



# Closed, Transferring and Transferred Range/Site Inventory Report

## FORT HAMILTON, NEW YORK

U.S. Army Military District of Washington (MDW)



FORT HAMILTON

December 2003

Final CTT  
Inventory Report



U.S. Army  
Corps of Engineers

MALCOLM  
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Closed, Transferring and Transferred Range/Site Inventory Report



**FINAL**

**U.S. ARMY CLOSED, TRANSFERRING  
and TRANSFERRED RANGE/SITE  
INVENTORY**

**for**

**FORT HAMILTON, NY**

**22 December 2003**

Prepared for

**U.S. Army Environmental  
Center  
and  
U.S. Army Corps of  
Engineers,  
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## ABBREVIATIONS / ACRONYMS

AEC	Army Environmental Center
A/I	Active/Inactive
APG	Aberdeen Proving Grounds
ARID	Army Range Inventory Database
ARNG	Army National Guard
ARS	Advance Range Survey
ASR	Archive Search Report
BRAC	Base Realignment and Closure
CADD	Computer Aided Drafting and Design
CTC	Cost to Complete
CTT	Closed/Transferring/Transferred
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DMM	Discarded Military Munitions
DoD	Department of Defense
DoDD	Department of Defense Directive
DoDI	Department of Defense Instruction
DOE	Department of Energy
DSERTS	Defense Site Environmental Restoration Tracking System
EOD	Explosive Ordnance Disposal
FFID	Federal Facility Identification
FUDS	Formerly Used Defense Site
FY	Fiscal Year
GIS	Geographic Information System
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
LPA	Limited Public Access
LTM	Long Term Monitoring
MACOM	Major Command
MC	Munitions Constituents
MMRP	Military Munitions Response Program
MR	Munitions Response
N/A	Not Applicable
NGB	National Guard Bureau
NPA	No Public Access
OB	Open Burn
OD	Open Detonation
PA	Preliminary Assessment
PM	Project Manager
POC	Point of Contact
QA	Quality Assurance
QC	Quality Control
RAC	Risk Assessment Code
RAO	Remedial Action (Operations)
RC	Response Complete
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
RIP	Remedy in Place

# ABBREVIATIONS / ACRONYMS

RMIS	Restoration Management Information System
RPA	Restricted Public Access
SI	Site Inspection
STARC	State Area Command
TIC	Technical Information Center
UPA	Unrestricted Public Access
U.S.	United States
USACE	United States Army Corps of Engineers
USARC	United States Army Reserve Command
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
UXO	Unexploded Ordnance
WMM	Waste Military Munitions

## Site Specific Acronyms

AMSA	Area Maintenance Support Activity
OW	Open Water
TBTA	Triborough Bridge and Tunnel Authority
WWI	World War I
WWII	World War II

<b>EXECUTIVE SUMMARY</b> .....	ES-1
Purpose of the Closed, Transferring, or Transferred (CTT) Inventory .....	ES-1
Purpose of the Range Inventory Report .....	ES-2
Summary of Results .....	ES-2
<b>A. INTRODUCTION</b> .....	A-1
Background .....	A-1
Project Drivers .....	A-3
Report Objectives.....	A-3
Project Participants .....	A-3
<b>B. DEFINITIONS AND DATA REQUIREMENTS</b> .....	B-1
Inventory Definitions .....	B-1
Inventory Data Requirements .....	B-4
Range and Site Requirements .....	B-4
ARID Data Requirements .....	B-4
Risk Assessment Code Methodology .....	B-5
DERP Eligibility Determination .....	B-5
<b>C. INSTALLATION SUMMARY</b> .....	C-1
Installation Overview and Description .....	C-1
Contractor Team Composition .....	C-1
Installation Points of Contact (POCs) .....	C-2
Nature of Data Collection and Coordination .....	C-2
Summary of Critical Data Sources .....	C-2
<b>D. INSTALLATION CTT RANGE AND SITE DATA</b> .....	D-1
Summary of CTT Range and UXO, DMM and MC Sites .....	D-1
CTT Range and Site Summaries .....	D-2
CTT Range and Site Details Table .....	D-5
CTT Range and Site Ownership, Use and Access Control Summary Table..	D-7
DERP Eligibility Table .....	D-9

<b>E. RANGE &amp; SITE MAPS .....</b>	<b>E-1</b>
<b>F. ARID DATA FILES .....</b>	<b>F-1</b>
<b>G. RISK ASSESSMENT CODE ANALYSIS .....</b>	<b>G-1</b>
<b>H. DIGITAL FILES .....</b>	<b>H-1</b>
<b>I. DOCUMENT LOG .....</b>	<b>I-1</b>
Reports .....	I-1
Maps .....	I-2
Interviews .....	I-3
<b>J. NOTES .....</b>	<b>J-1</b>

## **EXECUTIVE SUMMARY**

### **Purpose of the Closed, Transferring, and Transferred Inventory**

To meet immediate, short-term, and long-term needs, the United States (U.S.) Army is conducting its range inventory in three phases. The first phase (Phase 1) involved a data call issued to each U.S. Army Major Command (MACOM) requesting general information about ranges on their installations. This phase was also referred to as the Advance Range Survey (ARS). The ARS allowed the Army to meet its immediate needs; however, a more detailed inventory was necessary. The Army decided to divide the detailed follow-on inventory into two parts, an active and inactive (A/I) inventory (Phase 2) and a closed, transferring, and transferred (CTT) inventory (Phase 3).

The results of the Phase 2 inventory for the installation were documented in an A/I range inventory binder submitted to the Army Environmental Center (AEC), the respective MACOM, and the installation. The Phase 2 binder contains maps that delineate the A/I range boundaries. The remainder of the property inside the installation's boundary is designated as non-A/I property by default. If the Phase 2 inventory was conducted at an installation, the data was provided to the Phase 3 team prior to starting the data collection effort.

This Phase 3 inventory began as an inventory of just Army CTT ranges. However, as a result of the congressional requirements outlined in the Defense Authorization Act of 2002 (Public law 107-107) and resultant changes to the Defense Environmental Restoration Program (DERP), the Phase 3 Inventory is a comprehensive history of both CTT ranges and other CTT sites with unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). All locations previously or currently owned, leased or possessed by the Department of Defense (DoD) (except those currently classified as A/I ranges or permitted military munitions treatment and/or disposal facilities) are included in this inventory. The U.S. Army Corps of Engineers (USACE) is the predominant executor of the Phase 3 inventory. The inventory specifically focused on the non-A/I areas as defined in Phase 2 and areas around the installation that may have been used in the past for munitions-related testing, training, or disposal.

Specific requirements of the Phase 3 inventory include: 1) mapping the CTT ranges and sites with UXO, DMM, or MC; 2) collecting and preparing data to be uploaded into the Army Range Inventory Database (ARID); 3) conducting an assessment of explosives safety risk using the Risk Assessment Code (RAC) methodology for each CTT range or site with UXO or DMM identified in the inventory; and 4) determining which sites on the inventory potentially qualify for the Military Munitions Response Program (MMRP).

The one-day data collection portion of the Fort Hamilton CTT inventory was conducted December 9, 2002. While on site, the data collection team reviewed historical records, and interviewed installation personnel concerning potential CTT

ranges, disposal areas, and other UXO, DMM, or MC sites. This report summarizes the CTT inventory conducted at Fort Hamilton, and presents the results.

## **Purpose of the Range Inventory Report**

The purpose of this report is to present the results of the Phase 3 CTT inventory. The report includes individual CTT map(s) for the installation, a copy of the data tables that will be submitted electronically to AEC for uploading into the ARID, completed RAC worksheets for all CTT ranges and sites with UXO or DMM, DERP eligibility determination, and identification of which ranges/sites potentially qualify for the MMRP. Although the inventory did not require exhaustive archive searches to be performed, it did require historical research to identify sites subject to this inventory, locations, periods of use, the types of munitions used, and other specific information regarding the site. The majority of this data was obtained by reviewing installation records and interviewing personnel at, or involved with, the installation. Although the data presented in this report is believed to be accurate, it has not been verified by field sampling.

## **Summary of Results**

Fort Hamilton occupies 144 acres. The Phase 3 inventory identified one closed range complex, two transferred small arms ranges, and two transferred range complexes occupying 2,845 acres. The munitions used on the ranges were varied, including large caliber ammunition and small arms. By definition, a closed range/site is an area that is no longer used as a range but is still owned by the Army. A transferred range means the land is no longer under DoD control. Fort Hamilton had three sub-installations: Fort Wadsworth, Fort Totten and Bellmore Maintenance Facility (Bellmore). Fort Wadsworth was evaluated under the Base Realignment and Closure Act (BRAC), Fort Totten will be covered in a separate report and Bellmore was evaluated under the Formerly Used Defense Site (FUDS) program.

As part of the inventory, the data collection team performed an assessment of explosives safety risk using the RAC process for each range and site with UXO and DMM in the inventory. The RAC process requires the completion of a worksheet that consists of a series of questions regarding the area. Based on the results of the worksheet, a relative overall score (RAC score) for each area is assigned. The RAC score is an estimate of the relative explosives safety risk, which is reported as a number from 1 (high explosives safety risk) to 5 (negligible explosives safety risk).

The results of the Phase 3 inventory for this installation are summarized in Table ES-1 on the following page.

**Table ES-1: CTT Range and Site**

Installation Name	Range / Site Name	Classification	Total Area (Acres)	Munitions Constituents	RAC <sup>1</sup> Score	DERP Eligibility
FORT HAMILTON MILITARY COMMUNITY	HAMILTON CLOSED COMPLEX	CLOSED	42	Unknown	5	MR
	<i>Munitions Type(s)</i> LARGE CALIBER (37MM AND LARGER), HE SMALL ARMS					
FORT HAMILTON MILITARY COMMUNITY	HAMILTON PARADE GROUND #1	TRANSFERRED	15	Unknown	5	MR
	<i>Munitions Type(s)</i> SMALL ARMS					
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRAINING FIELD	TRANSFERRED	5	Unknown	5	MR
	<i>Munitions Type(s)</i> SMALL ARMS					
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRANSFERRED COMPLEX	TRANSFERRED	609	Unknown	5	MR
	<i>Munitions Type(s)</i> LARGE CALIBER (37MM AND LARGER), HE					
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRANSFERRED-OW	TRANSFERRED	2174	Unknown	1	MR
	<i>Munitions Type(s)</i> LARGE CALIBER (37MM AND LARGER), HE					

<sup>1</sup> "0" indicates that the site is a Munitions Constituent (MC) site and therefore, RAC scores have not been prepared.

Note: A TD at the end of the Range/Site name indicates a Transferred portion of a site. If a site extends past the installation boundary and is therefore identified as transferred, that transferred portion is given the same name as the site within the installation boundary and a "TD" is added to the end to indicate that it has been identified as transferred.

## **A. INTRODUCTION**

The United States (U.S.) Army is in the process of inventorying all of its past and current ranges to support its Range Sustainment Program and the Military Munitions Response Program (MMRP). The Army is conducting the inventory in three phases. The first and second phases only address properties meeting the definition of a range. The third and final phase is an inventory of closed, transferring and transferred (CTT) ranges and sites with unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC). Both ranges and other sites with explosive hazards, such as UXO or munitions disposal areas, are included.

This report documents the results of the CTT Range and Site inventory for Fort Hamilton located in Richmond County in New York.

### **Background**

To meet immediate, short-term, and long-term needs, the Army is conducting its range inventory program in three phases. The first phase (Phase 1) involved a data call issued through the Army Environmental Center (AEC) requesting general information about ranges on various installations under each U.S. Army Major Command (MACOM). The Phase 1 inventory was conducted using a questionnaire called the Advance Range Survey (ARS). The ARS allowed the Army to meet the short-term data goal of supporting the Department of Defense's (DoD) preparation of Senate Report 106-50.

The ARS for Fort Hamilton was completed in November 2000. Mr. Peter Koutroubis, the Supervisory Environmental Engineer with the Department of Public Works at Fort Hamilton, was listed as the point of contact (POC) in the ARS for CTT ranges. Seven records for CTT ranges at Fort Hamilton were found in the ARS. Six of the records referred to coastal batteries, and one record was for a one-acre indoor pistol range. The Fort Hamilton ARS data was submitted to AEC and compiled into a master database of U.S. Army installations.

The ARS allowed the Army to meet its short-term needs; however, the Army's long-term needs required a more detailed inventory of its ranges that was not achievable based on the information in the ARS. For management and budgetary reasons, the Army divided the detailed follow-on inventory into two phases. The Phase 2 inventory addressed active and inactive (A/I) ranges (operational ranges), while Phase 3 covers CTT ranges and sites with UXO, DMM, or MC.

Malcolm Pirnie reviewed the U.S. Army A/I Range Inventory Information/Schedule List and found that a Phase 2 inventory for Fort Hamilton was not conducted. Therefore, no A/I map was prepared for this location.

This Phase 3 inventory includes all CTT ranges and UXO, DMM, and MC sites that are currently or have been owned, leased, or operated by the Army or DoD. Properties currently classified as A/I ranges or permitted military munitions treatment and/or disposal facilities are excluded from the Phase 3 inventory. Closed ranges and sites are no longer in use, but are still located on Army property. Transferred ranges and sites are no longer in use and are located on property that is no longer under military control. Transferred ranges that qualify for the Formerly Used Defense Site (FUDS) program are not included in the Phase 3 inventory. However, transferred sites that qualify for FUDS, but are not on the FUDS docket, and transferred sites that do not qualify for FUDS (transferred after 1986) are included in this inventory. A range or site is referred to as "transferring" if it is no longer used and is proposed for imminent release from military control.

The Fort Hamilton site visit occurred on December 9, 2002 to collect the CTT range inventory data. While on site, the data collection team reviewed historical records and interviewed knowledgeable installation personnel concerning CTT ranges.

The inventory itself represents a summary or "snap shot" in time of the areas associated with the U.S. Army's munitions disposal, training, and testing and should be updated as the Army changes how it uses training ranges or gathers additional data over time.

### **Project Drivers**

There are several drivers for the Phase 3 inventory, including the Defense Environmental Restoration Program (DERP), as amended by the Defense Authorization Act of 2002 (Public Law 107-107, signed into law January 2002); federal financial accounting standards; and DoD guidance. The most important driver is the DERP. DERP requires that an "inventory of defense sites that are known or suspected to contain UXO, DMM, or MC" be conducted and completed by May 31, 2003. The revised Management Guidance for the DERP (September, 2001) created the MMRP and outlines the specific program requirements for the CTT inventory. Federal financial accounting standards require DoD to estimate the cost of cleaning up sites under the MMRP and report this cost in its annual financial statements. A complete inventory of CTT ranges and other sites with UXO, DMM and MC will ensure that future financial reporting estimates are defensible and supported by accurate data.

## **Report Objectives**

The objective of this report is to present the results of the CTT inventory for this installation. Although this assignment did not require that an exhaustive archive search be performed, it did require historic research to identify CTT ranges and sites subject to this inventory, and the locations, periods of use, and associated types of UXO, DMM, or MC. The majority of this data was obtained by reviewing installation records and interviewing personnel at, or involved with, the installation. Although the data presented in this report is believed to be accurate, it has not been verified by field sampling.

## **Project Participants**

AEC is the Program Manager for the Army's CTT inventory. AEC provides overall management and guidance, identifies significant issues, develops and maintains the Army Range Inventory Database (ARID), defines achievable schedules and milestones, coordinates with relevant U.S. Army organizations, and reports on the inventory's status. The Project Manager (PM) for AEC is Ms. Mary Ellen Maly.

The U.S. Army Corps of Engineers (USACE) is the executing organization for Phase 3 and was responsible for conducting the record searches; gathering, compiling, and validating data; and submitting the validated data to AEC in the specified file formats. USACE Baltimore District was responsible for completing the Phase 3 inventory for this installation. The PM for USACE Baltimore is Ms. Ann Wood.

Malcolm Pirnie, Inc., under contract with the USACE Baltimore District, provided personnel to help the USACE collect and analyze inventory data and to document the results. The data collection team leader for the Fort Hamilton CTT range inventory was Mr. John Logigian.

Fort Hamilton offices and personnel were contacted and interviewed as part of the CTT inventory for both installations. The Fort Hamilton primary POC for the CTT range inventory was Mr. Peter Koutroubis, the Supervisory Environmental Engineer at Fort Hamilton.

## B. DEFINITIONS AND DATA REQUIREMENTS

Before the results of the inventory can be presented, it is helpful for the reader to have an understanding of the definitions and data requirements associated with the inventory. This section defines the terms used in this report and the data requirements established by the Army.

### Inventory Definitions

The following definitions are applicable to the Army's Range Inventory Program.

