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FINAL PRELIMINARY ASSESSMENT WORK PLAN FOR MUNITIONS RESPONSE  
PROGRAM SITE UNEXPLODED ORDNANCE (UXO) 3 NWS YORKTOWN VA  
10/01/2011  
CH2M HILL



Final

# **Preliminary Assessment Work Plan Munitions Response Program Site UXO-3**

Naval Weapons Station Yorktown  
Yorktown, Virginia

October 2011

Contract No. N62470-11-D-8012 | CTO-WE03

prepared by **CH2MHILL.**

Final

**Preliminary Assessment Work Plan  
Munitions Response Program Site UXO-3**

**Naval Weapons Station Yorktown  
Yorktown, Virginia**

**Contract Task Order WE03**

**October 2011**

Prepared for

**Department of the Navy  
Naval Facilities Engineering Command  
Mid-Atlantic**

Under the

**NAVFAC CLEAN 8012 Program  
Contract N62470-11-D-8012**

Prepared by



**CH2MHILL®**

**Virginia Beach, Virginia**

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# Acronyms and Abbreviations

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CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CHE	Chemical Warfare Materiel Hazard Evaluation
CLEAN	Comprehensive Long-Term Environmental Action—Navy
CSM	conceptual site model
CTO	Contract Task Order
CWM	chemical warfare materiel
DERP	Defense Environmental Restoration Program
Det	Detachment
DMM	discarded military munitions
DoD	Department of Defense
EHE	Explosive Hazard Evaluation
EOD	Explosive Ordnance Disposal
ESQD	explosives safety quantity distance
GIS	geographic information system
HHE	Health Hazard Evaluation
MC	munitions constituent
MEC	munitions and explosives of concern
MMRP	Military Munitions Response Program
MR	munitions response
MRP	Munitions Response Program
MRS	munitions response site
MRSPP	Munitions Response Site Prioritization Protocol
NAVFAC	United States Naval Facilities Engineering Command
Navy	United States Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIRIS	Naval Installation Restoration Information System
NMC	Navy Munitions Command
PA	Preliminary Assessment
SI	Site Investigation
TNT	trinitrotoluene
USACE	United States Corps of Engineers
USEPA	United States Environmental Protection Agency
UXO	unexploded ordnance
VDEQ	Virginia Department of Environmental Quality
WPNSTA	Naval Weapons Station

# Background

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## 1.1 Introduction

This Work Plan presents the approach for conducting the Preliminary Assessment (PA) for Military Munitions Response Program (MMRP) Navy Munitions Command (NMC) Detachment (Det) Yorktown Site Unexploded Ordnance (UXO)-0003, Naval Weapons Station (WPNSTA) Yorktown, located in Yorktown, Virginia. Herein, the site will be referred to as UXO-3. This PA Work Plan has been prepared under the United States Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic, Comprehensive Long-Term Environmental Action—Navy (CLEAN) 8012, Contract Number N62470-11-D-8012, Contract Task Order (CTO) WE03. It provides guidance and procedures that will be followed to ensure sufficient and appropriate data are collected and presented during the PA. The UXO-3 PA will be used to determine if munitions and explosives of concern (MEC), including UXO, discarded military munitions (DMM), and munitions constituents (MCs), are potentially present at the site due to site operations. In addition, the PA will provide recommendations for additional investigations as part of a Site Investigation (SI), if necessary. This work plan also presents the preliminary conceptual site model (CSM) for UXO-3, which will assist the team in planning, interpreting data, and communicating throughout the PA process. This Work Plan has been prepared for review by the WPNSTA Yorktown Partnering Team, which consists of representatives from NAVFAC Mid-Atlantic, United States Environmental Protection Agency (USEPA) Region 3, and Virginia Department of Environmental Quality (VDEQ).

