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FINAL EXPANDED SITE INSPECTION REPORT MUNITIONS RESPONSE PROGRAM AREA UNEXPLODED ORDNANCE 1 (UXO 1) ST JULIENS CREEK ANNEX VA

6/1/2013

CH2M HILL

Final

Expanded Site Inspection Report
Munitions Response Program Area UXO 1

St. Juliens Creek Annex
Chesapeake, Virginia

Contract Task Order WE10

June 2013

Prepared for

Department of the Navy
Naval Facilities Engineering Command
Mid-Atlantic

Under the

NAVFAC CLEAN 1000 Program
Contract N62470-08-D-1000

Prepared by

CH2MHILL

Virginia Beach, Virginia

Declaration

Site Name and Location

Area UXO 1 – Wharf Area Sediments
St. Juliens Creek Annex
Chesapeake, Virginia

Statement of Basis and Purpose

This Statement of Basis and Purpose and stakeholder signatures documents the conclusion that no further action (NFA) is necessary to ensure protection of human health and the environment at Area Unexploded Ordnance (UXO) 1, St. Juliens Creek Annex (SJCA), Chesapeake, Virginia. This determination has been made in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan. This decision is based on the Expanded Site Inspection (ESI) report and information contained in the Administrative Record for the site. The United States Navy (Navy), in partnership with the United States Environmental Protection Agency (USEPA) Region 3 and Virginia Department of Environmental Quality (VDEQ), concurs with the NFA determination.

Rationale for No Further Action Determination

Based on the results of the ESI, no potentially unacceptable human health or ecological risks and no contaminant releases were identified at Area UXO 1. Because there are no hazardous substances, pollutants, or contaminants remaining onsite above levels that prevent unlimited use and unrestricted exposure, NFA is necessary for the site.

Authorizing Signatures

Krista Parra — 6/25/13
Krista Parra — Date
Remedial Project Manager
Naval Facilities Engineering Command, Mid-Atlantic

6-28-13
Robert Stroud — Date
Remedial Project Manager
United States Environmental Protection Agency Region 3

6-26-13
Karen Doran — Date
Remedial Project Manager
Virginia Department of Environmental Quality

Executive Summary

This report summarizes the Expanded Site Inspection (ESI) conducted at Munitions Response Program (MRP) Area Unexploded Ordnance (UXO) 1 located at St. Juliens Creek Annex (SJCA) in Chesapeake, Virginia. The ESI was performed under Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Contract Number N62470-08-D-1000, Contract Task Order WE10, and Contract Number N62470-11-D-8012, Contract Task Order WE11, to evaluate whether or not a Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)-regulated release has occurred at UXO 1 that warrants further action. The primary objective of the investigation was to assess whether or not there is evidence that historical ordnance loading activities at the wharfs at Area UXO 1 resulted in munitions and explosives of concern (MEC) being dropped into the Southern Branch of the Elizabeth River.

This ESI report was prepared under the NAVFAC Mid-Atlantic Contract Number N62470-08-D-1000, Contract Task Order WE10, for submittal to the SJCA Tier I Partnering Team, consisting of representatives from NAVFAC Mid-Atlantic, the United States Environmental Protection Agency (USEPA) Region 3, and the Virginia Department of Environmental Quality (VDEQ).

Area UXO 1 includes current and former wharf areas at SJCA. Anecdotal evidence obtained through individual interviews indicated there is potential for munitions to have been dropped during historical loading operations, resulting in the presence of MEC, in particular discarded military munitions (DMM), in the sediment adjacent to the wharfs. Previous investigations, including an Initial Assessment Study (IAS) (NEESA, 1981), Relative Risk Ranking (RRR) (CH2M HILL, 1996a), Site Screening Assessment (SSA) (CH2M HILL, 1996b), Sonar Imagery (United States Naval Underwater Construction Team, 2008), Preliminary Assessment (PA) (CH2M HILL, 2009), and Site Inspection (SI) (CH2M HILL, 2010), identified metallic anomalies around the two wharf areas; however, no MEC had been encountered at Area UXO 1. During the 2010 SI, an underwater geophysical survey was conducted to the extent practicable using digital geophysical mapping (DGM) techniques within the northern and southern wharf areas to evaluate the potential for MEC to be present in the vicinity of the former wharfs by identifying geophysical anomalies on or buried in the river sediment. An evaluation of the SI data identified 1,651 ferrous anomalies at the wharf areas. Based on these results, the SI report (CH2M HILL, 2010) recommended investigating and visually inspecting a selected subset of anomaly sources identified during the SI, as well as investigating potential metallic debris from areas where DGM data were not able to be collected.