- Defense Site:** Locations that are or were owned by, leased to, or otherwise possessed or used by DoD. Does not include: operational ranges, operating storage or manufacturing facilities or facilities that are or were permitted for the treatment or disposal of military munitions.
- Military Munitions:** All ammunition products and components produced or used by or for the DoD or the U.S. Armed Services for national defense and security, including military munitions under the control of the DoD, the U.S. Coast Guard, the U.S. Department of Energy (DOE), and National Guard personnel. The term military munitions includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes and incendiaries used by DoD components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, and mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof. Military munitions do not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof. However, the term does include nonnuclear components of nuclear devices, managed under DOE's nuclear weapons program, after all required sanitization operations under the Atomic Energy Act of 1954, as amended, have been completed.
- Discarded Military Munitions (DMM):** Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage facility for the purpose of disposal. Does not include: UXO or military munitions that are being held for use or planned disposal or that have been disposed of properly.
- Unexploded Ordnance (UXO):** Military munitions that have been primed, fused, armed, or otherwise prepared for action; have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or

- material; and remain unexploded either by malfunction, design, or any other cause.
- Munitions Constituents (MC):** Any materials that originate from UXO, DMM or other military munitions, including explosive and non-explosive materials, and emission, degradation or breakdown elements of such ordnance or military munitions.
- Military Range:** A designated land or water area set aside, managed and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.
- Active Range:** A military range that is currently in service and is being regularly used for range activities. For the purposes of the inventory, "in service" is defined as currently in operation, construction, maintenance, renovation, or reconfiguration to meet current Army training and/or test requirements. An active range qualifies as an operational range.
- Inactive Range:** A military range that is not currently being used, but that is still considered by the Army to be a potential range area, and that has not been put to a new use that is incompatible with range activities. An inactive range qualifies as an operational range.
- Closed Range:** A military range that has been taken out of service as a range and that either has been put to new uses that are incompatible with range activities or is not considered by the military to be a potential range area. A closed range is still under the control of a DoD component. Closed ranges cannot occupy an area that has been identified as an A/I range. Closed ranges are those areas of land that used to be operational, are still owned by the Army, but are now used for non-range purposes.
- Transferred Range:** A military range that is no longer under military control and had been leased, transferred, or returned by DoD to another entity, including Federal entities. This includes a military range that is no longer under military control, but that was once used by the Army. This includes use under the terms of an executive order, special-use permit or authorization, right-of-way, public land order, or other instrument issued by the Federal land manager.

- Transferring Range:** A military range that is proposed to be leased, transferred, or returned by the DoD to another entity, including federal entities. This includes a military range that is used under the terms of a withdrawal, executive order, special-use permit or authorization, right of way, public land order, or other instrument issued by the federal land manager or property owner. A range will not be considered a “transferring range” until the transfer is imminent.
- Operational Range:** A military range that is currently in service and is being regularly used for range activities, or a military range that is not currently used, but that is still considered by the Military to be a potential range area, and that has not been put to a new use that is incompatible with range activities. Active and inactive ranges qualify as operational ranges.
- Base Realignment and Closure (BRAC):** A DoD program that focuses on compliance and cleanup efforts at military installations undergoing closure or realignment, as authorized by Congress in four rounds of base closures for 1988, 1991, 1993, and 1995. A BRAC parcel is eligible for the MMRP if the release occurred prior to September 30, 2002; the release is not an operational range, FUDS, active munitions demilitarization facility, or active waste military munitions (WMM) treatment or disposal unit that operated after September 30, 2002; and the site was not identified or included in the Restoration Management Information System (RMIS) prior to September 30, 2002.
- Formerly Used Defense Site (FUDS):** A DoD program that focuses on compliance and cleanup efforts at sites that were formerly used by the DoD. A property is eligible for the FUDS program if the release occurred prior to October 17, 1986; the property was transferred from DoD control prior to October 17, 1986; and the property or project meets other FUDS eligibility criteria.
- Restoration Management Information System (RMIS) Site:** A site included in the DoD’s RMIS database. Includes any building, structure, impoundment, landfill, storage container, or other site or area where a hazardous substance was or has come to be located. Installations and ranges may have more than one RMIS site. The RMIS is used to track DoD sites under the DERP.
- DSERTS Site:** A site included in the Army’s Defense Site Environmental Restoration Tracking System (DSERTS) database. DSERTS is the database the Army uses to track Installation Restoration Program (IRP) sites under DERP.

## **Inventory Data Requirements**

The goal of the inventory was to identify locations, periods of use, and types of munitions used on CTT ranges and sites with UXO, DMM or MC associated with the installation. Specific inventory data requirements included: 1) mapping out the CTT ranges and sites with UXO, DMM and MC, 2) collecting and preparing data to be uploaded into the ARID, 3) conducting an assessment of explosives safety risk using the Risk Assessment Code (RAC) methodology for each CTT range and UXO and DMM site identified in the inventory, and 4) determining which sites in the inventory qualify for the MMRP. Data requirements for range and site maps, ARID, and the RAC methodology are described below.

## **Range and Site Map Requirements**

A CTT range and site map (or multiple maps depending on the specific installation) was generated for the CTT inventory of the installation. The map shows all the ranges and sites associated with the installation, including the A/I range areas (from Phase 2); closed, transferred, and transferring ranges and sites; and the non-range, UXO, DMM, and MC sites. The range and site map is provided in section E. Based on data collected and site conditions, multiple maps may be included in section E. An electronic version (.pdf file) of the map has been provided as an upload to ARID.

## **ARID Data Requirements**

The CTT inventory data is driven by the requirements of ARID. The ARID Upload Instructions (14 January 2003) describe the minimum data elements required for completing the range inventory. According to the instructions, the following files are required for the inventory:

- Points of Contact
- Installation
- Range
- Munitions
- Ownership
- Land Use Restrictions and Access Controls
- Range Demographics
- Map
- RMIS Site Information
- DSERTS Site Information

A printed copy of each file submitted to ARID is provided in Section F.

## **Risk Assessment Code Methodology**

The inventory team was required to perform an explosives safety risk assessment on each CTT range and UXO or DMM site identified during the inventory using the RAC methodology. RAC scores are not calculated for MC only sites. The RAC methodology is a process that the USACE designed to evaluate the relative explosives safety risk associated with past ordnance-related disposal, testing or training. The RAC score assists in prioritizing and sequencing projects. The RAC process is described in Appendix B of USACE Engineering Pamphlet 1110-1-18, Ordnance and Explosive Response (24 April 2000) and referenced in the updated management guidance for the DERP. The analysis involves a worksheet that, when completed, assigns a relative score (RAC score) to the sites. The RAC score is a number ranging from 1 (highest explosives safety risk) to 5 (negligible explosives safety risk). A summary of the calculated RAC scores and the completed RAC worksheets are included in Tab G.

## **DERP Eligibility Determination**

The inventory team was required to determine the DERP eligibility of each range and site included in the inventory. This was done to ensure that ranges/sites are not double counted if already included under the IRP. It is also performed to ensure only ranges with UXO, DMM, or MC that meet the requirements identified in the DERP Management Guidance, September 01, are included in the MMRP. Results of the DERP eligibility determination include IRP, MMRP, or other (not eligible). To make this determination the following must be considered (when applicable):

- Whether or not the site has a DSERTS Site ID,
- Whether or not the current DSERTS cost to complete (CTC) includes a response to all UXO, DMM, and MC,
- Whether or not the DSERTS site has a BRAC UXO flag, and
- Whether or not the DSERTS site is listed as response complete (RC) because of ineligibility of funding due to UXO or munitions, where applicable.

After determining whether or not the ranges and/or sites (including their associated UXO, DMM, and MC aspects) are currently covered under the IRP, it must be determined if the range/site is eligible for the MMRP. If the range/site is not currently covered under IRP and not eligible for the MMRP, it should be classified as "other." As appropriate based on the eligibility determination, RMIS range ID and RMIS site ID numbers are then assigned.

## **C. INSTALLATION SUMMARY**

This section provides a brief summary of the history of the installation and a summary of the data collection portion of the CTT inventory, including the types of records reviewed and personnel contacted.

### **Installation Overview and Description**

Fort Hamilton is located in the southwest corner of Brooklyn, New York at the base of the Verrazano-Narrows Bridge. It is a 144-acre installation designated as an administrative center that supports military activities throughout the metropolitan New York area. The installation was founded in 1814 when the City of New York conveyed 61 acres to establish the fort. Building started in 1825, at which time 95 additional acres were acquired from the city, bringing its total area to 156 acres. It is one of the oldest installations in the U.S. Army. Fort Hamilton is named for Alexander Hamilton, first secretary of the treasury, who fought in the Revolutionary War. During the Civil War, Fort Hamilton was used by the Union to train volunteer regiments and to defend the harbor. The fort was equipped for its defensive mission with batteries armed with cannons. During both World War I (WWI) and World War II (WWII), Fort Hamilton served as a training, embarkation, and separation center. Between the wars, it served as an infantry center. In the late 1950's, the installation gave the New York Triborough Bridge and Tunnel Authority (TBTA) 37 acres to build the Verrazano-Narrows bridge, and the TBTA gave the fort 11 acres in return. The bridge was finished in 1964. In the early 1960's, the State of New York donated 14 acres to Fort Hamilton, bringing its area to its current 144 acres. In 1997, Fort Hamilton was reassigned to the U.S. Army Military District of Washington due to the similarity of their missions. Fort Hamilton had three sub-installations: Fort Wadsworth, Fort Totten and Bellmore Maintenance Facility (Bellmore). Fort Wadsworth underwent BRAC in 1993 while under Navy ownership. Fort Totten underwent partial closure and Bellmore underwent full closure in 1995 under the Base Realignment and Closure (BRAC) program. Fort Totten will be covered in a separate report and Bellmore was evaluated under the Formerly Used Defense Site (FUDS) program.

### **Contractor Team Composition**

The CTT range inventory team (CTT team) for Fort Hamilton was staffed by Malcolm Pirnie, Inc. The CTT Team Leader for Fort Hamilton was Mr. John Logigian. Additional team members included Mr. Svend Egholm and Ms. Monique De Jesus as researchers, Mr. Steven Song as the Geographic Information System (GIS) Specialist, and Mr. Conrad Bernier as the Quality Assurance/Quality Control Manager.

## **Installation Points of Contact (POCs)**

The primary CTT range inventory POC for Fort Hamilton was Mr. Peter Koutroubis, the Supervisory Environmental Engineer. Other Fort Hamilton personnel who assisted in the inventory included Mr. Richard Cox, the Museum Technician at the Harbor Defense Museum, Mr. Louis F. Aiese, the Master Planner at Fort Hamilton, and Mr. Craig Seba, an independent contractor (Performance Group, Inc.) that serves as the installation's GIS Program Manager.

## **Nature of Data Collection and Coordination**

Each installation is unique in terms of the amount and quality of data available regarding CTT ranges and sites with UXO, DMM, and MC, as well as the depth of experience and knowledge of the personnel available for interviews. The data collection team attempts to contact as many applicable offices and review as many record repositories as possible.

The data collection team had access to the historical records depository, as well as records, reports, maps, and personnel to interview at the following offices and departments at Fort Hamilton:

- Environmental Division
- Geographic Information Systems (GIS) Office
- Harbor Defense Museum
- Engineering Division

The specific records that were reviewed and the personnel who were interviewed are listed in the document log (see Section I).

## **Summary of Critical Data Sources**

Certain data sources (records and interviews) proved to be of particular value and interest to the data collection team and were critical for developing the CTT inventory at Fort Hamilton. The following is a summary of these critical data sources.

Mr. Peter Koutroubis provided access to environmental documents, installation maps, current history, and information about the present-day operations at Fort Hamilton. Mr. Richard Cox provided information on Fort Hamilton's site history, and access to historical maps and aerial photos. Mr. Louis F. Aiese provided maps and information on past and current land usage at the installation. Mr. Craig Seba provided GIS base mapping, and aerial images for Fort Hamilton.

## D. INSTALLATION CTT RANGE AND SITE DATA

This section presents information on the CTT ranges and sites with UXO, DMM or MC on or associated with the installation. It includes a summary of the total range and site area in acres, a summary of each individual CTT range and site, a table listing the details of each CTT range and site, a table with ownership and accessibility information, and a table illustrating the DERP eligibility determination.

### Summary of CTT Range and UXO, DMM and MC Sites

The following is a summary of the range/site area at Fort Hamilton:

A/I Range Area – N/A

CTT Range/Site Area – 2845 acres

Total Range/Site Area (A/I, and CTT combined) – 2845 acres

The Fort Hamilton Closed Range Complex is still owned by the Department of Defense. The Training Field-TD is now owned by a federal agency. As for the other nine areas identified as CTT ranges, they are owned by the city. The CTT range/site ownership is provided in Table D-1.

**Table D-1: Ownership Summary Table**

INSTALLATION NAME	RANGE / SITE NAME	OWNER	CTT ACREAGE
FORT HAMILTON MILITARY COMMUNITY	HAMILTON CLOSED COMPLEX	DOD	42
FORT HAMILTON MILITARY COMMUNITY	HAMILTON PARADE GROUND #1	LOCAL GOVERNMENT	15
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRAINING FIELD	FEDERAL AGENCY	5
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRANSFERRED COMPLEX	LOCAL GOVERNMENT PRIVATE SECTOR	609
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRANSFERRED-OW	STATE AGENCY	2174
<b>Total Acreage</b>			<b>2845</b>

### CTT Range and Site Summaries

Below are summaries for the individual CTT ranges and/or sites inventoried at the installation. Each summary typically includes a brief history of the range or site, total acreage, relative location, types of ordnance used or discarded, periods of use, information on any UXO responses conducted, and current usage. Only the non-A/I range area is reported to ARID to avoid duplicate Phase 2 and 3 reporting. The level of detail reported in these summaries is based on the level of data available. The ranges and sites are listed in alphabetical order.

The ranges are shown in detail in Figures D-1. The water and land portions of the transferred batteries are identified as separate complexes because they have

different RAC scores.

**HAMILTON CLOSED COMPLEX** – This range complex contains all closed ranges inside Fort Hamilton. It includes eleven battery firing points, a parade ground, and a training field. The range complex occupies 42 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for its guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fan, which extends into the waters of New York Harbor. The parade ground and the training field were used for maneuvers and small arms training. The parade ground was used from 1900 to 1964. The training field was used from 1892 to 1950. Current uses on the property include installation housing, tennis courts, parking lots, baseball fields, and undeveloped land. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas. The Fort Hamilton batteries included in this range complex are: Brown, Burke, Doubleday, Gillmore, Griffin, Johnson, Livingston, Mendenhall, Neary, Piper, and Spear.

There are eleven installation restoration program sites within the range boundaries, but none of them relate to munitions. FTHM-02, FTHM-03, FTHM-04, FTHM-24, and FTHM-26 are all designated response complete since all required cleanups have been completed. FTHM-05 and FTHM-20 did not qualify for DERA/BRAC funding. FTHM-06, FTHM-12, and FTHM-25 are designated response complete because all studies were completed and no further cleanup is required. FTHM-19 is classified as response complete for unspecified reasons in the Army environmental database.

**HAMILTON PARADE GROUND #1** – This range is a 15-acre area where maneuvers and potentially small arms training occurred. This transferred range is located outside the northwestern corner of the Fort Hamilton installation boundary. The parade ground was used from 1900 to 1964. The munitions used inside this range would be small arms ammunition. It now lies under the Verrazano Bridge's supports and ramps. No documents were found to indicate any UXO investigations and/or responses were performed on the Hamilton Parade Ground #1.

**HAMILTON TRAINING FIELD** – This range is a five-acre area that was used for maneuver exercises and to train soldiers with small arms. It could accommodate 500-yard firing, but due to its proximity to civilian housing, the firing range was reduced to 300 yards. This transferred range is located outside the northeastern corner of the Fort Hamilton installation boundary. The training field was used from 1892 to 1950. The munitions used were small arms ammunition. This portion of the training field (the closed part is under the Hamilton Closed Complex) is covered by the Veteran Administration's Hospital, which was constructed in the 1950s. No documents were found to indicate any UXO investigations and/or responses were performed on the Hamilton Training Field.

**HAMILTON TRANSFERRED COMPLEX** – This range complex includes ten battery firing fans. The range complex occupies 609 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for their guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fans, which extend into the waters of New York Harbor. Current uses of this complex include sections of the Belt Parkway, a parking lot, and housing complexes. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas. The Fort Hamilton battery firing fans covered under this range complex are: Burke, Doubleday, Gillmore, Griffin, Johnson, Livingston, Mendenhall, Neary, Piper, and Spear.

**HAMILTON TRANSFERRED-OW** – This range complex contains all battery firing fans located over the water associated with Fort Hamilton. The range complex occupies 2,174 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for their guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fans, which extend into the waters of New York Harbor. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas. The area is currently used for recreational and commercial shipping purposes

## CTT Range and Site Details Table

The CTT Range and Site Details Table (Table D-2) provides detailed information on the CTT areas included in the inventory.

**Table D-2: CTT Site Details Table**

INSTALLATION AND RANGE / SITE NAME	CLASSIFICATION	TOTAL AREA	MUNITIONS CONSTITUENTS	RAC SCORE*	HISTORIC USE
FORT HAMILTON MILITARY COMMUNITY					
HAMILTON CLOSED COMPLEX	CLOSED	42	UNKNOWN	5	•ARTILLERY •SMALL ARMS •TRAINING AREA/MANEUVER AREA
<u>MUNITIONS TYPE(S)</u> LARGE CALIBER (37MM AND LARGER), HE SMALL ARMS					
FORT HAMILTON MILITARY COMMUNITY					
HAMILTON PARADE GROUND #1	TRANSFERRED	15	UNKNOWN	5	•TRAINING AREA/MANEUVER AREA •SMALL ARMS
<u>MUNITIONS TYPE(S)</u> SMALL ARMS					
FORT HAMILTON MILITARY COMMUNITY					
HAMILTON TRAINING FIELD	TRANSFERRED	5	UNKNOWN	5	•TRAINING AREA/MANEUVER AREA •SMALL ARMS
<u>MUNITIONS TYPE(S)</u> SMALL ARMS					
FORT HAMILTON MILITARY COMMUNITY					
HAMILTON TRANSFERRED COMPLEX	TRANSFERRED	609	UNKNOWN	5	•ARTILLERY
<u>MUNITIONS TYPE(S)</u> LARGE CALIBER (37MM AND LARGER), HE					
FORT HAMILTON MILITARY COMMUNITY					
HAMILTON TRANSFERRED-OW	TRANSFERRED	2174	UNKNOWN	1	•ARTILLERY
<u>MUNITIONS TYPE(S)</u> LARGE CALIBER (37MM AND LARGER), HE					
* The RAC score is a prioritization and sequencing tool used to rank the explosives safety risk at a site; 1 is the highest explosives safety risk, 5 is the lowest explosives safety risk. The RAC score is discussed further in section G. The RAC Score is only developed for range, UXO and DMM sites, not MC sites.					