## 1.2 Preliminary Assessment Guidance

Munitions response (MR) activities, including this PA, will be performed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Guidance documents that will be used to perform the preliminary assessment include:

- *Guidance for Performing Preliminary Assessments under CERCLA* (USEPA, 1991)
- *Handbook on the Management of Munitions Response Actions* (USEPA, 2005)
- *Department of the Navy Environmental Restoration Program Manual* (Navy, 2006)
- *Recommendation for USEPA Regional Offices on Preliminary Assessments and Site Investigations for the Department of Defense Military Munitions Response Program* (USEPA, 2010).

## 1.3 Facility Background and Description

WPNSTA Yorktown is a 10,624-acre installation located on the Virginia Peninsula in York and James City Counties, Virginia. WPNSTA Yorktown is bounded on the northwest by Cheatham Annex and the Kings Creek Commerce Center, on the northeast by the York River and the Colonial Parkway, on the southwest by Route 143 and Interstate 64, and on the southeast by Route 238, Colonial National Historical Park and the community of Lackey (**Figure 1-1**).

Originally named the Navy Mine Depot, Yorktown, WPNSTA Yorktown was established in 1918 to support the laying of mines in the North Sea during World War I. For 20 years after World War I, the depot continued to receive, reclaim, store, and issue mines, depth charges, and related materials. During World War II, the facility was expanded to include three trinitrotoluene (TNT) loading plants and new torpedo overhaul facilities. A research and development laboratory for experimentation with high explosives was established in 1944. In 1947, a quality evaluation laboratory was developed to monitor special tasks assigned to the facility that included the design and development of depth charges and advanced underwater weapons. On August 7, 1959, the depot was renamed the Yorktown Naval Weapons Station. Today, the primary mission of WPNSTA Yorktown

is to provide ordnance, technical support, and related services to sustain the war-fighting capability of the armed forces in support of national military strategy (Navy, 2011).

## 1.4 Site Background and Description

UXO-3 is the current and former piers and pier area along the shoreline of the York River, comprising approximately 289 acres of water and including approximately 6,400 linear feet of standing concrete pier (current operational pier area known as Pier R-3) and remnants of a former wooden pier area where only pilings remain (former Pier R-1) (**Figure 1-2**). For the purposes of the PA, delineation of the site follows the Code of Federal Regulations (CFR), Title 33, Paragraph 334.260.a.1:

*Naval Mine Service Testing Area (Prohibited) [UXO-3] - [a rectangular area surrounding the piers] and extending upstream therefrom, beginning at a point on the shore line at latitude 37°15'25" N., longitude 76°32'32" W.; thence to latitude 37°15'42" N., longitude 76°32'06" W.; thence to latitude 37°15'27" N., longitude 76°31'48" W.; thence to latitude 37°15'05" N., longitude 76°31'27" W.; thence to a point on the shore line at latitude 37°14'51"N., longitude 76°31'50" W.; and thence along the shore line to the point of beginning.*

UXO-3 is separated from WPNSTA Yorktown by the Colonial Parkway, which borders the southwestern edge of the site. Access to UXO-3 is limited to Navy personnel and vessels, per 33 CFR 334.260. This site has recently been opened under the Navy's MMRP and is designated as UXO-3.

Both a current pier and former pier are located within the site. Former Pier R-1 was a wooden pier constructed in 1919, the year after the Navy Mine Depot, Yorktown opened, to facilitate munitions loading to ships at WPNSTA Yorktown (WPNSTA Yorktown Public Affairs, 2008). Prior to the construction of the pier, munitions loading and handling reportedly occurred in the York River from barge to ship, possibly outside the boundaries of Site UXO-3. The wooden pier was badly damaged by the Chesapeake-Potomac Hurricane in 1933 and again by fire in 1954. In the 1990s, Pier R-1 was referred to as a recreational pier by the United States Corps of Engineers (USACE) (1993). Currently, even at low tide there are no visible pilings or other remains from Pier R-1, though pilings may remain below the water level.