In July and August 2012, this ESI was conducted to determine if a subset of the anomaly sources identified during the DGM survey represented MEC, and to determine whether or not munitions constituents (MC) were present at detectable concentrations in site sediment. The ESI consisted of metallic debris acquisition at 15 locations using a barge-mounted electromagnet and raking system and the collection of sediment samples from 15 investigation locations. Of the 1,580 pounds of metallic debris recovered, no MEC items were discovered during the investigation.

Sediment sampling at the 15 investigation locations resulted in only one analyte (2,4,6-trinitrotoluene [TNT]) being detected at three locations. Of these three detections, none exceeded the human health risk project action limit (PAL) and only one exceeded the ecological risk PAL. The human health risk screening (HHRS) and ecological risk screening (ERS) concluded that the chemical concentrations detected in the sediment samples did not present unacceptable human health or ecological risks.

The ESI resulted in no MEC being identified at any of the investigation locations, limited detections of chemical concentrations in sediment, and no unacceptable human health or ecological risks. Based on the results of the ESI, no further investigation of anomaly sources or analytical sampling to characterize the nature and extent of contamination or to further evaluate the presence of MEC is warranted for Area UXO 1.

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Acronyms and Abbreviations

°F	degree Fahrenheit
BTAG	Biological Technical Assistance Group
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
COPC	chemical of potential concern
CSM	conceptual site model
DFOW	definable feature of work
DGM	digital geophysical mapping
DMM	discarded military munitions
DoD	Department of Defense
EOD	explosive ordnance disposal
ESI	Expanded Site Inspection
ERS	ecological risk screening
ESS	Explosives Safety Submission
GPS	global positioning system
HHRS	human health risk screening
HMX	high melting explosive
HQ	hazard quotient
IAS	Initial Assessment Study
IDW	investigation-derived waste
IRP	Installation Restoration Program
MC	munitions constituents
MEC	munitions and explosives of concern
mg/kg	milligram per kilogram
MRP	Munitions Response Program
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol
msl	mean sea level
NAVFAC	Naval Facilities Engineering Command
Navy	United States Navy
NFA	no further action
NOAA	National Oceanic and Atmospheric Administration
NOEC	No Observed Effect Concentration
OER	Ordnance & Explosives Remediation, Inc.
PA	Preliminary Assessment
PAL	project action limit
PETN	pentaerythritol tetranitrate
QA	quality assurance
QC	quality control
QCP	Quality Control Plan
RDX	cyclotrimethylenetrinitramine
RRR	Relative Risk Ranking
RSL	Regional Screening Level

SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act of 1986
SI	Site Inspection
SJCA	St. Juliens Creek Annex
SSA	Site Screening Assessment
SUXOS	Senior Unexploded Ordnance Supervisor
TNT	trinitrotoluene
USEPA	United States Environmental Protection Agency
UXO	unexploded ordnance
UXOQCS	Unexploded Ordnance Quality Control Specialist
VDEQ	Virginia Department of Environmental Quality
VDH	Virginia Department of Health

SECTION 1

Introduction

This report summarizes the Expanded Site Inspection (ESI) that was conducted at Munitions Response Program (MRP) Area Unexploded Ordnance (UXO) 1, which is associated with St. Juliens Creek Annex (SJCA) in Chesapeake, Virginia. The ESI was performed under Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Contract Number N62470-08-D-1000, Contract Task Order WE10, and Contract Number N62470-11-D-8012, Contract Task Order WE11. Field activities were initiated on July 30, 2012, and completed on August 14, 2012. The investigation was conducted in accordance with the following documents:

- *Anomaly Acquisition and Investigation Work Plan, Area UXO 1* (CH2M HILL, 2012a), herein referred to as the ESI work plan
- *Sampling and Analysis Plan, Anomaly Acquisition and Investigation, Area UXO 1* (CH2M HILL, 2012b), herein referred to as the Sampling and Analysis Plan (SAP)
- *Explosives Safety Submission for Area UXO 1 Site Inspection* (CH2M HILL, 2012c), herein referred to as the Explosives Safety Submission (ESS)

This ESI report was prepared for NAVFAC Mid-Atlantic under Contract Number N62470-08-D-1000, Contract Task Order WE10, for submittal to the SJCA Tier I Partnering Team, consisting of representatives from NAVFAC Mid-Atlantic, the United States Environmental Protection Agency (USEPA) Region 3, and the Virginia Department of Environmental Quality (VDEQ).

An underwater digital geophysical mapping (DGM) survey conducted during the 2010 Area UXO 1 Site Inspection (SI) identified 1,651 geophysical anomalies located on or within the river sediment (CH2M HILL, 2010). The 2012 ESI consisted of the following:

- Acquisition of metallic debris at 15 investigation locations selected on the basis of the results of the 2010 SI
- Inspection of each item to determine if munitions and explosives of concern (MEC) were present
- Collection of sediment samples from the 15 investigation locations and laboratory analysis of the sediment samples for select munitions constituents (MC)

In accordance with the SAP, the ESI was performed to answer the following questions:

- Are MEC, presumably discarded military munitions (DMM), present in the sediment within the selected underwater areas of anomaly sources at Area UXO 1?
- Has the presence of DMM at Area UXO 1 resulted in a release of contaminants to the surrounding environment?
- What is the overall explosive risk associated with DMM in sediment?