The area data reported in ARID is adjusted to account for CTT range and site overlaps with A/I range areas inventoried in Phase 2 to ensure that no area is reported more than once. By definition, if a portion of the CTT range/site is considered an A/I range and is reported in Phase 2, the range/site portion is not reported again in the Phase 3 acreage (where applicable).

## CTT Range and Site Ownership, Use and Access Control Summary Table

The Range and Site Ownership Table (Table D-3) provides a summary of the owner, current use and access restrictions associated with each CTT site in the inventory.

**Table D-3: CTT Range and Site Ownership, Use and Access Control Summary Table**

INSTALLATION AND RANGE / SITE NAME	OWNER	CURRENT USE	RESTRICTIONS
FORT HAMILTON MILITARY COMMUNITY HAMILTON CLOSED COMPLEX	DOD	•UTILITY/GROUND IMPROVEMENTS •RESIDENTIAL - MULTI FAMILY COMPLEX •RECREATIONAL	
FORT HAMILTON MILITARY COMMUNITY HAMILTON PARADE GROUND #1	LOCAL GOVERNMENT	•UTILITY/GROUND IMPROVEMENTS	
FORT HAMILTON MILITARY COMMUNITY HAMILTON TRAINING FIELD	FEDERAL AGENCY	•MEDICAL/HOSPITAL •UTILITY/GROUND IMPROVEMENTS	
FORT HAMILTON MILITARY COMMUNITY HAMILTON TRANSFERRED COMPLEX	PRIVATE SECTOR	•UTILITY/GROUND IMPROVEMENTS •MEDICAL/HOSPITAL •RESIDENTIAL - MULTI FAMILY COMPLEX	
FORT HAMILTON MILITARY COMMUNITY HAMILTON TRANSFERRED COMPLEX	LOCAL GOVERNMENT	•UTILITY/GROUND IMPROVEMENTS •MEDICAL/HOSPITAL •RESIDENTIAL - MULTI FAMILY COMPLEX	
FORT HAMILTON MILITARY COMMUNITY HAMILTON TRANSFERRED-OW	STATE AGENCY	•OPEN WATER •RECREATIONAL	

## DERP Eligibility Table

The RMIS Information Table (Table D-4) and the DERP Eligibility Table (Table D-5) provide a summary of the process for determining a site's DERP eligibility. Specifically, the team determined whether a site should be covered under the MMRP program or if it was already addressed under the IRP and should remain under that program. For those sites that are not DERP eligible due to a lack of UXO, DMM, or MC contamination (e.g., bayonet ranges and drop zones), the table identifies the DERP eligibility as "other."

**Table D-4: RMIS Information Table**

INSTALLATION AND RANGE NAME	DSERTS SITE ID	DSERTS		DSERTS RC FLAG	RC REASON	ACTIVE DSERTS PHASE(S)
		CTC INCLUDES UXO-DMM	DSERTS SITE ID HAS BRAC UXO FLAG			
FORT HAMILTON MILITARY COMMUNITY HAMILTON CLOSED COMPLEX	N/A	N/A	N/A	N/A	N/A	N/A
FORT HAMILTON MILITARY COMMUNITY HAMILTON PARADE GROUND #1	N/A	N/A	N/A	N/A	N/A	N/A
FORT HAMILTON MILITARY COMMUNITY HAMILTON TRAINING FIELD	N/A	N/A	N/A	N/A	N/A	N/A
FORT HAMILTON MILITARY COMMUNITY HAMILTON TRANSFERRED COMPLEX	N/A	N/A	N/A	N/A	N/A	N/A
FORT HAMILTON MILITARY COMMUNITY HAMILTON TRANSFERRED-OW	N/A	N/A	N/A	N/A	N/A	N/A

Reason Codes:  
A- All Required Cleanup(s) Completed, B- Study completed, No Cleanup Required,  
C- Not Eligible for DERA/BRAC Funding, D- Other, N/A - Not Applicable,  
Y-Yes, N-No

**Table D-5: DERP Eligibility Table**

INSTALLATION	RANGE/SITE NAME	RANGE	DERP ELIGIBILITY	RMIS RANGE ID	RMIS SITE ID
FORT HAMILTON MILITARY COMMUNITY	HAMILTON CLOSED COMPLEX	Y	MR	FTHM-001-R	FTHM-001-R-01
FORT HAMILTON MILITARY COMMUNITY	HAMILTON PARADE GROUND #1	Y	MR	FTHM-002-R	FTHM-002-R-01
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRAINING FIELD	Y	MR	FTHM-003-R	FTHM-003-R-01
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRANSFERRED COMPLEX	Y	MR	FTHM-004-R	FTHM-004-R-01
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRANSFERRED- OW	Y	MR	FTHM-005-R	FTHM-005-R-01

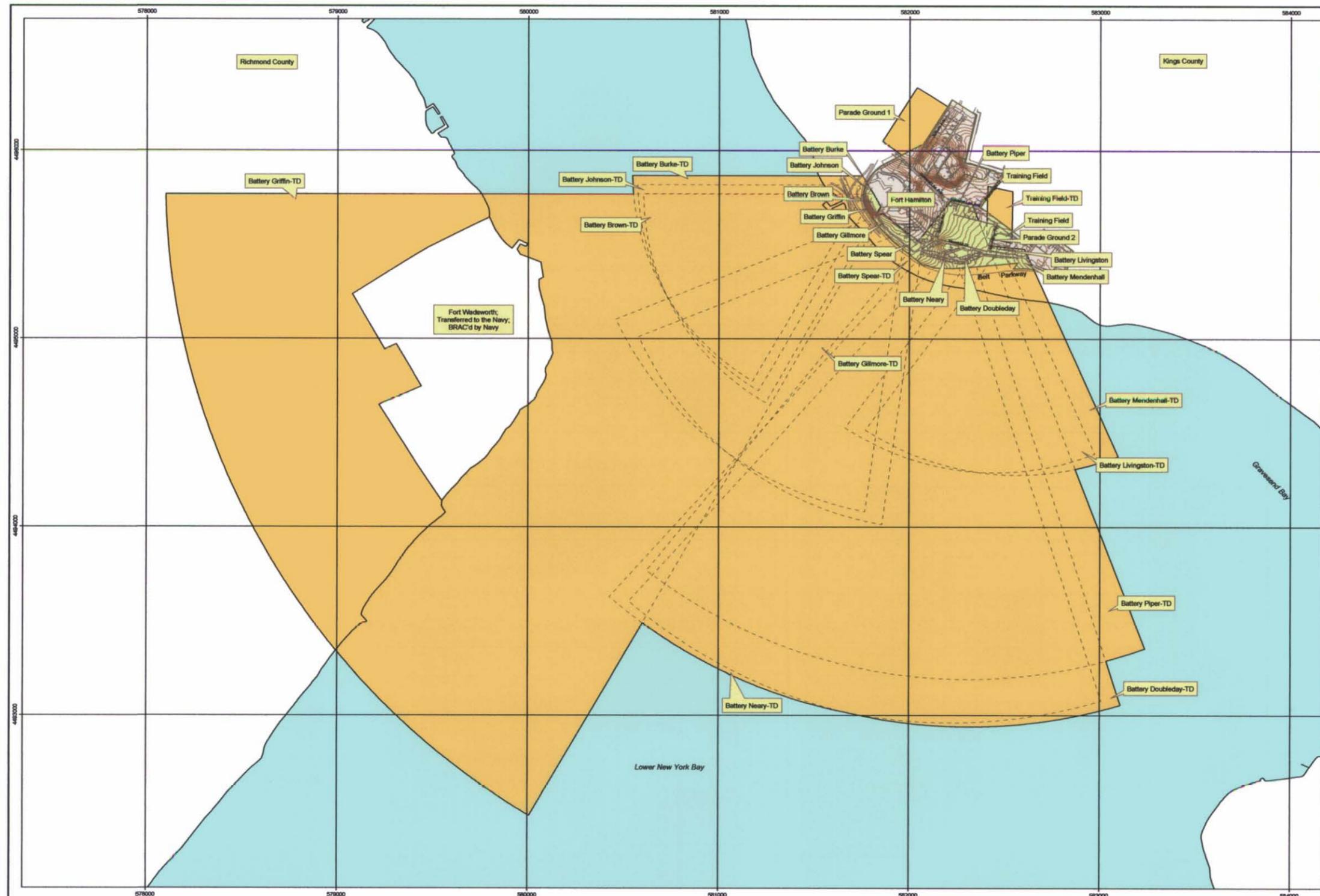
DERP Eligibility:  
 MR = Munitions Response Program Eligible, IR = Installation Restoration Program Eligible,  
 Other = Not Eligible for MR or IR Programs, Y = Yes, N = No



# CTT Range and UXO-DMM-MC Sites Fort Hamilton, NY

**MALCOLM  
PIRNIE**

**Figure D-1**



Area	Acres
A/I Ranges	0
Closed	42
Transferring	0
Transferred	2803

**Legend**

- Installation Boundary
- Roads
- Contours
- Water
- A/I Range Area
- Closed
- Transferring
- Transferred
- Non Range, Non UXO-DMM-MC Area

Projection UTM, Zone 18  
 Horizontal Datum NAD83  
 Units Meters  
 Grid 1000 Meters



1:10,000

0 0.2 0.4 0.8 Kilometers

0 0.1 0.2 0.4 Miles



**CTT Range and UXO-DMM-MC Sites  
Fort Hamilton, NY**

Source: Produced for the U.S. Army Corps of Engineers  
by Malcolm Pirnie, Inc. under contract DACA  
31-00-D-0043

Editor: Final Report

Date: December 2003

## **E. RANGE AND SITE MAPS**

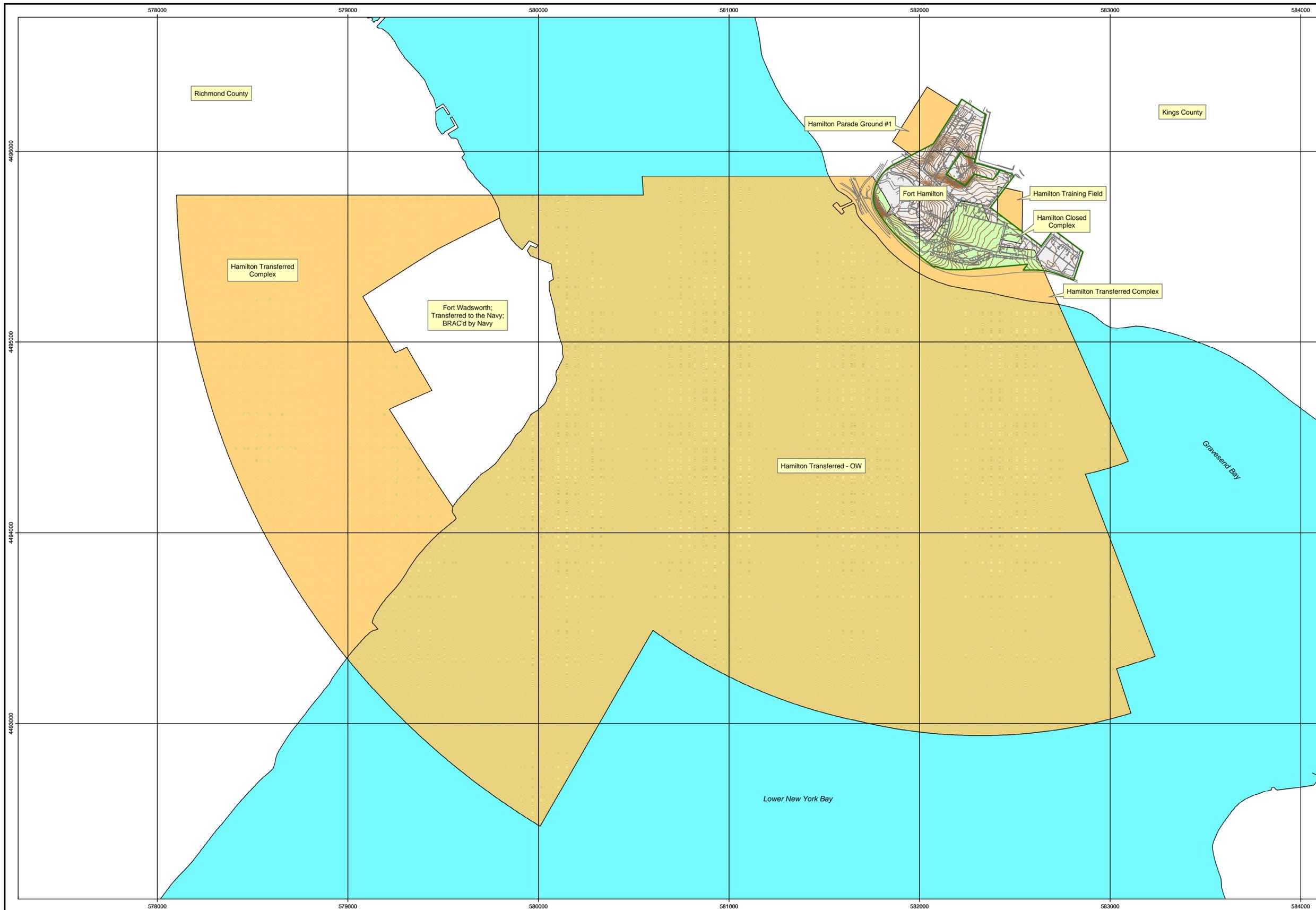
Individual CTT range and site map(s) were generated for the purposes of the Phase 3 inventory of this installation. The individual CTT range and site map(s) show all the range and site areas associated with the installation, including the A/I range areas (from Phase 2); closed, transferring, and transferred sites; and the non-range, UXO, DMM, or MC areas. An electronic version (.pdf file) of Figure E-1 has been provided as an upload to ARID. The individual CTT map(s) for the installation are included in this section.



# CTT Range and UXO-DMM-MC Sites Fort Hamilton, NY

**MALCOLM  
PIRNIE**

**Figure E-1**



Area	Acres
A/I Range	0
Closed	42
Transferring	0
Transferred	2803

**Legend**

- Installation Boundary
- Roads
- Contours
- Water
- A/I Ranges
- Closed
- Transferring
- Transferred
- Non Range, Non UXO-DMM-MC Area

**Projection** UTM, Zone 18  
**Horizontal Datum** NAD83  
**Units** Meters  
**Grid** 1000 Meters



**1:10,000**

0 0.15 0.3 0.6 Kilometers

0 0.1 0.2 0.4 Miles



**CTT Range and UXO-DMM-MC Sites  
Fort Hamilton, NY**

Source: Produced for the U.S. Army Corps of Engineers  
by Malcolm Pirnie, Inc. under contract DACA  
31-00-D-0043

Edition: Final Report

Date: November 2003

## **F. ARID DATA FILES**

This section contains a printout of the ARID data files submitted to AEC for the Phase 3 CTT Inventory for this installation. The files were set up according to the guidelines in the ARID Upload Instructions (14 January 2003). The following files are included:

- Points of Contact
- Installation
- Range
- Munitions
- Ownership
- Land Use Restriction and Access Controls
- Range Demographics
- RMIS Site Information
- DSERTS Site Information

**POC Table**

12/22/2003

<b>INSTALLATION NAME</b>	<b>FFID</b>	<b>LAST NAME</b>	<b>FIRST NAME</b>	<b>POC TITLE</b>	<b>POC ORG</b>
FORT HAMILTON MILITARY COMMUNITY	NY210220395	KOUTROUBIS	PETER	SUPERVISORY ENVIRONMENTAL ENGINEER	DEPARTMENT OF PUBLIC WORKS

**POC TYPE: CTT**

<b>PHONE</b>	<b>ADDRESS</b>
PHONE 718-630-4485	FORT HAMILTON MILITARY COMMUNITY
DSN 232-4485	129 WAINWRIGHT DRIVE
FAX 718-630-4486	
EMAIL KOUTROUBISP@HAMILTON.ARMY.MIL	BROOKLYN, NY 11252-6800
	UNITED STATES

4

**Installation Table**

12/22/2003

<b>INSTALLATION NAME</b>	<b>FFID</b>	<b>MACOM</b>	<b>MSC</b>	<b>PARENT INSTALLATION</b>	<b>A/I RANGE</b>	<b>CTT RANGE</b>	<b>BRAC ROUND</b>	<b>DERA FLAG</b>	<b>FUDS FLAG</b>
FORT HAMILTON MILITARY COMMUNITY	NY210220395	MDW			N	Y	N/A	Y	N

5

**Range Table**

12/22/2003

RMIS RANGE ID: FTHM-001-R

INSTALLATION NAME	FFID	RANGE/SITE NAME	STATUS	SEVERITY SCORE	PROBABILITY SCORE	RAC SCORE
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON CLOSED COMPLEX	CLOSED	V		5

**RANGE DESCRIPTION**

This range complex contains all closed ranges inside Fort Hamilton. It includes eleven battery firing points, a parade ground, and a training field. The range complex occupies 42 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for its guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fan, which extends into the waters of New York Harbor. The parade ground and the training field were used for maneuvers and small arms training. The parade ground was used from 1900 to 1964. The training field was used from 1892 to 1950. Current uses on the property include installation housing, tennis courts, parking lots, baseball fields, and undeveloped land. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas.