In the 1940s, construction began on what is now the current concrete pier, Pier R-3, immediately adjacent to Pier R-1. Pier R-3 was originally L-shaped and consisted of only the eastern arm of the current pier and a portion of the cross-member. In the 1950s, Pier R-3 was completed to the current U-shape.



**Legend**

-  Yorktown Base Boundary
-  UXO-3 Boundary
-  Interstate 64
-  Major Roads
-  Water Features



0 2,250 4,500  
Feet

Figure 1-1  
Installation Location Map  
Preliminary Assessment Work Plan  
WPNSTA Yorktown  
Yorktown, Virginia



**Legend**

-  Yorktown Base Boundary
-  Location of former pier known as Pier R-1 (submerged pilings may remain)
-  Pier R-3
-  UXO-3 Boundary
-  Colonial Parkway

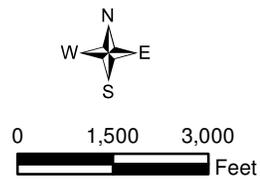


Figure 1-2  
UXO-3 Location and Vicinity  
Preliminary Assessment Work Plan  
WPNSTA Yorktown  
Yorktown, Virginia

## SECTION 2

# Objectives and Scope

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This PA Work Plan presents the procedures for conducting the PA for UXO-3. It provides guidance that must be followed to ensure sufficient and appropriate data are collected and presented in the PA Report. It also presents the preliminary CSM, which will assist the team in planning, interpreting data, and communicating throughout the PA, and will help the team draw logical conclusions about the potential presence of MEC in the vicinity of UXO-3. The CSM will be treated as a living document and will be revised as new information is identified at the site. This Work Plan will establish the methods to be used to accomplish these objectives.

The general objectives of the PA are to:

- Eliminate from further consideration those areas that pose no threat to public health or the environment
- Identify areas requiring further investigation prior to arriving at decisions on the need (or lack of need) for MR actions
- Identify the need for an accelerated remedial action or removal action due to an imminent threat to human health or the environment, if identified
- Evaluate the area to prioritize or sequence with other sites for further action and the determination of costs to complete cleanup (if any required)

To accomplish these objectives, the scope of work includes a desktop review of all available data and the performance of interviews with appropriate personnel. The findings will be compiled into a PA Report that will ultimately provide recommendations for either no further action or additional investigations as part of a SI.

## SECTION 3

# Data Collection

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The PA process will involve collecting and reviewing existing and available information associated with munitions activities that may have resulted in MEC being present at UXO-3. If data gathered during the PA indicates that activities at UXO 3 may have resulted in MEC in areas outside of the site (particularly the restricted area or the Munitions Handling Berth referenced in 33 CFR 334.260), the PA may include recommendations for additional investigations to be performed for these areas. Data collection activities will include offsite and onsite archival research and interviews.

## 3.1 Desktop Data

Desktop data consists of data collected from file sources, historical records reviews, and site-specific, in-house files, where applicable. NAVFAC and WPNSTA Yorktown security classification guidelines pertaining to document duplication and removal will be followed. The majority of information gathered will be through national and local archive/file searches and desktop information collection and analysis.

Local archive and desktop data sources may include the following resources:

- Internet
  - Naval Installation Restoration Information System (NIRIS)
  - USEPA Website
  - VDEQ Website
  - York County Website
- Previous investigation reports
- Libraries
  - USACE Norfolk District Library
  - Virginia Institute of Marine Science Library
  - Hampton Roads Naval Museum Reference Library
  - York County Public Library System
- Newspapers
- York County public records
- CFR
- Federal Register
- WPNSTA Yorktown Facilities Operations records

National archive data sources and data repositories may include the following resources:

- Navy Range Inventory Database
- National Archives and Historical Information Facilities (Washington, D.C. and College Park, Maryland)
- NAVFAC real estate archives
- Current Naval Explosive Ordnance Disposal (EOD) Operations Database.

