097701

Person being interviewed: Patton Mulford

Date: 6/22/11

1. Do you know if any fact sheets/brochures about the FUDS (Fort Segarra) are being distributed in the area?

No. I am not aware of any fact sheets having been or that are currently being distributed.

2. Do you know who is responsible for maintaining the two educational signs on Water Island?

No. I do not know who is responsible for maintaining these signs, not that there is much to maintain.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Patton Mulford	SHPO	#17 Kongens Gade Charlotte Amalie St. Thomas, V.I. 00802	19 May 2011	340-776-8605

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: IOVI0977

Person being interviewed: Tom Roth

Date: 26 April 2011

1. What was your involvement with this project (i.e., project manager)?

I was the project manager at Parsons until 2004. I essentially worked on the project up through the EE/CA. I believe Clay Edmonson took over as the Project Manager at Parsons when I left.

2. Do you know who the USACE Project Manager was?

Roger Fitzpatrick (Roger.A.Fitzpatrick@hnd01.usace.army.mil). Office: 256-895-1555. I did a quick Google search and found a newsletter from last August saying he was deploying to Iraq, so he may not be in Huntsville anymore. He worked for Chuck Twing (Charles.L.Twing@usace.army.mil), so you might try him.

3. We have reviewed a 2009 Site-Specific Final Report that was completed by Parsons. That report indicates the removal action was completed. Additionally, two signs, as part of the Institutional Controls, were installed. Do you know if brochures have been or are being distributed?

We prepared brochures that were distributed as part of a public meeting prior to the start of the field investigation (for the EE/CA).

4. Do you know if an Institutional Control Plan was developed?

Not while I was Project Manager.

5. Do you know who is responsible for maintaining and implementing the institutional controls?

That would have decided after I left Parsons. When I was on the project, I worked primarily with the Department of Public Works.

6. Do you think the public is adequately aware of the dangers?

Yes, definitely. Fact sheets and public notices were in the paper. Several public meetings were held around the time of the removal action.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number/Email
Tom Roth	CH2M Hill (formerly Parsons)	Principal Project Manager CH2M HILL Atlanta, Georgia	4/26/2011	404-474-7640 Cell 404-259-6674 Tom.Roth@CH2M.com

Interview Questionnaire for MMRP Five-Year Review

Site Name: Fort Segarra

Site Number: I02VI097701

Person being interviewed: Chuck Gidley

Date: 5/19/11

1. Are you aware that there is a MMRP FUDS project site in your vicinity and/or what is your current impression of the MMRP FUDS project site in your area?

He is aware of the history of the site and area and he was the on-island coordinator when they cleaned the island. He feels that they are cleaned up. We asked about the Flamingo Bay Landfill and why there were cars/vehicles are present in the landfill. He indicated that the area was fenced in the 1990's and he has the key. He indicated that cars are parked there (people pay to have them there) and no one else is allowed in the fenced area.

2. Are you aware of any events, incidents, or activities at the FUDS such as emergency responses regarding munitions findings from local authorities? If so, please give details.

No, he is not aware of any incidents on the island involving munitions and he is not aware of anyone finding anything in the area. He stated that people would call him if anything was found to come deal with it but nothing has been found.

3. Have there been routine communications or activities regarding the FUDS (site visits, inspections, reporting activities, etc.) that you are aware of? If so, please give details.

No, but he recalled that the signs were put up about a year after the USACE left. He knows that people stop and look at the signs so they are aware/informed of what was on the island. He is not aware of routine communications or activities regarding the FUDS.

4. Do you feel well informed about the FUDS and past activities and progress?

Yes he feels well informed because he was coordinating operations with Jacksonville District during the removal action and he was kept in the loop by USACE.

5. Do you have any questions regarding the FUDS's past history and uses and/or suggestions, or recommendations regarding current and future plans?

No he said he was well informed.

Additional information

The field team asked about the disposal area located in former Testing Area No. 4. He stated that it was a temporary solid waste transfer site sanctioned by the VI government. This site is cleared every 6 months.

Interview Documentation Form

Name	Organization	Location/Address	Date	Phone Number
Chuck Gidley	Private citizen	Flamingo Point Road Thomas, V.I. 00802	19 May 2011	340-690-0181

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