CTT TOTAL ACRES	MMR ACRES IDENTIFIED	MMR ACRES SUSPECTED	MMR ACRES NOT SUSPECTED
42	0	42	0

UTM ZONE	UTM DATUM	UTM X	UTM Y	CONSTRUCTION DATE	RIP RC DATE
18	NAD83	582231	4495539	1/1/1860	

**COMMENT**

The Fort Hamilton batteries covered under this range complex are: Brown, Burke, Doubleday, Gillmore, Griffin, Johnson, Livingston, Mendenhall, Neary, Piper, and Spear.

TOPOGRAPHY	VEGETATION	SOIL TYPE	START YEAR	END YEAR
FLAT	LOW GRASS AND FEW SHRUBS	SAND-SILT/SAND-CLAY		
<b>CURRENT USE 1</b>	UTILITY/GROUND IMPROVEMENTS		1941	
<b>CURRENT USE 2</b>	RESIDENTIAL - MULTI FAMILY COMPLEX		1941	
<b>CURRENT USE 3</b>	RECREATIONAL		1964	
<b>HISTORIC USE 1</b>	ARTILLERY		1860	1941



12/22/2003

**Range Table**

**RMIS RANGE ID:** FTHM-001-R

<b>HISTORIC USE 2</b>	SMALL ARMS	1892	1964
<b>HISTORIC USE 3</b>	TRAINING AREA/MANEUVER AREA	1892	1964

**Range Table**

12/22/2003

RMIS RANGE ID: FTHM-002-R

INSTALLATION NAME	FFID	RANGE/SITE NAME	STATUS	SEVERITY SCORE	PROBABILITY SCORE	RAC SCORE
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON PARADE GROUND #1	TRANSFERRED	V		5

**RANGE DESCRIPTION**

This range is a 15-acre area where maneuvers and potentially small arms training occurred. This transferred range is located outside the northwestern corner of the Fort Hamilton installation boundary. The parade ground was used from 1900 to 1964. The munitions used inside this range would be small arms ammunition. It now lies under the Verrazano Bridge's supports and ramps. No documents were found to indicate any UXO investigations and/or responses were performed on the Hamilton Parade Ground #1.

CTT TOTAL ACRES	MMR ACRES IDENTIFIED	MMR ACRES SUSPECTED	MMR ACRES NOT SUSPECTED
15	0	15	0

UTM ZONE	UTM DATUM	UTM X	UTM Y	CONSTRUCTION DATE	RIP RC DATE
18	NAD83	582028	4496149	1/1/1900	

**COMMENT**

TOPOGRAPHY	VEGETATION	SOIL TYPE
GENTLY ROLLING	BARREN OR LOW GRASS	SAND-SILT/SAND-CLAY

CURRENT USE 1	CURRENT USE 2	CURRENT USE 3	START YEAR	END YEAR
UTILITY/GROUND IMPROVEMENTS	N/A	N/A	1964	
			START YEAR	END YEAR
HISTORIC USE 1	TRAINING AREA/MANEUVER AREA		1900	1964
HISTORIC USE 2	SMALL ARMS		1900	1964
HISTORIC USE 3	N/A			

**Range Table**

12/22/2003

RMIS RANGE ID: FTHM-003-R

INSTALLATION NAME	FFID	RANGE/SITE NAME	STATUS	SEVERITY SCORE	PROBABILITY SCORE	RAC SCORE
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRAINING FIELD	TRANSFERRED	V		5

**RANGE DESCRIPTION**

This range is a five-acre area that was used for maneuver exercises and to train soldiers with small arms. It could accommodate 500-yard firing, but due to its proximity to civilian housing, the firing range was reduced to 300 yards. This transferred range is located outside the northeastern corner of the Fort Hamilton installation boundary. The training field was used from 1892 to 1950. The munitions used were small arms ammunition. This portion of the training field (the closed part is under the Hamilton Closed Complex) is covered by the Veteran Administration's Hospital, which was constructed in the 1950s. No documents were found to indicate any UXO investigations and/or responses were performed on the Hamilton Training Field.

CTT TOTAL ACRES	MMR ACRES IDENTIFIED	MMR ACRES SUSPECTED	MMR ACRES NOT SUSPECTED
5	0	5	0

UTM ZONE	UTM DATUM	UTM X	UTM Y	CONSTRUCTION DATE	RIP RC DATE
18	NAD83	582482	4495707	1/1/1892	

**COMMENT**

TOPOGRAPHY	VEGETATION	SOIL TYPE
FLAT	LOW GRASS AND FEW SHRUBS	SAND-SILT/SAND-CLAY

CURRENT USE	DESCRIPTION	START YEAR
CURRENT USE 1	MEDICAL/HOSPITAL	1950
CURRENT USE 2	UTILITY/GROUND IMPROVEMENTS	1950
CURRENT USE 3	N/A	

HISTORIC USE	DESCRIPTION	START YEAR	END YEAR
HISTORIC USE 1	TRAINING AREA/MANEUVER AREA	1892	1950
HISTORIC USE 2	SMALL ARMS	1892	1950

**Range Table**

12/22/2003

**RMIS RANGE ID:** FTHM-003-R

**HISTORIC USE 3** N/A

2

**Range Table**

12/22/2003

RMIS RANGE ID: FTHM-004-R

INSTALLATION NAME	FFID	RANGE/SITE NAME	STATUS	SEVERITY SCORE	PROBABILITY SCORE	RAC SCORE
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX	TRANSFERRED	V		5

**RANGE DESCRIPTION**

This range complex includes ten battery firing fans. The range complex occupies 609 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for their guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fans, which extend into the waters of New York Harbor. Current uses of this complex include sections of the Belt Parkway, a parking lot, and housing complexes. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas.

CTT TOTAL ACRES	MMR ACRES IDENTIFIED	MMR ACRES SUSPECTED	MMR ACRES NOT SUSPECTED
609	0	609	0

UTM ZONE	UTM DATUM	UTM X	UTM Y	CONSTRUCTION DATE	RIP RC DATE
18	NAD83	579054	4494839	1/1/1860	

**COMMENT**

The Fort Hamilton battery firing fans covered under this range complex are: Burke, Doubleday, Gillmore, Griffin, Mendenhall, Neary, Piper, and Spear.

TOPOGRAPHY	VEGETATION	SOIL TYPE
FLAT	BARREN OR LOW GRASS	SAND-SILT/SAND-CLAY

CURRENT USE	START YEAR
CURRENT USE 1 UTILITY/GROUND IMPROVEMENTS	1964
CURRENT USE 2 MEDICAL/HOSPITAL	1950
CURRENT USE 3 RESIDENTIAL - MULTI FAMILY COMPLEX	1970

HISTORIC USE	START YEAR	END YEAR
HISTORIC USE 1 ARTILLERY	1860	1941
HISTORIC USE 2 N/A		
HISTORIC USE 3 N/A		

**Range Table**

**RMIS RANGE ID:** FTHM-005-R

INSTALLATION NAME	FFID	RANGE/SITE NAME	STATUS	SEVERITY SCORE	PROBABILITY SCORE	RAC SCORE
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED-OW	TRANSFERRED	II	A	1

**RANGE DESCRIPTION**

This range complex contains all transferred battery firing fans located over the water associated with Fort Hamilton. The range complex occupies 2,174 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for their guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fans, which extend into the waters of New York Harbor. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas. The area is currently used for recreational and commercial shipping purposes

CTT TOTAL ACRES	MMR ACRES IDENTIFIED	MMR ACRES SUSPECTED	MMR ACRES NOT SUSPECTED
2174	0	2174	0

UTM ZONE	UTM DATUM	UTM X	UTM Y	CONSTRUCTION DATE	RIP RC DATE
18	NAD83	581200	4494204	1/1/1860	

**COMMENT**

The RAC score for this water range is higher than the score for the associated land range because of the site dynamics of water environments.

TOPOGRAPHY	VEGETATION	SOIL TYPE
WATER		SAND-SILT/SAND-CLAY

CURRENT USE	START YEAR
CURRENT USE 1 OPEN WATER	1941
CURRENT USE 2 RECREATIONAL	1941
CURRENT USE 3 N/A	

HISTORIC USE	START YEAR	END YEAR
HISTORIC USE 1 ARTILLERY	1860	1941
HISTORIC USE 2 N/A		
HISTORIC USE 3 N/A		

**Munitions Table**

12/22/2003

<b>INSTALLATION NAME</b>	<b>FFID</b>	<b>RANGE/SITE NAME</b>
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON CLOSED COMPLEX

<b>DODIC</b>	<b>DODIC DESCRIPTION</b>	<b>START DATE</b>	<b>END DATE</b>	<b>MUNITIONS EXPENDED</b>
CTT11	LARGE CALIBER (37MM AND LARGER), HE	01/1860	01/1941	
CTT16	SMALL ARMS	01/1892	01/1950	

<b>INSTALLATION NAME</b>	<b>FFID</b>	<b>RANGE/SITE NAME</b>
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON PARADE GROUND #1

<b>DODIC</b>	<b>DODIC DESCRIPTION</b>	<b>START DATE</b>	<b>END DATE</b>	<b>MUNITIONS EXPENDED</b>
CTT16	SMALL ARMS	01/1900	01/1964	

<b>INSTALLATION NAME</b>	<b>FFID</b>	<b>RANGE/SITE NAME</b>
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRAINING FIELD

<b>DODIC</b>	<b>DODIC DESCRIPTION</b>	<b>START DATE</b>	<b>END DATE</b>	<b>MUNITIONS EXPENDED</b>
CTT16	SMALL ARMS	01/1892	01/1950	

<b>INSTALLATION NAME</b>	<b>FFID</b>	<b>RANGE/SITE NAME</b>
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX

<b>DODIC</b>	<b>DODIC DESCRIPTION</b>	<b>START DATE</b>	<b>END DATE</b>	<b>MUNITIONS EXPENDED</b>
CTT11	LARGE CALIBER (37MM AND LARGER), HE	01/1860	01/1941	

\*\* Not all items listed under the DODIC Description may be present at the range/site.

**Munitions Table**

12/22/2003

<b>INSTALLATION NAME</b>	<b>FFID</b>	<b>RANGE/SITE NAME</b>
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED-OW

<b>DODIC</b>	<b>DODIC DESCRIPTION</b>	<b>START DATE</b>	<b>END DATE</b>	<b>MUNITIONS EXPENDED</b>
CTT11	LARGE CALIBER (37MM AND LARGER), HE	01/1860	01/1941	

\*\* Not all items listed under the DODIC Description may be present at the range/site.

**Ownership Table**

12/22/2003

INSTALLATION NAME	FFID	RANGE/SITE NAME		ALL ARMY OWNED	OWNER	OWNER DESCRIPTION		
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON CLOSED COMPLEX		Y	DOD	N/A		
<b>FEDERAL LEASE FLAG</b>	<b>STATE LEASE FLAG</b>	<b>LOCAL LEASE FLAG</b>	<b>TRIBAL LEASE FLAG</b>	<b>PRIVATE LEASE FLAG</b>	<b>OTHER LEASE FLAG</b>	<b>OTHER LEASE DESCRIPTION</b>	<b>LEASE TERMINATED</b>	<b>REVOCATION OF LAND</b>
N	N	N	N	N	N	N/A	N	N

INSTALLATION NAME	FFID	RANGE/SITE NAME		ALL ARMY OWNED	OWNER	OWNER DESCRIPTION		
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON PARADE GROUND #1		N	LOCAL GOVERNMENT	METROPOLITAN TRANSPORTATION AUTHORITY		
<b>FEDERAL LEASE FLAG</b>	<b>STATE LEASE FLAG</b>	<b>LOCAL LEASE FLAG</b>	<b>TRIBAL LEASE FLAG</b>	<b>PRIVATE LEASE FLAG</b>	<b>OTHER LEASE FLAG</b>	<b>OTHER LEASE DESCRIPTION</b>	<b>LEASE TERMINATED</b>	<b>REVOCATION OF LAND</b>
N	N	N	N	N	N	N/A	N	N

INSTALLATION NAME	FFID	RANGE/SITE NAME		ALL ARMY OWNED	OWNER	OWNER DESCRIPTION		
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRAINING FIELD		N	FEDERAL AGENCY	VETERAN AFFAIRS		
<b>FEDERAL LEASE FLAG</b>	<b>STATE LEASE FLAG</b>	<b>LOCAL LEASE FLAG</b>	<b>TRIBAL LEASE FLAG</b>	<b>PRIVATE LEASE FLAG</b>	<b>OTHER LEASE FLAG</b>	<b>OTHER LEASE DESCRIPTION</b>	<b>LEASE TERMINATED</b>	<b>REVOCATION OF LAND</b>
N	N	N	N	N	N	N/A	N	N

**Ownership Table**

12/22/2003

INSTALLATION NAME	FFID	RANGE/SITE NAME	ALL ARMY OWNED	OWNER	OWNER DESCRIPTION			
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX	N	PRIVATE SECTOR	INDIVIDUAL HOMEOWNERS AND PRIVATE INDUSTRY			
<b>FEDERAL LEASE FLAG</b>	<b>STATE LEASE FLAG</b>	<b>LOCAL LEASE FLAG</b>	<b>TRIBAL LEASE FLAG</b>	<b>PRIVATE LEASE FLAG</b>	<b>OTHER LEASE FLAG</b>	<b>OTHER LEASE DESCRIPTION</b>	<b>LEASE TERMINATED</b>	<b>REVOCATION OF LAND</b>
N	N	N	N	N	N	N/A	N	N

INSTALLATION NAME	FFID	RANGE/SITE NAME	ALL ARMY OWNED	OWNER	OWNER DESCRIPTION			
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX	N	LOCAL GOVERNMENT	NEW YORK CITY			
<b>FEDERAL LEASE FLAG</b>	<b>STATE LEASE FLAG</b>	<b>LOCAL LEASE FLAG</b>	<b>TRIBAL LEASE FLAG</b>	<b>PRIVATE LEASE FLAG</b>	<b>OTHER LEASE FLAG</b>	<b>OTHER LEASE DESCRIPTION</b>	<b>LEASE TERMINATED</b>	<b>REVOCATION OF LAND</b>
N	N	N	N	N	N	N/A	N	N

INSTALLATION NAME	FFID	RANGE/SITE NAME	ALL ARMY OWNED	OWNER	OWNER DESCRIPTION			
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED- OW	N	STATE AGENCY	NEW YORK STATE GOVERNMENT			
<b>FEDERAL LEASE FLAG</b>	<b>STATE LEASE FLAG</b>	<b>LOCAL LEASE FLAG</b>	<b>TRIBAL LEASE FLAG</b>	<b>PRIVATE LEASE FLAG</b>	<b>OTHER LEASE FLAG</b>	<b>OTHER LEASE DESCRIPTION</b>	<b>LEASE TERMINATED</b>	<b>REVOCATION OF LAND</b>
N	N	N	N	N	N	N/A	N	N

**Land Use Restriction Table**

12/22/2003

INSTALLATION NAME	FFID	RANGE/SITE NAME	RESTRICTION TYPE	RESTRICTION	PUBLIC ACCESS
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FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON CLOSED COMPLEX			UPA
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**DESCRIPTION:** ONCE INSIDE THE INSTALLATION, ANYONE HAS ACCESS TO THE SITE.

INSTALLATION NAME	FFID	RANGE/SITE NAME	RESTRICTION TYPE	RESTRICTION	PUBLIC ACCESS
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FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON PARADE GROUND #1			UPA
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**DESCRIPTION:**

INSTALLATION NAME	FFID	RANGE/SITE NAME	RESTRICTION TYPE	RESTRICTION	PUBLIC ACCESS
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FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRAINING FIELD			UPA
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**DESCRIPTION:**

INSTALLATION NAME	FFID	RANGE/SITE NAME	RESTRICTION TYPE	RESTRICTION	PUBLIC ACCESS
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FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX			UPA
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**DESCRIPTION:**

INSTALLATION NAME	FFID	RANGE/SITE NAME	RESTRICTION TYPE	RESTRICTION	PUBLIC ACCESS
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FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED-OW			UPA
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**DESCRIPTION:**

**PUBLIC ACCESS DEFINITIONS**

NPA = No Public Access: The public does not have any access to the range/site.

LPA = Limited Public Access: The public does have some access to the range/site, but that access doesn't involve any digging, only surface access, such as livestock grazing or use as a wildlife preserve or refuge.

RPA = Restricted Public Access: The public does have some access to the range/site and that access may involve some surface disturbance, such as agricultural use, forestry, recreation, and vehicle or supply storage facility use.

UPA = Unrestricted Public Access: There are no restrictions on the use of the range/site (excavation is allowed).