The appropriate data-handling processes will be followed for each type of datum.

The following information will be gathered and reviewed during the archive search where available:

- Maps and aerial photographs, including photogrammetry and orthophotos of UXO-3

- Environmental, cultural, and historical conditions
- Environmental surveys, studies, or assessments, where available, including:
  - Physical investigations
  - Chemical sample results
  - Results from previous surface clearances/maintenance, geophysical surveys, and sampling programs
  - Identification of potential pathways and receptors
- Munitions-related operations records
  - Munitions handling and storage procedures
  - Types and quantities of munitions handled
  - ESQD arcs
  - Dates and durations of munitions-related operations
- Reports of MEC being discovered
- EOD reports
- Real estate records
- Environmental cleanup record
- River dredging records
- Newspaper articles
- Ordnance inventory records
- Property reuse, transfer plans (zoning plans, deeds), and installation Master Plans
- Available geographic information system (GIS) data

Additional resources and information may also be used, if identified, during the desktop study.

### 3.1.1 Desktop Data Documenting

Copies of all pertinent data will be kept and filed as permitted. A Document Log Sheet (**Attachment 1**) entry will be made at the time of collection. This log will include the following information:

- Data source
- Date/time collected
- Employee name
- Facility/activity providing document
- Document title
- Disposition of document

All documentation collected will be scanned (if hard copy) and uploaded to the local secure server in the specified file folder.

### 3.1.2 Graphic Information System/Spatial Data Documentation

The collected GIS/spatial data will be uploaded and verified by GIS personnel for spatial correctness. Metadata will be kept to identify any adjustments made to collected spatial data. Adjustments can include:

- Geographic coordinate adjustments
- Data set reduction/extraction
- File structure changes

A Document Log Sheet (**Attachment 1**) entry will be made at the time of data collection.

## 3.2 Interview Data

Interviews will be conducted with current WPNSTA Yorktown personnel and active and retired Department of Defense (DoD) civilian and military personnel capable of providing pertinent information regarding UXO-3. The goal of these interviews is to validate and verify data collected during the desktop data collection and review, and to identify other potential information not previously available. Personnel to be interviewed will be identified through several sources:

- References from base personnel
- Identification by name during archival records review
- Solicitation through approved base resources

Names of potential interviewees will be provided to the Navy Technical Representative for approval before any interviews are conducted. No contact will be made with potential interviewees until proper approval has been received.

### 3.2.1 Interview Data Documentation

Each interview session will be logged using an Interview Log Sheet (**Attachment 2**). To expedite the interview process, log entries may be transcribed from recordings collected during the interview, or notes taken during the interview. Interview records will be uploaded to a specified file folder on CH2M HILL's internal server located in the Virginia Beach, Virginia office.

# Conceptual Site Model

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This section summarizes the preliminary CSM (**Figure 4-1**) for UXO-3. The CSM is a description of the area and the environment based on existing knowledge, which will serve as a planning instrument, a modeling and data interpretation aid, and a communication device among team members and between team members and the general public. The PA investigation and desktop review will likely generate a large amount of information and references that will be used to update or modify the preliminary CSM. This section summarizes the information and knowledge that is currently represented in the CSM. The CSM will be continually updated and refined throughout the PA development as data are collected and additional information becomes available.

Guidance documents for the preparation of CSMs for munitions sites include the following:

- *Handbook on the Management of Munitions Response Actions* (USEPA, 2005)
- *Conceptual Site Models for Ordnance and Explosives (OE) and Hazardous, Toxic, and Radioactive Waste (HTRW) Projects* (USACE, 2005)

## 4.1 Profile Development

The following profiles have been defined to develop the preliminary CSM:

- **Facility Profile**—Describes the man-made features and potential sources for munitions at or near UXO-3
- **Physical Profile**—Describes physical factors that may affect release, fate, transport, and access to potential items of concern
- **Release Profile**—Describes the movement, possible migration, and extent of contaminants in the environment
- **Land Use and Exposure Profile**—Provides information used to identify and evaluate the applicable exposure scenarios, receptors, and receptor locations
- **Ecological Profile**—Describes the natural habitats and ecological receptors in the areas of concern

These profiles will continue to be reviewed and revised throughout the iterative development of the CSM. The preliminary profiles for UXO-3 are presented in the following subsections. An updated CSM will be included as part of the PA report.