**Range Demographics Table**

12/22/2003

<b>INSTALLATION NAME</b>	<b>FFID</b>	<b>RANGE/SITE NAME</b>	<b>TYPE</b>	<b>NAME</b>	<b>STATE</b>	<b>COUNTRY</b>
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON CLOSED COMPLEX	CITY	BROOKLYN	NY	UNITED STATES
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON PARADE GROUND #1	COUNTY	KINGS COUNTY	NY	UNITED STATES
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRAINING FIELD	COUNTY	KINGS COUNTY	NY	UNITED STATES
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX	COUNTY	RICHMOND COUNTY	NY	UNITED STATES
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX	CITY	BROOKLYN	NY	UNITED STATES
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED- OW	COUNTY	KINGS COUNTY	NY	UNITED STATES
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED- OW	COUNTY	RICHMOND COUNTY	NY	UNITED STATES

**RMIS Information Table**

12/22/2003

INSTALLATION NAME	FFID	RANGE/SITE NAME		RMIS RANGE ID	RMIS SITE ID	ON RANGE FLAG		
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRAINING FIELD		FTHM-003-R	FTHM-003-R-01	Y		
<b>RMIS SITE USEAGE:</b>		<b>SMALL ARMS RANGE</b>	<b>SKEET RANGE</b>	<b>TESTING</b>	<b>TRAINING</b>	<b>WASTE MILITARY MUNITIONS</b>	<b>OTHER</b>	<b>OTHER DESCRIPTION</b>
<b>BUFFER AREA</b>	<b>DISPOSAL</b>	<b>OBOD</b>	<b>RANGE</b>	<b>RANGE</b>	<b>TESTING</b>	<b>TRAINING</b>	<b>MUNITIONS</b>	<b>OTHER</b>
N	N	N	Y	N	N	N	N	N
<b>DRINKING WATER</b>	<b>GROUNDWATER DEPTH (FT)</b>	<b>CONSTITUENT FLAG</b>		<b>UXO DENSITY</b>				
POTENTIAL	20	UNKNOWN						

INSTALLATION NAME	FFID	RANGE/SITE NAME		RMIS RANGE ID	RMIS SITE ID	ON RANGE FLAG		
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX		FTHM-004-R	FTHM-004-R-01	Y		
<b>RMIS SITE USEAGE:</b>		<b>SMALL ARMS RANGE</b>	<b>SKEET RANGE</b>	<b>TESTING</b>	<b>TRAINING</b>	<b>WASTE MILITARY MUNITIONS</b>	<b>OTHER</b>	<b>OTHER DESCRIPTION</b>
<b>BUFFER AREA</b>	<b>DISPOSAL</b>	<b>OBOD</b>	<b>RANGE</b>	<b>RANGE</b>	<b>TESTING</b>	<b>TRAINING</b>	<b>MUNITIONS</b>	<b>OTHER</b>
N	N	N	Y	N	N	N	N	N
<b>DRINKING WATER</b>	<b>GROUNDWATER DEPTH (FT)</b>	<b>CONSTITUENT FLAG</b>		<b>UXO DENSITY</b>				
POTENTIAL	20	UNKNOWN						

**RMIS Information Table**

12/22/2003

INSTALLATION NAME		FFID	RANGE/SITE NAME				RMIS RANGE ID	RMIS SITE ID	ON RANGE FLAG
FORT HAMILTON MILITARY COMMUNITY		NY210220395	HAMILTON CLOSED COMPLEX				FTHM-001-R	FTHM-001-R-01	Y
<b>RMIS SITE USEAGE:</b>			<b>SMALL</b>	<b>SKEET</b>		<b>WASTE</b>			
<b>BUFFER</b>	<b>DISPOSAL</b>	<b>OBOD</b>	<b>ARMS</b>	<b>RANGE</b>	<b>TESTING</b>	<b>TRAINING</b>	<b>MUNITIONS</b>	<b>OTHER</b>	<b>OTHER DESCRIPTION</b>
N	N	N	Y	N	N	Y	N	Y	Coastal Defense
<b>DRINKING WATER</b>		<b>GROUNDWATER</b>		<b>CONSTITUENT</b>					
	<b>DEPTH (FT)</b>	<b>FLAG</b>	<b>UXO DENSITY</b>						
POTENTIAL	20	UNKNOWN							

INSTALLATION NAME		FFID	RANGE/SITE NAME				RMIS RANGE ID	RMIS SITE ID	ON RANGE FLAG
FORT HAMILTON MILITARY COMMUNITY		NY210220395	HAMILTON PARADE GROUND #1				FTHM-002-R	FTHM-002-R-01	Y
<b>RMIS SITE USEAGE:</b>			<b>SMALL</b>	<b>SKEET</b>		<b>WASTE</b>			
<b>BUFFER</b>	<b>DISPOSAL</b>	<b>OBOD</b>	<b>ARMS</b>	<b>RANGE</b>	<b>TESTING</b>	<b>TRAINING</b>	<b>MUNITIONS</b>	<b>OTHER</b>	<b>OTHER DESCRIPTION</b>
N	N	N	Y	N	N	N	N	N	
<b>DRINKING WATER</b>		<b>GROUNDWATER</b>		<b>CONSTITUENT</b>					
	<b>DEPTH (FT)</b>	<b>FLAG</b>	<b>UXO DENSITY</b>						
POTENTIAL	20	UNKNOWN							

**RMIS Information Table**

12/22/2003

INSTALLATION NAME		FFID	RANGE/SITE NAME			RMIS RANGE ID	RMIS SITE ID	ON RANGE FLAG		
FORT HAMILTON MILITARY COMMUNITY		NY210220395	HAMILTON TRANSFERRED- OW			FTHM-005-R	FTHM-005-R-01	Y		
RMIS SITE USEAGE: BUFFER AREA		DISPOSAL	OBOD	SMALL ARMS RANGE	SKEET RANGE	TESTING	TRAINING	WASTE MILITARY MUNITIONS	OTHER	OTHER DESCRIPTION
N	N	N	N	N	N	Y	N	Y	Coastal Defense	
DRINKING WATER		GROUNDWATER DEPTH (FT)		CONSTITUENT FLAG		UXO DENSITY				
NO POTENTIAL				UNKNOWN						

**DSERTS Information Table**

12/22/2003

INSTALLATION NAME	FFID	RANGE/SITE NAME	DSERTS SITE ID	DSERTS CTC INCLUDES UXO-DMM	DSERTS SITE ID HAS BRAC UXO FLAG	DERP ELIGIBILITY	RMIS SITE ID
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON CLOSED COMPLEX	N/A			MR	FTHM-001-R-01

**RESPONSE COMPLETE:**

**DSERTS PHASE      FLAG    REASON**

INSTALLATION NAME	FFID	RANGE/SITE NAME	DSERTS SITE ID	DSERTS CTC INCLUDES UXO-DMM	DSERTS SITE ID HAS BRAC UXO FLAG	DERP ELIGIBILITY	RMIS SITE ID
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON PARADE GROUND #1				MR	FTHM-002-R-01

**RESPONSE COMPLETE:**

**DSERTS PHASE      FLAG    REASON**

**DSERTS Information Table**

12/22/2003

INSTALLATION NAME	FFID	RANGE/SITE NAME	DSERTS SITE ID	DSERTS CTC INCLUDES UXO-DMM	DSERTS SITE ID HAS BRAC UXO FLAG	DERP ELIGIBILITY	RMIS SITE ID
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRAINING FIELD				MR	FTHM-003-R-01

**RESPONSE COMPLETE:**

**DSERTS PHASE      FLAG    REASON**

INSTALLATION NAME	FFID	RANGE/SITE NAME	DSERTS SITE ID	DSERTS CTC INCLUDES UXO-DMM	DSERTS SITE ID HAS BRAC UXO FLAG	DERP ELIGIBILITY	RMIS SITE ID
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED COMPLEX	N/A			MR	FTHM-004-R-01

**RESPONSE COMPLETE:**

**DSERTS PHASE      FLAG    REASON**

**DSERTS Information Table**

12/22/2003

INSTALLATION NAME	FFID	RANGE/SITE NAME	DSERTS SITE ID	DSERTS CTC INCLUDES UXO-DMM	DSERTS SITE ID HAS BRAC UXO FLAG	DERP ELIGIBILITY	RMIS SITE ID
FORT HAMILTON MILITARY COMMUNITY	NY210220395	HAMILTON TRANSFERRED-OW	N/A			MR	FTHM-005-R-01
<b><u>RESPONSE COMPLETE:</u></b>							
<b>DSERTS PHASE</b>	<b>FLAG</b>	<b>REASON</b>					

## **G. RISK ASSESSMENT CODE ANALYSIS**

As part of the CTT Inventory, the data collection teams performed an assessment of explosives safety risk using the RAC process. The RAC process requires the completion of a worksheet that consists of a series of questions regarding the range or site. Based on the results of the worksheet, relative values for the severity and probability of explosives safety risk associated with the range area are assigned. The severity and probability values are then combined to arrive at an overall score (RAC score). The RAC score is an estimate of the relative explosives risk, which is reported as a number between 1 and 5. The following is a description of the RAC scores.

- RAC 1 High Explosives Safety Risk - Highest priority for further action.
- RAC 2 Serious Explosives Safety Risk - Priority for further action.
- RAC 3 Moderate Explosives Safety Risk - Recommend further action.
- RAC 4 Low Explosives Safety Risk - Recommend further action.
- RAC 5 Negligible Explosives Safety Risk - No explosive related action necessary.

As designed by USACE, a site's RAC score is calculated and revised up to the end of the site's investigation as an expression of the explosives safety risk at the site. The RAC scoring performed under this CTT inventory is based on the munitions used, discarded, or disposed of at the CTT military range or site with UXO, DMM, or MC as determined through interviews, site visits and historic records and does not reflect any clean-up actions that may have already been performed at the site. If cleanup actions have been completed at the site, this is noted in the Narrative at the end of the RAC worksheet. Hence, the actual RAC score may reflect a higher than anticipated current risk at the site. DoD is currently developing a new priority assessment tool for site explosives safety risk. Until a new tool is approved for use, DoD is mandating the use of RAC scoring for the analysis of explosives safety risk associated with ranges and sites identified during this CTT inventory.

The area, probability value, severity value and overall RAC score for each of the CTT range, UXO and DMM sites in the inventory are provided in Table G-1 below.

**Table G-1: Risk Assessment Code Analysis Results**

INSTALLATION	RANGE NAME	ACRES	SEVERITY*	PROBABILITY**	OVERALL***
FORT HAMILTON MILITARY COMMUNITY	HAMILTON CLOSED COMPLEX	42	V	N/A	5
FORT HAMILTON MILITARY COMMUNITY	HAMILTON PARADE GROUND #1	15	V	N/A	5
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRAINING FIELD	5	V	N/A	5
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRANSFERRED COMPLEX	609	V	N/A	5
FORT HAMILTON MILITARY COMMUNITY	HAMILTON TRANSFERRED- OW	2174	II	A	1

\* Severity – 5 possible classifications from I (catastrophic) to V (none)  
 \*\* Probability – 5 possible classifications from A (frequent) to E (improbable).  
 \*\*\* "0" indicates that the site is a MC site and therefore, RAC scores have not been prepared.

According to the RAC worksheet instructions, if the severity value is V, the probability value does not need to be calculated, and a RAC score of 5 should be assigned to the range.

The completed RAC worksheet for each range in the CTT inventory is also included in this section. RAC worksheets were not prepared for MC sites.

# **RISK ASSESSMENT CODE WORKSHEETS**

**RISK ASSESSMENT CODE WORKSHEETS**  
Hamilton Closed Complex

Hamilton Closed Complex

RISK ASSESSMENT CODE WORKSHEETS

Site Name: Hamilton Closed Complex Rater's Name: Monique DeJesus
Site Location: FORT HAMILTON Phone: (914) 641-2766
MILITARY COMMUNITY
Date Completed: 6/4/03 Organization: MPI
Score: RAC 5

Explosive Relative Risk Assessment:

This risk assessment procedure was developed in accordance with Military Standard 882C and Army Regulation 385-10. The Risk Assessment Code (RAC) score will be used by DoD and the U.S. Army to assist in the prioritization and sequencing of projects. The risk assessment is based on the best available information resulting from the data collection effort of the CTT inventory. This information is used to assess the explosive relative risk involved with the CTT ranges/sites identified in this inventory. The risk assessment is composed of two factors, hazard severity and hazard probability.

PART I. HAZARD SEVERITY

Hazard severity categories are defined to provide a qualitative measure of the worst credible event resulting from personnel exposure to various types and quantities of UXO.

Table with 2 columns: TYPE OF ORDNANCE: (Circle all that apply) and VALUE. Includes categories like Medium/large caliber (20mm and larger) with value 10, Bombs, explosive with value 10, Grenades, hand or rifle, explosive with value 10, Landmine, explosive with value 10, Rockets, guided missile, explosive with value 10, Detonators, blasting caps, fuzes, boosters, bursters with value 6, Bombs, practice (w/spotting charges) with value 6, Grenades, practice (w/spotting charges) with value 4, Landmine, practice (w/spotting charges) with value 4, Small arms, complete round (.22 cal -.50 cal) with value 1, Small arms, expended with value 0, Practice ordnance (w/o spotting charges) with value 0.

Conventional ordnance and ammunition (largest single value): 0

What evidence do you have regarding conventional unexploded ordnance?

Although this range complex had many batteries that had large guns, which shot the equivalent of large caliber shells, the area has been fully developed since the batteries were removed from

Hamilton Closed Complex

the area. In accordance with the Army Corps of Engineers-Huntsville, since no ordnance has been found in the area, a RAC score of five will be assigned to this range complex.

**B. The Values for Pyrotechnics (for munitions not described above):** VALUE

Munition (containers) containing White Phosphorus (WP) or other pyrophoric material (i.e.,spontaneously flammable)  10

Munition containing a flame or incendiary material (i.e., Napalm, Triethylaluminum metal incendiaries)  6

Flares, signals, simulators, screening smokes (other than WP)  4

Pyrotechnics (select the single largest value): 0

What evidence do you have regarding pyrotechnics?

None found during site visit and document search.

**C. Bulk High Explosives (HE) (not an integral part of conventional ordnance; uncontainerized):** VALUE

Primary or initiating explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)  10

Demolition charges  10

Secondary explosives (PETN, Compositions A, B, C, Teteryl, TNT, RDX, HMX, HBX, Black Powder, etc.)  8

Military dynamite  6

Less sensitive explosives (Ammonium Nitrate, Explosive D, etc.)  3

High explosives (select the single largest value): 0

What evidence do you have regarding bulk explosives?:

None found during site visit and document search.

**D. Bulk propellants (not an integral part of rockets, guided missiles, or other conventional ordnance;**

Solid or liquid propellants  6

Propellants: 0

Hamilton Closed Complex

What evidence do you have regarding bulk propellants?

None found during site visit and document search.

**E. Chemical Warfare Materiel (CWM) and Radiological Weapons: VALUE**

Toxic chemical agents (choking, nerve, blood, blister)  25

War Gas Identification Sets  20

Radiological  15

Riot Control Agents (vomiting, tear)  5

Chemical and Radiological (select the single largest value): 0

What evidence do you have regarding chemical or radiological?

None found during site visit and document search.

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TOTAL HAZARD SEVERITY VALUE (Sum of value A through E (maximum of 61): 0

Apply this value to Table 1 to determine Hazard Severity Category

TABLE 1  
HAZARD SEVERITY\*

DESCRIPTION	CATEGORY	HAZARD SEVERITY VALUE
CATASTROPHIC	I <input type="checkbox"/>	21 and/or greater
CRITICAL	II <input type="checkbox"/>	10 to 20
MARGINAL	III <input type="checkbox"/>	5 to 9
NEGLIGIBLE	IV <input type="checkbox"/>	1 to 4
**NONE	V <input checked="" type="checkbox"/>	0

\*Apply Hazard Severity Category to Table 3

\*\*If hazard severity value is 0, you do not need to complete Part II of this form. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

---

Hamilton Closed Complex

**PART II. HAZARD PROBABILITY**

The probability that a hazard has been, or will be, created due to the presence and other rated factors of unexploded ordnance or explosive materials on the range/site.

**AREA, EXTENT, ACCESSIBILITY OF OE HAZARD (Circle all that apply)**

<b>A. Locations of OE hazards</b>	<b>VALUE</b>
On the surface	<input type="checkbox"/> 5
Within tanks, pipes, vessels, or other confined areas	<input type="checkbox"/> 4
Inside walls, ceilings, or other building/structure	<input type="checkbox"/> 3
Subsurface	<input type="checkbox"/> 2

Location (select the single largest value): 0

What evidence do you have regarding the location of OE?

Not Applicable

**B. Distance to nearest inhabited location/structure likely to be at risk from OE hazard (road, park, playground, building, etc.)**

	<b>VALUE</b>
Less than 1,250 feet	<input type="checkbox"/> 5
1,250 feet to 0.5 mile	<input type="checkbox"/> 4
0.5 mile to 1.0 mile	<input type="checkbox"/> 3
1.0 mile to 2.0 Miles	<input type="checkbox"/> 2
Over 2 miles	<input type="checkbox"/> 1

Distance (select the single largest value): 0

What are the nearest inhabited structures/buildings?

Not Applicable

Hamilton Closed Complex

C. Number(s) of building(s) within a 2-mile radius measured from the OE hazard area, not the installation boundary.

- 26 and over  5
- 16 to 25  4
- 11 to 15  3
- 6 to 10  2
- 1 to 5  1
- 0  0

Number of buildings (select the single largest value): 0

Narrative:

Not Applicable

D. Types of Buildings (within a 2 mile radius)

VALUE

- Educational, child care, residential, hospitals hotels, commercial, shopping centers  5
- Industrial, warehouse, etc.  4
- Agricultural, forestry, etc.  3
- Detention, correctional  2
- No buildings  0

Types of buildings (select the single largest value): 0

Describe the types of buildings:

Not Applicable

E. Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance:

VALUE

*Hamilton Closed Complex*

- No barrier nor security system  5
- Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.  4
- A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.  3
- Security Guard, but no barrier.  2
- Isolated site.  1
- A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel continuously monitors and controls entry; or, an artificial or natural barrier (e.g., fence combined with a cliff) which completely surrounds the area; and, a means to control entry at all times through the gates or other entrances (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the area).  0

Accessibility (select the single largest value): 0

Describe the site accessibility:

Not Applicable

**F. Site Dynamics.**

**VALUE**

This deals with site conditions are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion on beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase

Expected  5

None anticipated  0

Site Dynamics (select the single largest value): 0

Desc Dynamics:

Not Applicable

---

TOTAL HAZARD PROBABILITY VALUE (sum of largest values for A through F (maximum of 30): 0

Apply this value to Hazard Probability Table 2 to determine the Hazard Probability Level.

*Hamilton Closed Complex*

TABLE 2  
HAZARD PROBABILITY

DESCRIPTION	LEVEL	HAZARD PROBABILITY
FREQUENT	A <input type="checkbox"/>	27 or greater
PROBABLE	B <input type="checkbox"/>	21 to 26
OCCASIONAL	C <input type="checkbox"/>	15 to 20
REMOTE	D <input type="checkbox"/>	8 to 14
IMPROBABLE	E <input type="checkbox"/>	less than 8

\*Apply Hazard Probability Level to Table 3.

**PART III. RISK ASSESSMENT**

The risk assessment value for this site is determined using the following Table. Enter the results of the Hazard Probability and Hazard Severity values. If the Hazard Severity value is zero (0), a Hazard Probability is not calculated and a RAC score of 5 is automatically assigned to the range or site.

TABLE 3

PROBABILITY LEVEL	FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
SEVERITY CATEGORY:					
CATASTROPHIC I	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
CRITICAL II	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
MARGINABLE III	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NEGLIGIBLE IV	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 5

RISK ASSESSMENT CODE (RAC)

- RAC 1 High Risk - Highest priority for further action.
- RAC 2 Serious Risk - Priority for further action.
- RAC 3 Moderate Risk - Recommend further action.
- RAC 4 Low Risk - Recommend further action.
- RAC 5 Negligible Risk - Indicates that no DoD action is necessary.

*Hamilton Closed Complex*

**PART IV. NARRATIVE**

Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made:

A RAC score of five is assigned to the Hamilton Closed Complex. This range complex contains all closed ranges inside Fort Hamilton. It includes eleven battery firing points, a parade ground, and a training field. The range complex occupies 42 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for its guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fan, which extends into the waters of New York Harbor. The parade ground and the training field were used for maneuvers and small arms training. The parade ground was used from 1900 to 1964. The training field was used from 1892 to 1950. Current uses on the property include installation housing, tennis courts, parking lots, baseball fields, and undeveloped land. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas.

**RISK ASSESSMENT CODE WORKSHEETS**  
Hamilton Parade Ground #1

Hamilton Parade Ground #1

RISK ASSESSMENT CODE WORKSHEETS

Site Name: Hamilton Parade Ground #1 Rater's Name: Monique DeJesus

Site Location: FORT HAMILTON MILITARY COMMUNITY Phone: (914) 641-2766

Date Completed: 11/6/03 Organization: MPI  
Score: RAC 5

Explosive Relative Risk Assessment:

This risk assessment procedure was developed in accordance with Military Standard 882C and Army Regulation 385-10. The Risk Assessment Code (RAC) score will be used by DoD and the U.S. Army to assist in the prioritization and sequencing of projects. The risk assessment is based on the best available information resulting from the data collection effort of the CTT inventory. This information is used to assess the explosive relative risk involved with the CTT ranges/sites identified in this inventory. The risk assessment is composed of two factors, hazard severity and hazard probability.

PART I. HAZARD SEVERITY

Hazard severity categories are defined to provide a qualitative measure of the worst credible event resulting from personnel exposure to various types and quantities of UXO.

TYPE OF ORDNANCE: (Circle all that apply)	VALUE
<b>A. Conventional ordnance and ammunition:</b>	
Medium/large caliber (20mm and larger)	<input type="checkbox"/> 10
Bombs, explosive	<input type="checkbox"/> 10
Grenades, hand or rifle, explosive	<input type="checkbox"/> 10
Landmine, explosive	<input type="checkbox"/> 10
Rockets, guided missile, explosive	<input type="checkbox"/> 10
Detonators, blasting caps, fuzes, boosters, bursters	<input type="checkbox"/> 6
Bombs, practice (w/spotting charges)	<input type="checkbox"/> 6
Grenades, practice (w/spotting charges)	<input type="checkbox"/> 4
Landmine, practice (w/spotting charges)	<input type="checkbox"/> 4
Small arms, complete round (.22 cal -.50 cal)	<input type="checkbox"/> 1
Small arms, expended	<input checked="" type="checkbox"/> 0
Practice ordnance (w/o spotting charges)	<input type="checkbox"/> 0

Conventional ordnance and ammunition (largest single value): 0

What evidence do you have regarding conventional unexploded ordnance?

No documentation was found that suggested anything but small arms ammunition was used on this range.

Hamilton Parade Ground #1

**B. The Values for Pyrotechnics (for munitions not described above):** **VALUE**

Munition (containers) containing White Phosphorus (WP) or other pyrophoric material (i.e.,spontaneously flammable)  10

Munition containing a flame or incendiary material (i.e., Napalm, Triethylaluminum metal incendiaries)  6

Flares, signals, simulators, screening smokes (other than WP)  4

Pyrotechnics (select the single largest value): 0

What evidence do you have regarding pyrotechnics?

None found during site visit and document search.

**C. Bulk High Explosives (HE) (not an integral part of conventional ordnance; uncontainerized):** **VALUE**

Primary or initiating explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)  10

Demolition charges  10

Secondary explosives (PETN, Compositions A, B, C, Teteryl, TNT, RDX, HMX, HBX, Black Powder, etc.)  8

Military dynamite  6

Less sensitive explosives (Ammonium Nitrate, Explosive D, etc.)  3

High explosives (select the single largest value): 0

What evidence do you have regarding bulk explosives?:

None found during site visit and document search.

**D. Bulk propellants (not an integral part of rockets, guided missiles, or other conventional ordnance;**

Solid or liquid propellants  6

Propellants: 0

What evidence do you have regarding bulk propellants?

None found during site visit and document search.

*Hamilton Parade Ground #1*

<b>E. Chemical Warfare Materiel (CWM) and Radiological Weapons:</b>	<b>VALUE</b>
Toxic chemical agents (choking, nerve, blood, blister)	<input type="checkbox"/> 25
War Gas Identification Sets	<input type="checkbox"/> 20
Radiological	<input type="checkbox"/> 15
Riot Control Agents (vomiting, tear)	<input type="checkbox"/> 5

Chemical and Radiological (select the single largest value): 0

What evidence do you have regarding chemical or radiological?

*None found during site visit and document search.*

TOTAL HAZARD SEVERITY VALUE (Sum of value A through E (maximum of 61): 0

Apply this value to Table 1 to determine Hazard Severity Category

TABLE 1  
HAZARD SEVERITY\*

DESCRIPTION	CATEGORY	HAZARD SEVERITY VALUE
CATASTROPHIC	I <input type="checkbox"/>	21 and/or greater
CRITICAL	II <input type="checkbox"/>	10 to 20
MARGINAL	III <input type="checkbox"/>	5 to 9
NEGLIGIBLE	IV <input type="checkbox"/>	1 to 4
**NONE	V <input checked="" type="checkbox"/>	0

\*Apply Hazard Severity Category to Table 3

\*\*If hazard severity value is 0, you do not need to complete Part II of this form. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Hamilton Parade Ground #1

**PART II. HAZARD PROBABILITY**

The probability that a hazard has been, or will be, created due to the presence and other rated factors of unexploded ordnance or explosive materials on the range/site.

**AREA, EXTENT, ACCESSIBILITY OF OE HAZARD (Circle all that apply)**

- | <b>A. Locations of OE hazards</b>                     | <b>VALUE</b>               |
|---|----------------------------|
| On the surface  | <input type="checkbox"/> 5 |
| Within tanks, pipes, vessels, or other confined areas | <input type="checkbox"/> 4 |
| Inside walls, ceilings, or other building/structure   | <input type="checkbox"/> 3 |
| Subsurface  | <input type="checkbox"/> 2 |

Location (select the single largest value): 0

What evidence do you have regarding the location of OE?

Not Applicable

**B. Distance to nearest inhabited location/structure likely to be at risk from OE hazard (road, park, playground, building, etc.)**

- |                        | <b>VALUE</b>               |
|------------------------|----------------------------|
| Less than 1,250 feet   | <input type="checkbox"/> 5 |
| 1,250 feet to 0.5 mile | <input type="checkbox"/> 4 |
| 0.5 mile to 1.0 mile   | <input type="checkbox"/> 3 |
| 1.0 mile to 2.0 Miles  | <input type="checkbox"/> 2 |
| Over 2 miles           | <input type="checkbox"/> 1 |

Distance (select the single largest value): 0

What are the nearest inhabited structures/buildings?

Not Applicable

Hamilton Parade Ground #1

C. Number(s) of building(s) within a 2-mile radius measured from the OE hazard area, not the installation boundary.

- 26 and over  5
- 16 to 25  4
- 11 to 15  3
- 6 to 10  2
- 1 to 5  1
- 0  0

Number of buildings (select the single largest value): 0

Narrative:

Not Applicable

D. Types of Buildings (within a 2 mile radius)

VALUE

- Educational, child care, residential, hospitals hotels, commercial, shopping centers  5
- Industrial, warehouse, etc.  4
- Agricultural, forestry, etc.  3
- Detention, correctional  2
- No buildings  0

Types of buildings (select the single largest value): 0

Describe the types of buildings:

Not Applicable

E. Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance:

VALUE

Hamilton Parade Ground #1

- No barrier nor security system  5
- Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.  4
- A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.  3
- Security Guard, but no barrier.  2
- Isolated site.  1
- A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel continuously monitors and controls entry; or, an artificial or natural barrier (e.g., fence combined with a cliff) which completely surrounds the area; and, a means to control entry at all times through the gates or other entrances (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the area).  0

Accessibility (select the single largest value): 0

Describe the site accessibility:

Not Applicable

**F. Site Dynamics.**

**VALUE**

This deals with site conditions are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion on beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase

Expected  5

None anticipated  0

Site Dynamics (select the single largest value): 0

Desc Dynamics:

Not Applicable

---

TOTAL HAZARD PROBABILITY VALUE (sum of largest values for A through F (maximum of 30): 0

Apply this value to Hazard Probability Table 2 to determine the Hazard Probability Level.

Hamilton Parade Ground #1

TABLE 2  
HAZARD PROBABILITY

DESCRIPTION	LEVEL	HAZARD PROBABILITY
FREQUENT	A <input type="checkbox"/>	27 or greater
PROBABLE	B <input type="checkbox"/>	21 to 26
OCCASIONAL	C <input type="checkbox"/>	15 to 20
REMOTE	D <input type="checkbox"/>	8 to 14
IMPROBABLE	E <input type="checkbox"/>	less than 8

\*Apply Hazard Probability Level to Table 3.

**PART III. RISK ASSESSMENT**

The risk assessment value for this site is determined using the following Table. Enter the results of the Hazard Probability and Hazard Severity values. If the Hazard Severity value is zero (0), a Hazard Probability is not calculated and a RAC score of 5 is automatically assigned to the range or site.

TABLE 3

PROBABILITY LEVEL	FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
SEVERITY CATEGORY:					
CATASTROPHIC I	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
CRITICAL II	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
MARGINABLE III	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NEGLIGIBLE IV	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 5

RISK ASSESSMENT CODE (RAC)

- RAC 1 High Risk - Highest priority for further action.
- RAC 2 Serious Risk - Priority for further action.
- RAC 3 Moderate Risk - Recommend further action.
- RAC 4 Low Risk - Recommend further action.
- RAC 5 Negligible Risk - Indicates that no DoD action is necessary.

*Hamilton Parade Ground #1*

**PART IV. NARRATIVE**

Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made:

A RAC score of five is assigned to the Hamilton Parade Ground #1. This range is a 15-acre area where maneuvers and maybe small arms training occurred. This transferred range is located outside the northwestern corner of the Fort Hamilton installation boundary. The parade ground was used from 1900 to 1964. The munitions used inside this range would be small arms ammunition. It now lies under the Verrazano Bridge's supports and ramps. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas.

**RISK ASSESSMENT CODE WORKSHEETS**  
Hamilton Training Field

Hamilton Training Field

RISK ASSESSMENT CODE WORKSHEETS

Site Name: Hamilton Training Field

Rater's Name: Monique DeJesus

Site Location: FORT HAMILTON  
MILITARY COMMUNITY

Phone: (914) 641-2766

Date Completed: 11/6/03

Organization: MPI

Score: RAC 5

**Explosive Relative Risk Assessment:**

This risk assessment procedure was developed in accordance with Military Standard 882C and Army Regulation 385-10. The Risk Assessment Code (RAC) score will be used by DoD and the U.S. Army to assist in the prioritization and sequencing of projects. The risk assessment is based on the best available information resulting from the data collection effort of the CTT inventory. This information is used to assess the explosive relative risk involved with the CTT ranges/sites identified in this inventory. The risk assessment is composed of two factors, hazard severity and hazard probability.

**PART I. HAZARD SEVERITY**

Hazard severity categories are defined to provide a qualitative measure of the worst credible event resulting from personnel exposure to various types and quantities of UXO.

**TYPE OF ORDNANCE: (Circle all that apply)**

**VALUE**

**A. Conventional ordnance and ammunition:**

- Medium/large caliber (20mm and larger)  10
- Bombs, explosive  10
- Grenades, hand or rifle, explosive  10
- Landmine, explosive  10
- Rockets, guided missile, explosive  10
- Detonators, blasting caps, fuzes, boosters, bursters  6
- Bombs, practice (w/spotting charges)  6
- Grenades, practice (w/spotting charges)  4
- Landmine, practice (w/spotting charges)  4
- Small arms, complete round (.22 cal -.50 cal)  1
- Small arms, expended  0
- Practice ordnance (w/o spotting charges)  0

Conventional ordnance and ammunition (largest single value): 0

What evidence do you have regarding conventional unexploded ordnance?

No documentation was found suggesting that anything but small arms ammunition was used on this range.

Hamilton Training Field

**B. The Values for Pyrotechnics (for munitions not described above):** **VALUE**

Munition (containers) containing White Phosphorus (WP) or other pyrophoric material (i.e.,spontaneously flammable)  10

Munition containing a flame or incendiary material (i.e., Napalm, Triethylaluminum metal incendiaries)  6

Flares, signals, simulators, screening smokes (other than WP)  4

Pyrotechnics (select the single largest value): 0

What evidence do you have regarding pyrotechnics?

None found during site visit and document search.

**C. Bulk High Explosives (HE) (not an integral part of conventional ordnance; uncontainerized):** **VALUE**

Primary or initiating explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)  10

Demolition charges  10

Secondary explosives (PETN, Compositions A, B, C, Teteryl, TNT, RDX, HMX, HBX, Black Powder, etc.)  8

Military dynamite  6

Less sensitive explosives (Ammonium Nitrate, Explosive D, etc.)  3

High explosives (select the single largest value): 0

What evidence do you have regarding bulk explosives?:

None found during site visit and document search.

**D. Bulk propellants (not an integral part of rockets, guided missiles, or other conventional ordnance;**

Solid or liquid propellants  6

Propellants: 0

What evidence do you have regarding bulk propellants?

None found during site visit and document search.

Hamilton Training Field

<b>E. Chemical Warfare Materiel (CWM) and Radiological Weapons:</b>	<b>VALUE</b>
Toxic chemical agents (choking, nerve, blood, blister)	<input type="checkbox"/> 25
War Gas Identification Sets	<input type="checkbox"/> 20
Radiological	<input type="checkbox"/> 15
Riot Control Agents (vomiting, tear)	<input type="checkbox"/> 5

Chemical and Radiological (select the single largest value): 0

What evidence do you have regarding chemical or radiological?

None found during site visit and document search.

TOTAL HAZARD SEVERITY VALUE (Sum of value A through E (maximum of 61): 0

Apply this value to Table 1 to determine Hazard Severity Category

TABLE 1  
HAZARD SEVERITY\*

DESCRIPTION	CATEGORY	HAZARD SEVERITY VALUE
CATASTROPHIC	I <input type="checkbox"/>	21 and/or greater
CRITICAL	II <input type="checkbox"/>	10 to 20
MARGINAL	III <input type="checkbox"/>	5 to 9
NEGLIGIBLE	IV <input type="checkbox"/>	1 to 4
**NONE	V <input checked="" type="checkbox"/>	0

\*Apply Hazard Severity Category to Table 3

\*\*If hazard severity value is 0, you do not need to complete Part II of this form. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Hamilton Training Field

**PART II. HAZARD PROBABILITY**

The probability that a hazard has been, or will be, created due to the presence and other rated factors of unexploded ordnance or explosive materials on the range/site.

**AREA, EXTENT, ACCESSIBILITY OF OE HAZARD (Circle all that apply)**

**A. Locations of OE hazards**

**VALUE**

- |   |                            |
|---|----------------------------|
| On the surface  | <input type="checkbox"/> 5 |
| Within tanks, pipes, vessels, or other confined areas | <input type="checkbox"/> 4 |
| Inside walls, ceilings, or other building/structure   | <input type="checkbox"/> 3 |
| Subsurface  | <input type="checkbox"/> 2 |

Location (select the single largest value): 0

What evidence do you have regarding the location of OE?

Not Applicable

**B. Distance to nearest inhabited location/structure likely to be at risk from OE hazard (road, park, playground, building, etc.)**

**VALUE**

- |                        |                            |
|------------------------|----------------------------|
| Less than 1,250 feet   | <input type="checkbox"/> 5 |
| 1,250 feet to 0.5 mile | <input type="checkbox"/> 4 |
| 0.5 mile to 1.0 mile   | <input type="checkbox"/> 3 |
| 1.0 mile to 2.0 Miles  | <input type="checkbox"/> 2 |
| Over 2 miles           | <input type="checkbox"/> 1 |

Distance (select the single largest value): 0

What are the nearest inhabited structures/buildings?