### 4.1.1 Facility Profile

Detailed descriptions of WPNSTA Yorktown and UXO-3 are provided in **Sections 1.3** and **1.4**, respectively.

### 4.1.2 Physical Profile

UXO-3 is located along the southern shore of the York River. The York River is a brackish tidal estuary of the lower Chesapeake Bay. The area of concern is completely submerged in the river and is subject to tidal influence. The depth of the water from the shoreline to beneath the inboard edge of the cross-member of Pier R-3 ranges from approximately 1 foot to 20 feet, with a gradual increase in depth from the shore to the cross-member of the pier. Along the cross-member of Pier R-3 the depth is approximately 15 feet to 47 feet, with the shallower areas along the inboard edge of the pier and deeper areas along the outboard edge of the pier (NOAA, 2008). Dredging is required to maintain the depths along the cross-member of Pier R-3.

Submerged pilings are present within the inboard area of Pier R-3 and the remains of Pier R-1 are located immediately to the southeast of Pier R-3. Currently, all persons and all vessels other than authorized naval ships are forbidden to enter UXO-3; this is enforced by the Commander Naval Base, Norfolk, Virginia (33 CFR 334.260).

The potential presence of MEC surrounding Piers R-3 and R-1, and the possible release of MCs through degradation of the MEC, may require additional research and investigation.

### 4.1.3 Release Profile

Because the PA has not yet been conducted, the release profile is not fully developed. It is currently assumed that the areas of potential concern at UXO-3 are the areas immediately surrounding Piers R-3 and R-1, where ordnance loading and unloading activities may have resulted in munitions being dropped into the York River. The number and types of MEC that may have been released are currently not known. Although the probable location for the items that may have been released is local to the pier areas, the potential exists for migration of the ordnance from underwater currents, tide, and flooding. These migration modes may result in changes in location or additional sediment covering the MEC. Relocation or movement of MEC items may also have occurred from physical processes such as dredging, entanglement in fishing nets/gear, construction activities, and investigation activities/human contact.

### 4.1.4 Land Use and Exposure Profile

Federal regulations currently prevent access to the water area within UXO-3 (**Figure 1-2**).

Currently, Pier R-3 is in operation as an ordnance handling, loading, and unloading facility. Pilings associated with Pier R-1 likely remain beneath the water surface. The 289 acres around the two piers represent a prohibited area limited to Navy use only. The planned future land use for Pier R-3 area will be to continue operating as a loading/unloading point for ordnance materials. Potential future human receptors may include Navy personnel, future construction workers (for maintenance activities at the pier or on ships, demolition of damaged portions of the pier, or river dredging), trespassers, recreational walkers along the coastline, recreational swimmers, fisherman and divers that may conduct activities outside of UXO-3. Although ecological receptors do not typically engage in activities that expose them to ordnance, ecological receptors may be affected by release of MC through degradation or potential activities in support of MR, such as blow-in-place operations.

### 4.1.5 Ecological Profile

Potential MC releases and future activities at or near the areas of concern, such as investigations and MEC detonations, may impact ecological receptors. The shoreline bordering UXO-3 is primarily beach and lightly wooded areas. The York River provides a variety of aquatic habitat types for a number of ecological receptors. Several species of submerged aquatic vegetation and a variety of fringing marsh species occur in the oligohaline/mesohaline aquatic habitats present. The river also supports a diverse array of estuarine benthic-dwelling organisms, including insects, annelids, mollusks, and crustaceans (VIMS, 2009). Additionally, aquatic organisms, particularly estuarine and marine fish, inhabit the river and surrounding areas. Avian and mammalian wildlife are also potential ecological receptors.