Not Applicable

Hamilton Training Field

C. Number(s) of building(s) within a 2-mile radius measured from the OE hazard area, not the installation boundary.

- 26 and over  5
- 16 to 25  4
- 11 to 15  3
- 6 to 10  2
- 1 to 5  1
- 0  0

Number of buildings (select the single largest value): 0

Narrative:

Not Applicable

D. Types of Buildings (within a 2 mile radius)

VALUE

- Educational, child care, residential, hospitals hotels, commercial, shopping centers  5
- Industrial, warehouse, etc.  4
- Agricultural, forestry, etc.  3
- Detention, correctional  2
- No buildings  0

Types of buildings (select the single largest value): 0

Describe the types of buildings:

Not Applicable

E. Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance:

VALUE

*Hamilton Training Field*

- No barrier nor security system  5
- Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.  4
- A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.  3
- Security Guard, but no barrier.  2
- Isolated site.  1
- A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel continuously monitors and controls entry; or, an artificial or natural barrier (e.g., fence combined with a cliff) which completely surrounds the area; and, a means to control entry at all times through the gates or other entrances (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the area).  0

Accessibility (select the single largest value): 0

Describe the site accessibility:

Not Applicable

**F. Site Dynamics.**

**VALUE**

This deals with site conditions are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion on beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase

Expected  5

None anticipated  0

Site Dynamics (select the single largest value): 0

Desc Dynamics:

Not Applicable

---

TOTAL HAZARD PROBABILITY VALUE (sum of largest values for A through F (maximum of 30): 0

Apply this value to Hazard Probability Table 2 to determine the Hazard Probability Level.

*Hamilton Training Field*

TABLE 2  
HAZARD PROBABILITY

DESCRIPTION	LEVEL	HAZARD PROBABILITY
FREQUENT	A <input type="checkbox"/>	27 or greater
PROBABLE	B <input type="checkbox"/>	21 to 26
OCCASIONAL	C <input type="checkbox"/>	15 to 20
REMOTE	D <input type="checkbox"/>	8 to 14
IMPROBABLE	E <input type="checkbox"/>	less than 8

\*Apply Hazard Probability Level to Table 3.

**PART III. RISK ASSESSMENT**

The risk assessment value for this site is determined using the following Table. Enter the results of the Hazard Probability and Hazard Severity values. If the Hazard Severity value is zero (0), a Hazard Probability is not calculated and a RAC score of 5 is automatically assigned to the range or site.

TABLE 3

PROBABILITY LEVEL	FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
SEVERITY CATEGORY:					
CATASTROPHIC I	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
CRITICAL II	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
MARGINABLE III	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NEGLIGIBLE IV	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 5

RISK ASSESSMENT CODE (RAC)

- RAC 1 High Risk - Highest priority for further action.
- RAC 2 Serious Risk - Priority for further action.
- RAC 3 Moderate Risk - Recommend further action.
- RAC 4 Low Risk - Recommend further action.
- RAC 5 Negligible Risk - Indicates that no DoD action is necessary.

*Hamilton Training Field*

**PART IV. NARRATIVE**

Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made:

A RAC score of five is assigned to the Hamilton Training Field. This range is a five-acre area that was used for maneuver exercises and probably to train soldiers with small arms. It could accommodate 500-yard firing, but due to its proximity to civilian housing, the firing range was reduced to 300 yards. This transferred range is located outside the northeastern corner of the Fort Hamilton installation boundary. The training field was used from 1892 to 1950. The munitions used inside this range would be small arms ammunition. This portion of the training field (the closed part in under the Hamilton Closed Complex) is covered by the Veteran Administration's Hospital, which was constructed in the 1950s. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas.

## **RISK ASSESSMENT CODE WORKSHEETS**

Hamilton Transferred Complex

W

Hamilton Transferred Complex

RISK ASSESSMENT CODE WORKSHEETS

Site Name: Hamilton Transferred Complex

Rater's Name: Monique DeJesus

Site Location: FORT HAMILTON MILITARY COMMUNITY

Phone: (914) 641-2766

Date Completed: 1/31/03

Organization: MPI

Score: RAC 5

Explosive Relative Risk Assessment:

This risk assessment procedure was developed in accordance with Military Standard 882C and Army Regulation 385-10. The Risk Assessment Code (RAC) score will be used by DoD and the U.S. Army to assist in the prioritization and sequencing of projects. The risk assessment is based on the best available information resulting from the data collection effort of the CTT inventory. This information is used to assess the explosive relative risk involved with the CTT ranges/sites identified in this inventory. The risk assessment is composed of two factors, hazard severity and hazard probability.

PART I. HAZARD SEVERITY

Hazard severity categories are defined to provide a qualitative measure of the worst credible event resulting from personnel exposure to various types and quantities of UXO.

TYPE OF ORDNANCE: (Circle all that apply) VALUE

A. Conventional ordnance and ammunition:

- Medium/large caliber (20mm and larger)  10
- Bombs, explosive  10
- Grenades, hand or rifle, explosive  10
- Landmine, explosive  10
- Rockets, guided missile, explosive  10
- Detonators, blasting caps, fuzes, boosters, bursters  6
- Bombs, practice (w/spotting charges)  6
- Grenades, practice (w/spotting charges)  4
- Landmine, practice (w/spotting charges)  4
- Small arms, complete round (.22 cal -.50 cal)  1
- Small arms, expended  0
- Practice ordnance (w/o spotting charges)  0

Conventional ordnance and ammunition (largest single value): 0

What evidence do you have regarding conventional unexploded ordnance?

Although this range complex had many batteries that had large guns, which shot the equivalent of large caliber shells, the area

Hamilton Transferred Complex

has been fully developed since the batteries were removed from the area. In accordance with the Army Corps of Engineers- Huntsville, since no ordnance has been found in the area, a RAC score of five will be assigned to this range complex.

**B. The Values for Pyrotechnics (for munitions not described above):** **VALUE**

Munition (containers) containing White Phosphorus (WP) or other pyrophoric material (i.e.,spontaneously flammable)  10

Munition containing a flame or incendiary material (i.e., Napalm, Triethylaluminum metal incendiaries)  6

Flares, signals, simulators, screening smokes (other than WP)  4

Pyrotechnics (select the single largest value): 0

What evidence do you have regarding pyrotechnics?

None found during site visit and document search.

**C. Bulk High Explosives (HE) (not an integral part of conventional ordnance; uncontainerized):** **VALUE**

Primary or initiating explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)  10

Demolition charges  10

Secondary explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)  8

Military dynamite  6

Less sensitive explosives (Ammonium Nitrate, Explosive D, etc.)  3

High explosives (select the single largest value): 0

What evidence do you have regarding bulk explosives?:

None found during site visit and document search.

**D. Bulk propellants (not an integral part of rockets, guided missiles, or other conventional ordnance;**

Solid or liquid propellants  6

Propellants: 0

Hamilton Transferred Complex

What evidence do you have regarding bulk propellants?

None found during site visit and document search.

<b>E. Chemical Warfare Materiel (CWM) and Radiological Weapons:</b>	<b>VALUE</b>
Toxic chemical agents (choking, nerve, blood, blister)	<input type="checkbox"/> 25
War Gas Identification Sets	<input type="checkbox"/> 20
Radiological	<input type="checkbox"/> 15
Riot Control Agents (vomiting, tear)	<input type="checkbox"/> 5

Chemical and Radiological (select the single largest value): 0

What evidence do you have regarding chemical or radiological?

None found during site visit and document search.

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TOTAL HAZARD SEVERITY VALUE (Sum of value A through E (maximum of 61): 0

Apply this value to Table 1 to determine Hazard Severity Category

TABLE 1  
HAZARD SEVERITY\*

DESCRIPTION	CATEGORY	HAZARD SEVERITY VALUE
CATASTROPHIC	I <input type="checkbox"/>	21 and/or greater
CRITICAL	II <input type="checkbox"/>	10 to 20
MARGINAL	III <input type="checkbox"/>	5 to 9
NEGLIGIBLE	IV <input type="checkbox"/>	1 to 4
**NONE	V <input checked="" type="checkbox"/>	0

\*Apply Hazard Severity Category to Table 3

\*\*If hazard severity value is 0, you do not need to complete Part II of this form. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

---

*Hamilton Transferred Complex*

**PART II. HAZARD PROBABILITY**

The probability that a hazard has been, or will be, created due to the presence and other rated factors of unexploded ordnance or explosive materials on the range/site.

**AREA, EXTENT, ACCESSIBILITY OF OE HAZARD (Circle all that apply)**

- | <b>A. Locations of OE hazards</b>                     | <b>VALUE</b>               |
|---|----------------------------|
| On the surface  | <input type="checkbox"/> 5 |
| Within tanks, pipes, vessels, or other confined areas | <input type="checkbox"/> 4 |
| Inside walls, ceilings, or other building/structure   | <input type="checkbox"/> 3 |
| Subsurface  | <input type="checkbox"/> 2 |

Location (select the single largest value): 0

What evidence do you have regarding the location of OE?

Not Applicable

**B. Distance to nearest inhabited location/structure likely to be at risk from OE hazard (road, park, playground, building, etc.)**

- |                        | <b>VALUE</b>               |
|------------------------|----------------------------|
| Less than 1,250 feet   | <input type="checkbox"/> 5 |
| 1,250 feet to 0.5 mile | <input type="checkbox"/> 4 |
| 0.5 mile to 1.0 mile   | <input type="checkbox"/> 3 |
| 1.0 mile to 2.0 Miles  | <input type="checkbox"/> 2 |
| Over 2 miles           | <input type="checkbox"/> 1 |

Distance (select the single largest value): 0

What are the nearest inhabited structures/buildings?

Not Applicable

Hamilton Transferred Complex

C. Number(s) of building(s) within a 2-mile radius measured from the OE hazard area, not the installation boundary.

- 26 and over  5
- 16 to 25  4
- 11 to 15  3
- 6 to 10  2
- 1 to 5  1
- 0  0

Number of buildings (select the single largest value): 0

Narrative:

Not Applicable

D. Types of Buildings (within a 2 mile radius)

VALUE

- Educational, child care, residential, hospitals hotels, commercial, shopping centers  5
- Industrial, warehouse, etc.  4
- Agricultural, forestry, etc.  3
- Detention, correctional  2
- No buildings  0

Types of buildings (select the single largest value): 0

Describe the types of buildings:

Not Applicable

E. Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance:

VALUE

*Hamilton Transferred Complex*

- No barrier nor security system  5
- Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.  4
- A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.  3
- Security Guard, but no barrier.  2
- Isolated site.  1
- A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel continuously monitors and controls entry; or, an artificial or natural barrier (e.g., fence combined with a cliff) which completely surrounds the area; and, a means to control entry at all times through the gates or other entrances (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the area).  0

Accessibility (select the single largest value): 0

Describe the site accessibility:

Not Applicable

**F. Site Dynamics.**

**VALUE**

This deals with site conditions are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion on beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase

Expected  5

None anticipated  0

Site Dynamics (select the single largest value): 0

Desc Dynamics:

Not Applicable

---

TOTAL HAZARD PROBABILITY VALUE (sum of largest values for A through F (maximum of 30): 0

Apply this value to Hazard Probability Table 2 to determine the Hazard Probability Level.

*Hamilton Transferred Complex*

TABLE 2  
HAZARD PROBABILITY

DESCRIPTION	LEVEL	HAZARD PROBABILITY
FREQUENT	A <input type="checkbox"/>	27 or greater
PROBABLE	B <input type="checkbox"/>	21 to 26
OCCASIONAL	C <input type="checkbox"/>	15 to 20
REMOTE	D <input type="checkbox"/>	8 to 14
IMPROBABLE	E <input type="checkbox"/>	less than 8

\*Apply Hazard Probability Level to Table 3.

**PART III. RISK ASSESSMENT**

The risk assessment value for this site is determined using the following Table. Enter the results of the Hazard Probability and Hazard Severity values. If the Hazard Severity value is zero (0), a Hazard Probability is not calculated and a RAC score of 5 is automatically assigned to the range or site.

TABLE 3

PROBABILITY LEVEL	FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
SEVERITY CATEGORY:					
CATASTROPHIC I	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
CRITICAL II	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
MARGINABLE III	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NEGLIGIBLE IV	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 5

**RISK ASSESSMENT CODE (RAC)**

- RAC 1 High Risk - Highest priority for further action.
- RAC 2 Serious Risk - Priority for further action.
- RAC 3 Moderate Risk - Recommend further action.
- RAC 4 Low Risk - Recommend further action.
- RAC 5 Negligible Risk - Indicates that no DoD action is necessary.

*Hamilton Transferred Complex*

**PART IV. NARRATIVE**

Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made:

A RAC score of five is assigned to the Hamilton Transferred Complex. This range complex includes ten battery firing fans. The range complex occupies 609 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for their guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fans, which extend into the waters of New York Harbor. Current uses of this complex include sections of the Belt Parkway, a parking lot, and housing complexes. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas.

**RISK ASSESSMENT CODE WORKSHEETS**  
Hamilton Transferred-OW

Hamilton Transferred-OW

RISK ASSESSMENT CODE WORKSHEETS

Site Name: Hamilton Transferred-OW Rater's Name: Monique DeJesus
Site Location: FORT HAMILTON MILITARY COMMUNITY Phone: (510) 735-3029
Date Completed: 9/26/03 Organization: MPI
Score: RAC 1

Explosive Relative Risk Assessment:

This risk assessment procedure was developed in accordance with Military Standard 882C and Army Regulation 385-10. The Risk Assessment Code (RAC) score will be used by DoD and the U.S. Army to assist in the prioritization and sequencing of projects. The risk assessment is based on the best available information resulting from the data collection effort of the CTT inventory. This information is used to assess the explosive relative risk involved with the CTT ranges/sites identified in this inventory. The risk assessment is composed of two factors, hazard severity and hazard probability.

PART I. HAZARD SEVERITY

Hazard severity categories are defined to provide a qualitative measure of the worst credible event resulting from personnel exposure to various types and quantities of UXO.

TYPE OF ORDNANCE: (Circle all that apply) VALUE

A. Conventional ordnance and ammunition:

- Medium/large caliber (20mm and larger) [checked] 10
Bombs, explosive [ ] 10
Grenades, hand or rifle, explosive [ ] 10
Landmine, explosive [ ] 10
Rockets, guided missile, explosive [ ] 10
Detonators, blasting caps, fuzes, boosters, bursters [ ] 6
Bombs, practice (w/spotting charges) [ ] 6
Grenades, practice (w/spotting charges) [ ] 4
Landmine, practice (w/spotting charges) [ ] 4
Small arms, complete round (.22 cal -.50 cal) [ ] 1
Small arms, expended [ ] 0
Practice ordnance (w/o spotting charges) [ ] 0

Conventional ordnance and ammunition (largest single value): 10

What evidence do you have regarding conventional unexploded ordnance?

No evidence of munitions has been found on land, but the impact zone of the ranges was water, so there is reason to believe munitions could be found underwater.

Hamilton Transferred-OW

**B. The Values for Pyrotechnics (for munitions not described above):** **VALUE**

Munition (containers) containing White Phosphorus (WP) or other pyrophoric material (i.e.,spontaneously flammable)  10

Munition containing a flame or incendiary material (i.e., Napalm, Triethylaluminum metal incendiaries)  6

Flares, signals, simulators, screening smokes (other than WP)  4

Pyrotechnics (select the single largest value): 0

What evidence do you have regarding pyrotechnics?

None found during site visit and document search.

**C. Bulk High Explosives (HE) (not an integral part of conventional ordnance; uncontainerized):** **VALUE**

Primary or initiating explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)  10

Demolition charges  10

Secondary explosives (PETN, Compositions A, B, C, Tetryl, TNT, RDX, HMX, HBX, Black Powder, etc.)  8

Military dynamite  6

Less sensitive explosives (Ammonium Nitrate, Explosive D, etc.)  3

High explosives (select the single largest value): 0

What evidence do you have regarding bulk explosives?:

None found during site visit and document search.

**D. Bulk propellants (not an integral part of rockets, guided missiles, or other conventional ordnance;**

Solid or liquid propellants  6

Propellants: 0

What evidence do you have regarding bulk propellants?

None found during site visit and document search.

Hamilton Transferred-OW

<b>E. Chemical Warfare Materiel (CWM) and Radiological Weapons:</b>	<b>VALUE</b>
Toxic chemical agents (choking, nerve, blood, blister)	<input type="checkbox"/> 25
War Gas Identification Sets	<input type="checkbox"/> 20
Radiological	<input type="checkbox"/> 15
Riot Control Agents (vomiting, tear)	<input type="checkbox"/> 5

Chemical and Radiological (select the single largest value): 0

What evidence do you have regarding chemical or radiological?

None found during site visit and document search.

TOTAL HAZARD SEVERITY VALUE (Sum of value A through E (maximum of 61): 10

Apply this value to Table 1 to determine Hazard Severity Category

TABLE 1  
HAZARD SEVERITY\*

DESCRIPTION	CATEGORY	HAZARD SEVERITY VALUE
CATASTROPHIC	I <input type="checkbox"/>	21 and/or greater
CRITICAL	II <input checked="" type="checkbox"/>	10 to 20
MARGINAL	III <input type="checkbox"/>	5 to 9
NEGLIGIBLE	IV <input type="checkbox"/>	1 to 4
**NONE	V <input type="checkbox"/>	0

\*Apply Hazard Severity Category to Table 3

\*\*If hazard severity value is 0, you do not need to complete Part II of this form. Proceed to Part III and use a RAC score of 5 to determine your appropriate action.

Hamilton Transferred-OW

**PART II. HAZARD PROBABILITY**

The probability that a hazard has been, or will be, created due to the presence and other rated factors of unexploded ordnance or explosive materials on the range/site.

**AREA, EXTENT, ACCESSIBILITY OF OE HAZARD (Circle all that apply)**

**A. Locations of OE hazards**

**VALUE**

- |   |                                       |
|---|---------------------------------------|
| On the surface  | <input type="checkbox"/> 5            |
| Within tanks, pipes, vessels, or other confined areas | <input type="checkbox"/> 4            |
| Inside walls, ceilings, or other building/structure   | <input type="checkbox"/> 3            |
| Subsurface  | <input checked="" type="checkbox"/> 2 |

Location (select the single largest value): 2

What evidence do you have regarding the location of OE?

The impact zone for the range complex was water, so if there are any munitions to be found, they would be underwater.

**B. Distance to nearest inhabited location/structure likely to be at risk from OE hazard (road, park, playground, building, etc.)**

**VALUE**

- |                        |                                       |
|------------------------|---------------------------------------|
| Less than 1,250 feet   | <input checked="" type="checkbox"/> 5 |
| 1,250 feet to 0.5 mile | <input type="checkbox"/> 4            |
| 0.5 mile to 1.0 mile   | <input type="checkbox"/> 3            |
| 1.0 mile to 2.0 Miles  | <input type="checkbox"/> 2            |
| Over 2 miles           | <input type="checkbox"/> 1            |

Distance (select the single largest value): 5

What are the nearest inhabited structures/buildings?

The range complex borders Fort Hamilton, which has or is close to office buildings, recreational areas, a hospital, and housing projects.

45

Hamilton Transferred-OW

C. Number(s) of building(s) within a 2-mile radius measured from the OE hazard area, not the installation boundary.

- 26 and over  5
- 16 to 25  4
- 11 to 15  3
- 6 to 10  2
- 1 to 5  1
- 0  0

Number of buildings (select the single largest value): 5

Narrative:

There are housing projects, a hospital, stores, and office buildings located near the former range areas.

D. Types of Buildings (within a 2 mile radius) VALUE

- Educational, child care, residential, hospitals hotels, commercial, shopping centers  5
- Industrial, warehouse, etc.  4
- Agricultural, forestry, etc.  3
- Detention, correctional  2
- No buildings  0

Types of buildings (select the single largest value): 5

Describe the types of buildings:

There are housing projects, a hospital, stores, and office buildings located near the former range areas.

E. Accessibility to site refers to access by humans to ordnance and explosives. Use the following guidance: VALUE

Hamilton Transferred-OW

- No barrier nor security system  5
- Barrier is incomplete (e.g., in disrepair or does not completely surround the site). Barrier is intended to deny egress from the site, as for a barbed wire fence for grazing.  4
- A barrier (any kind of fence in good repair) but no separate means to control entry. Barrier is intended to deny access to the site.  3
- Security Guard, but no barrier.  2
- Isolated site.  1
- A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel continuously monitors and controls entry; or, an artificial or natural barrier (e.g., fence combined with a cliff) which completely surrounds the area; and, a means to control entry at all times through the gates or other entrances (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the area).  0

Accessibility (select the single largest value): 5

Describe the site accessibility:

The range complex is outside of the installation boundaries, so there is no barrier around it.

**F. Site Dynamics.**

**VALUE**

This deals with site conditions are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion on beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase

Expected  5

None anticipated  0

Site Dynamics (select the single largest value): 5

Desc Dynamics:

There is a potential that dredging might occur on the water impact zone, which could result in suspected munitions being uncovered.

27

*Hamilton Transferred-OW*

TOTAL HAZARD PROBABILITY VALUE (sum of largest values for A through F (maximum of 30): 27

Apply this value to Hazard Probability Table 2 to determine the Hazard Probability Level.

TABLE 2  
HAZARD PROBABILITY

DESCRIPTION	LEVEL	HAZARD PROBABILITY
FREQUENT	A <input checked="" type="checkbox"/>	27 or greater
PROBABLE	B <input type="checkbox"/>	21 to 26
OCCASIONAL	C <input type="checkbox"/>	15 to 20
REMOTE	D <input type="checkbox"/>	8 to 14
IMPROBABLE	E <input type="checkbox"/>	less than 8

\*Apply Hazard Probability Level to Table 3.

**PART III. RISK ASSESSMENT**

The risk assessment value for this site is determined using the following Table. Enter the results of the Hazard Probability and Hazard Severity values. If the Hazard Severity value is zero (0), a Hazard Probability is not calculated and a RAC score of 5 is automatically assigned to the range or site.

TABLE 3

PROBABILITY LEVEL	FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
SEVERITY CATEGORY:					
CATASTROPHIC I	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
CRITICAL II	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
MARGINABLE III	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5
NEGLIGIBLE IV	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 5

RISK ASSESSMENT CODE (RAC)

*Hamilton Transferred-OW*

- RAC 1 High Risk - Highest priority for further action.
- RAC 2 Serious Risk - Priority for further action.
- RAC 3 Moderate Risk - Recommend further action.
- RAC 4 Low Risk - Recommend further action.
- RAC 5 Negligible Risk - Indicates that no DoD action is necessary.

**PART IV. NARRATIVE**

Summarize the documented evidence that supports this risk assessment. If no documented evidence was available, explain all the assumptions that you made:

*A RAC score of one is assigned to the Hamilton Transferred-OW. This range complex contains all transferred battery firing fans located over the water associated with Fort Hamilton. The range complex occupies 2,174 acres. The batteries were used for defense and training purposes between 1860-1941. Munitions used at the batteries were most likely shells filled with black powder and sized for their guns. The battery structures no longer exist. Any munitions fired from the batteries would be found inside the firing fans, which extend into the waters of New York Harbor. No documents were found to indicate any UXO investigations and/or responses were performed on the range complex areas. The area is currently used for recreational and commercial shipping purposes*

## **H. DIGITAL FILES**

Compact discs are attached to this section of the report<sup>1</sup>, which contain the Phase 3 inventory electronic ARID, GIS, and map files. The compact discs also include the Phase 2 inventory electronic GIS files.

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<sup>1</sup> Digital files are not included in the Draft Report.

## I. DOCUMENT LOG

### Reports

Environmental Science and Engineering, Inc. Installation Assessment of New York Area Command - Fort Hamilton, Brooklyn, NY, and its sub-installations: Fort Wadsworth, Straten Island, NY, and Fort Totten, Flushing, NY, 1984.

Global Security.org. U.S. Military Facilities-Army Forts and Camps: Fort Hamilton. December 19, 2002. <<http://www.globalsecurity.org/military/facility/fort-hamilton.htm>>

Military District of Washington. U.S. Army Garrison Fort Hamilton website. September 10, 2002. December 19, 2002. <<http://www.hamilton.army.mil/>>

Roberts, Joseph. The Hand-Book of Artillery, for the Service of the United States (Army and Militia.) 5th Edition. New York: D. Van Nostrand, 1863. <<http://www.civilwarartillery.com/books/RobertsHandBookofArtillery.htm#P2s6SCA>>

The Civil War Artillery Page: Ammunition. Maintained by Chuck Ten Brink. October 2002. January 2003. <<http://www.cwartillery.org/artammo.html>>

U.S. Army Corps of Engineers, St. Louis District. Archives Search Report for Fort Hamilton. September 1998

## **Maps**

Map 1: Army-Headquarters-First Army. Fort Hamilton, New York, Buildings of Interests to Transients, 1950.

Map 2: Board of Officers. Reconstruction of Fort Hamilton, NY, 1906.

Map 3: Post Engineer's Office. Fort Hamilton, New York, 1953.

Map 4: Department of the Army. Site Plan of Fort Hamilton, 1962.

Map 5: Master Planner's Office. General Site Plan for Fort Hamilton, 1982.

Map 6: Corps of Engineers-New York District. Site Plan of Fort Wadsworth, 1981.

## **Interviews**

Mr. Craig Seba. Independent Contractor (Performance Group, Inc.) that serves as Installation GIS Program Manager, Fort Hamilton, NY. Decemebr 9, 2002.

Mr. Louis F. Aiese. Master Planner, Fort Hamilton, NY. December 9, 2002.

Mr. Peter Koutroubis. Supervisory Environmental Engineer, Fort Hamilton, NY. December 9, 2002.

Mr. Richard Cox. Museum Technician, Harbor Defense Museum, Fort Hamilton, NY. December 9, 2002.

## **J. NOTES**

The RAC scores provided for the battery fans in Tab G were calculated based on procedures established by Huntsville USACE. By following this procedure, a RAC score of 1 was assigned to the Hamilton Transferred-OW. This is indicative of the munition types and the urban location of the installation. However, the RAC worksheets are provided in this report as a site prioritization tool and they do not reflect the site risk.

**Tegtmeyer, Denise**

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**Subject:** FW: Fort Hamilton - DECISION

-----Original Message-----

From: Maly, Mary Ellen USAEC [mailto:maryellen.h.maly@us.army.mil]  
Sent: Friday, December 19, 2003 3:29 PM  
To: Ann Wood (E-mail); Polinsky, Heather  
Cc: Maly, Mary Ellen USAEC; Edwards, Dominique K USAEC; Albe, Mark A USAEC/Battelle; Bryant, Samuel W USAEC/Engineering & Environment, Inc.; Symalla, Thomas W USAEC  
Subject: Fort Hamilton - DECISION

Ann,

AEC has reviewed the supporting documentation for Fort Hamilton and has determined that the RAC scores for the 'Hamilton Closed Complex' and the 'Hamilton Transferred Complex' should be revised from their current score of "2" to a score of "5". The reasons for recommending these changes are as follows:

- a. An Archive Search Report (ASR) was prepared for Fort Hamilton in 1998. In this report, a RAC score for the range areas over land was calculated. A RAC of "5" was assigned. The ASR notes that although some munition items were found during construction activities in the 1960s (small arms cartridges, inert fuze and 2 WP grenades), the findings were determined to be isolated events and were not entered onto the ASR's RAC score sheets. No new information was uncovered by the inventory to dispute the ASR findings.
- b. As part of their quality assurance role for the Phase 3 Inventory, the Huntsville District reviewed the Fort Hamilton Phase 3 Inventory Report. Huntsville had two major comments regarding the way the RAC scores were calculated for the 'Hamilton Closed Complex' and for the 'Hamilton Transferred Complex'. They recommended that the RAC score all land areas covered by these two sites be changed from a "2" to a "5" because of all the construction on this land for "streets, housing, parking lots, sports fields and other types of buildings". They stated that "it is very unlikely that any ordnance would still be present" due to all this construction. Additionally, they mentioned the fact that the 1998 ASR had been reviewed and approved by the Ordnance and Explosives Center for Expertise Technical Advisory Group. Huntsville did agree with the RAC scores for the other sites in the Phase 3 Report.

AEC requests the following:

1. A Revised Final Phase 3 Inventory Report for Fort Hamilton should be

issued (change out pages are acceptable, if appropriate). Please distribute to all parties who received the final version of the report.

2. An updated ARID upload for Fort Hamilton should be submitted to replace the incorrect data.

Please contact me if you have any questions or concerns.

MEM

December 23, 2003

Ms. Ann Wood  
U.S. Army Corps of Engineers, Baltimore District  
10 South Howard St.  
CENAB-EN-HM (Attn: A. Wood RM 10000-F)  
Baltimore, MD 21201

Re: Final CTT Range/Site Inventory Report, Fort Hamilton, New York  
FFID: NY210220395  
Army Range Inventory  
Contract DACA-31-00-D-0043  
Delivery Order No. 7

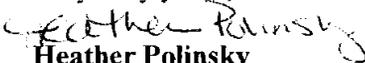
Dear Ms. Wood:

Malcolm Pirnie is pleased to provide to the Baltimore District these **Revised Final Closed, Transferred, and Transferring (CTT) Range/Site Report, Fort Hamilton, New York**. The Revised Final Report reflects the Army Environmental Center's (AEC) decision to change the RAC scores for the land portion of the range complex to a RAC 5. Attached are the original response to comments provided with the Final Report dated November 2003 and AEC's e-mail providing the rationale for the RAC score change. The RAC scores were also changed in the GIS and ARID CDs.

In total 5 copies of the Revised Final Report have been provided. Please replace the Final Report for Fort Hamilton, New York dated November 2003 with this Revised Final Report dated December 2003.

I apologize for the inconvenience. Please call me at 410-3230-9961 if you have any questions or comments.

Very truly yours,

  
**Heather Polinsky**  
MALCOLM PIRNIE, INC.  
Project Manager

CC:

Fort Hamilton – Mr. Peter Koutroubis (1 copy)  
AEC – Mr. Samuel Bryant (1 copy)  
AEC ROM– Unidentified (1 copy)  
USACE Huntsville – Mr. James Manthey (1 copy)

## Comments and Responses

### Closed, Transferring and Transferred (CTT) Range and Site Inventory Project

Site: Fort Hamilton

Date: 12/22/2003

Comment #	Reviewer	Section	Comment	Response	Response Explanation
1	Dennis J. Powers Acting Chief, Remedial Investigation and Design Section HTRW Branch	Page ES-2, Summary of Results, end of 4 <sup>th</sup> line	Please replace "Building" with "Buildings". Sentence should read as "Five buildings located.....".	N	The individual ranges have been combined together into complexes at the request of AEC and the installation. The comment no longer applies.
2	Dennis J. Powers Acting Chief, Remedial Investigation and Design Section HTRW Branch	Page B-3	Rather than present a brand new definition for "Operational Range," would it not be more efficient to say that an "Operational Range" is the sum total of an installation's "Active Range" and "Inactive Range" components?	N	AEC requested this definition be used.
3	Dennis J. Powers Acting Chief, Remedial Investigation and Design Section HTRW Branch	Page D-10, Battery Ayres- OW	Please replace "Fort Hamilton" with "Fort Wadsworth" on the 3 <sup>rd</sup> line.	N	The individual ranges have been combined together into complexes at the request of AEC and the installation. The comment no longer applies.
4	Dennis J. Powers Acting Chief, Remedial Investigation and Design Section HTRW Branch	Page D-11, Battery Barbour-OW	Please replace "Fort Hamilton" with "Fort Wadsworth" in the 3 <sup>rd</sup> sentence.	N	The individual ranges have been combined together into complexes at the request of AEC and the installation. The comment no longer applies.
5	Dennis J. Powers Acting Chief, Remedial Investigation and Design Section HTRW Branch	Page D-12, Battery Caitlin-OW	Please replace "2 acres" to "213 acres" on the 2 <sup>nd</sup> line.	N	The individual ranges have been combined together into complexes at the request of AEC and the installation. The comment no longer applies.

Response Codes:

A = Accept/Concur

N = Non-concur

M = Text modified to reflect comment

D = Deferred to later version

**MALCOLM  
PIRNIE**

## Comments and Responses

### Closed, Transferring and Transferred (CTT) Range and Site Inventory Project

Site: Fort Hamilton

Date: 12/22/2003

Comment #	Reviewer	Section	Comment	Response	Response Explanation
11	Dennis J. Powers Acting Chief, Remedial Investigation and Design Section HTRW Branch	Section G, RAC Analysis, Battery Bacon- OW	Please replace the "Total Hazard Probability Value" from 0 to 25.	N	The individual ranges have been combined together into complexes at the request of AEC and the installation. The comment no longer applies.
12	Mary Ellen Maly & Mark A. Albe for AEC	General	Based on the review of the information in this report, recommend that an evaluation be made by USACE, Malcolm Pirnie, and the installation POC to determine if this report could be greatly reduced and simplified through the 3 potential combination of ranges/sites located at each installation that are described in the report.	M	The report has been reduced in size.
13	Mary Ellen Maly & Mark A. Albe for AEC	Page D-3, CTT Range and Site Summaries, Fort Hamilton	Each site summary is missing a statement regarding Relative Location within the installation and UXO investigation and Response. Please ensure that this information is provided in the revised report.	M	Since the ranges were organized together into complexes, it is now hard to describe their location relative to the rest of the installation. A sentence about UXO investigations has been added to the range description.
14	Mary Ellen Maly & Mark A. Albe for AEC	General	Please ensure that in the final report the range acreages from overlapping fans are not doubly counted.	A	

Response Codes:

A = Accent/Concur

N = Non-concur

M = Text modified to reflect comment

D = Deferred to later version

**MALCOLM  
PIRNIE**

## Comments and Responses

### Closed, Transferring and Transferred (CTT) Range and Site Inventory Project

Site: Fort Hamilton

Date: 12/22/2003

Comment #	Reviewer	Section	Comment	Response	Response Explanation
16	Peter Koutroubis for Fort Hamilton Military Community	Tab G, RAC Scores	<p>The land surrounding Fort Hamilton and Fort Wadsworth (especially Fort Hamilton, since I'm not as familiar with Wadsworth, even though it's similar), is densely populated, urban, built-up landscape. My understanding from reading the report, is that some of this land is categorized as RAC 1. Are we then saying to these communities that they're most likely sitting on UXO? How does the Army want to handle this potentially adverse public relations situation?</p> <p>One of the reasons that the current US Army Garrison Fort Hamilton land is assigned a RAC 5, is that it has been developed (housing, roads, other structures, etc.) over the years, and no UXO has been found. The surrounding communities are identical. Why are we then setting different standards on what we consider RAC 1? And, as the Army isn't concerned with UXO on its property, the surrounding communities shouldn't be concerned with UXO on their private property. I recommend that the Army's CTT inventory program managers carefully reevaluate the situation, so that we can assign a reasonable RAC, based on the same standard, and at the same time, don't unnecessarily cause alarm to our neighbors and bad public relations for the Army.</p>	A/M	<p>AEC requested that the RAC scores be decided under a strict policy determined by the munitions used at the site. The approach suggested by the installation would not follow this policy. Therefore, the Phase 3 team was directed to maintain the higher RAC scores in the Final Report.</p> <p>After the Final Report was issued, AEC recommended that the RAC scores for the 'Hamilton Closed Complex' and the 'Hamilton Transferred Complex' should be revised from their current score of "2" to a score of "5". See attached email for additional details. Change-out pages have been issued to reflect this change.</p>

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**MALCOLM  
PIRNIF**