## 4.2 Pathway Analysis

Potential source-receptor interactions are defined in this section to identify the potential for exposure to the possibility of MEC at UXO-3. There are three key components to be considered during pathway analysis. For UXO-3, these items are defined below.

### 4.2.1 Source

The source of the potential MEC was previously defined as the loading and unloading operations where ordnance items may have been dropped or mishandled and released into the York River at UXO-3. This may have occurred at Pier R-1 or R-3 within the area of UXO-3. As previously discussed, the exact location, quantity, and depth of items potentially released are currently unknown. It is anticipated that ordnance items that may have been dropped from the pier areas are either on the surface of the riverbed floor or are partially or completely buried in the sediment.

## 4.2.2 Receptors

Current and future receptors are identified in the previous sections. They are Navy personnel, construction workers, recreational walkers/swimmers/divers, fishermen, and trespassers. Ecological receptors at UXO-3 include aquatic vegetation (wetlands), benthic organisms, estuarine and marine fish, and wildlife.

## 4.2.3 Interaction

Source-receptor interaction at UXO-3 could occur in the following ways:

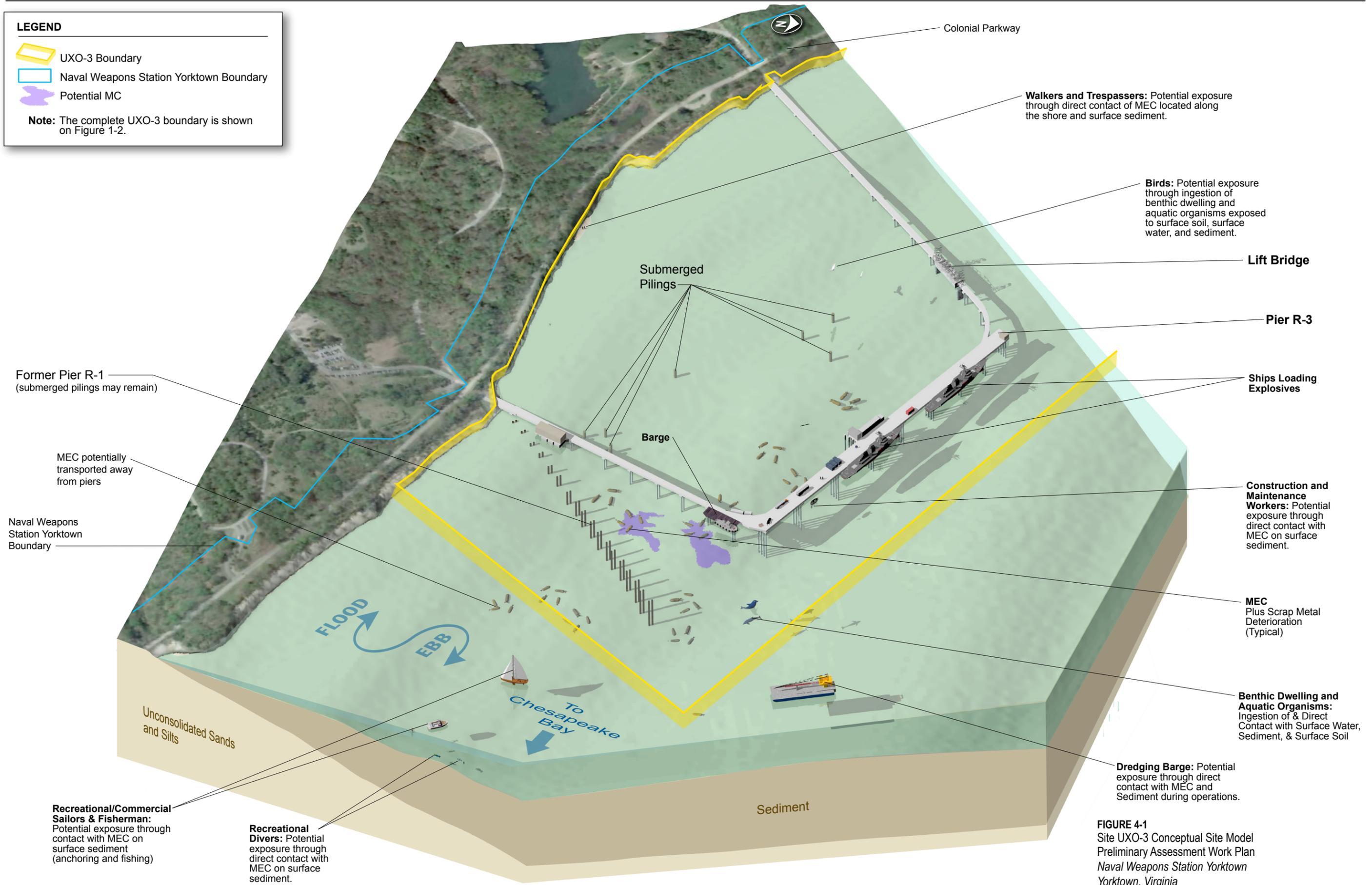
- Construction workers encountering MEC during pier or vessel maintenance and repairs, demolition, or during future construction activities in or around the pier (such as digging or dredging)
- Fishermen outside of UXO-3 contacting MEC while fishing, trolling, or crabbing, or by munitions items becoming entangled in fishing nets or gear
- Recreational swimmers and divers encountering MEC during swimming and diving outside of UXO-3
- Site workers encountering MEC during investigations, sampling activities, or ecological studies
- Ecological receptors exposed to MC released from deteriorated MEC items
- Ecological receptors exposed to MC and other dangers during detonation of MEC

Access of human receptors to the locations of the potential MEC may be limited by the depth of the water near the pier area and the security restriction in the area. However, it may be possible for MEC to have washed up on the shoreline outside of the prohibited area of the Site, allowing contact by recreational walkers, or for MEC to have been transported outside of the site and for recreational human receptors to potentially come in contact. Ecological receptors such as fish and other aquatic species have unrestricted access to potential MC through direct contact (sediment and water) of lower trophic-level species (i.e., benthic and aquatic organisms). Wildlife may be exposed to these constituents through ingestion of chemicals that have accumulated in prey, ingestion of surface water, and incidental ingestion of sediment while foraging or grooming. The activity associated with each source-receptor interaction is presented in the bulleted items above.

**LEGEND**

-  UXO-3 Boundary
-  Naval Weapons Station Yorktown Boundary
-  Potential MC

**Note:** The complete UXO-3 boundary is shown on Figure 1-2.



**FIGURE 4-1**  
 Site UXO-3 Conceptual Site Model  
 Preliminary Assessment Work Plan  
 Naval Weapons Station Yorktown  
 Yorktown, Virginia

## SECTION 5

# MRSP Protocol Development

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In 2001, Congress directed that the DoD identify and then prioritize their munitions response sites (MRSs). The Munitions Response Site Prioritization Protocol (MRSP) is an approach used by the DoD as a tool for assigning a relative priority for munitions response activities at MRSs. The protocol provides a uniform procedure for assessing explosives safety risk at MRSs and is comprised of three hazard evaluation modules: Explosive Hazard Evaluation (EHE) module, the Chemical Warfare Materiel Hazard Evaluation (CHE) module, and the Health Hazard Evaluation (HHE). An MRS priority is determined based on the ratings from the EHE, CHE, and HHE modules.

The MRSP consist of Tables 1 through 29 which evaluate and rank the following modules:

- EHE module's (MRSP Tables 1 through 10) data elements include explosive hazard (munitions type and source of hazard), accessibility (location of munitions, ease of access and status of property) and receptors (populations density, population near hazard, types of activities/structures and ecological and/or cultural resources).
- CHE module's (MRSP Tables 11 through 20) data elements include the chemical warfare materiel (CWM) hazard, accessibility and receptors.
- HHE module's (MRSP Tables 21 through 28) data elements include a contaminant hazard ranking, migration pathway ranking and receptor ranking.
- MRS Ranking (Table 29) determines the MRS priority ranking.

If the PA research identifies the potential presence of MEC at the site, the MRSP scoring will be completed and included as part of the PA report. For each of the three modules, data elements for UXO-3 will be assigned a numeric value and the sum of these values will be used to determine the MRS priority rating. The site will be assigned to one of eight MRS priorities based on the ratings of the three modules, where Priority 1 indicates the highest potential hazard and Priority 8 the lowest potential hazard. This priority will be compared against all other identified MMRP sites for response prioritization of future actions.

# Preliminary Assessment Report

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A PA Report will be prepared to summarize the results of the desktop study. At a minimum, the PA report will contain six sections, which will be organized as follows:

- **Section 1, Introduction:** Details the purpose of the PA report and the report structure.
- **Section 2, Summary of Data Collected and Review of Information:** Reviews and summarizes data collection activities, MEC inventory and classification, and Defense Environmental Restoration Program (DERP) Management Guidance (MMRP eligibility) for inclusion in MMRP site inventory.
- **Section 3, UXO-3 Description, Operational History, and Waste Characteristics:** Describes the history, location, and operations of WPNSTA Yorktown and UXO-3. It will also provide details of the physical setting of the areas of concern, including boundaries, climate, terrain, access restrictions, vegetation, geology, hydrology, hydrogeology, soil characteristics, and adjacent land use. Additionally, a narrative on natural and cultural resources within WPNSTA Yorktown, and a summary of relevant completed previous investigations will be included.
- **Section 4, Pathway and Hazard Assessment:** Presents the CSM, discusses the MEC and explosive hazards, identifies other constituents of concern, presents the population summary (demographics), and summarizes the development of the MRSPP. Tables 1 through 29 of the MRSPP will be completed, to the maximum extent possible, and included as an appendix to the PA Report.
- **Section 5, Conclusions and Recommendations:** Identifies the ordnance and explosive risks, identifies risks associated with any other constituents, and provides recommendations for next steps.
- **Section 6, References:** Lists documents and sources cited or used in the development of the PA Report.

SECTION 7

# Schedule

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The following schedule is anticipated for PA activities. Based on the proposed document submission and review schedule, the start date for the records search is anticipated to be fall 2011.

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Event	Completion Date
Final PA Work Plan	October 2011
Records Search	December 2011
Draft PA Report	February 2012
Final PA Report	May 2012

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## SECTION 8

# References

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The following references were consulted during the preparation of this PA Work Plan. Not all are cited in the text.

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**Attachment 1**  
**Document Log Sheet**

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**Attachment 2**  
**Example Interview Log Sheet**

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## EXAMPLE INTERVIEW LOG SHEET

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**Interviewee:**

**Date and Location:**

**Interviewer:**

*Note: This record was not transcribed from a recorded conversation. It was reconstructed from interview notes, so the conversation is paraphrased.*

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*What is/was your affiliation with the site?*

*What is/was your position?*

*What were your responsibilities at the base dealing with munitions, pier-side maintenance activities, and/or emergency response for munitions related activities?*

*What types of ordnance or military munitions were used?*

*Where did munitions loading activities occur (please provide time frame if possible)?*

*Do you know of any areas of concern, possible drop points, or areas where MEC may have been released?*

*Do you know of any previous incidents involving MEC at or near the site?*

*Do you know of any disposal operations or dumping that may have occurred at or near the site?*

*Other information?*