SECTION 2

Site Description and Background

2.1 Site Description and Location

SJCA covers an area of approximately 490 acres and is situated at the confluence of St. Juliens Creek and the Southern Branch of the Elizabeth River in the City of Chesapeake in southeastern Virginia (**Figure 2-1**). Most surrounding areas are developed and include residences, schools, recreational areas, and shipping facilities for several large industries.

SJCA was one of the largest ammunition depots in the United States involving wartime transfer of ammunitions to other naval facilities. Specific ordnance operations and processes conducted at SJCA included stockpiling Explosive D (ammonium picrate or picrate acid) for use in projectiles, manufacturing Mark VI mines, assembling small-caliber guns and ammunition, storing torpedoes, filling shells, testing ordnance, distributing and receiving ammunition, and acting as a test loading facility for new ammunition types for the Bureau of Ordnance. Ammunition loading and unloading operations were conducted on three wharfs. By 1975, all ordnance operations had been transferred to Naval Weapons Station Yorktown. As a result, decontamination was performed in, around, and under ordnance-handling facilities at SJCA in 1977.

SJCA has also provided non-ordnance services, including degreasing operations; operation of paint shops, machine shops, vehicle and locomotive maintenance shops, pest control shops, battery shops, print shops, electrical shops, boiler plants, wash racks, and potable water and salt water fire-protection systems; firefighter training; and storage of oil and chemicals.

Activity at SJCA has decreased in recent years and many of the aging structures are being demolished. The current primary mission of SJCA is to provide a radar-testing range and various administrative and warehousing facilities for nearby Norfolk Naval Shipyard and other local naval activities. SJCA also provides administrative offices, light industrial shops, and storage facilities for several tenant commands, including Defense Reutilization and Marketing Office storage, Space and Naval Warfare Systems Command, Fleet and Industrial Supply Center, Norfolk Integrated Logistics Support, and a cryogenics school.

Area UXO 1 includes the current and former wharf areas along the shoreline of the Southern Branch of the Elizabeth River (**Figure 2-2**). The site comprises approximately 2,230 linear feet of shoreline associated with the current and former wharfs (Wharf 1, Wharf 2, and Wharf 3). The Area UXO 1 MRS consists of two areas within the Southern Branch of the Elizabeth River, the southern wharf area (Wharf 1 and Wharf 2) and the northern wharf area (Wharf 3). The acreages associated with the MRS for the southern and northern wharf areas are 7.4 acres and 6.7 acres, respectively.

Construction of the southern wharf area, consisting of Wharf 1 and Wharf 2 located in the southeast portion of SJCA, was initiated in 1903. During World War II, the two wharfs were joined together and an extension, referred to as the dolphin pier/lighter storage area, was added to support increased munitions production. Ordnance loading activities continued until the early 1970s, when production declined commensurate with the disengagement policy and the reduced operations in Southeast Asia. The southern wharf was damaged in 1975 when it was struck by two ships; however, portions of the wharf are still functional. The northern wharf, consisting of Wharf 3, was constructed in 1917 adjacent to Buildings M-5 and 190. The wharf was historically used for loading Mark VI mines, and was partially demolished in 1933 for fire prevention reasons. Presently, only the pilings from Wharf 3 remain.

It is assumed that the various types of ordnance and ammunition handled at SJCA may have been loaded at the Area UXO 1 wharfs throughout the site's history in addition to non-munitions related items. These ordnance and ammunition items included Explosive D, Mark VI mines, small caliber ammunitions, torpedoes, and projectiles. The volume of materials transferred at the Area UXO 1 wharfs over time is not known.

2.2 Previous Site Investigations

2.2.1 Initial Assessment Study (NEESA, 1981)

An Initial Assessment Study (IAS) was conducted to systematically identify, assess, and control contamination of the environment resulting from past hazardous materials storage, transfer, manufacturing, and disposal operations. The IAS report indicated that explosive ordnance disposal (EOD) divers visually searched the northern wharf area (at that time defined as Installation Restoration Program [IRP] Site 20) and identified metal and thick silt deposits near the former wharf (**Figure 2-1**). The IAS report indicated that it was a reasonable assumption that ordnance had been dropped into the sediment adjacent to the former wharf area during loading and unloading operations. The assumed ordnance presence was not considered a hazard as long as the sediment was not disturbed.

2.2.2 Relative Risk Ranking (CH2M HILL, 1996a)

The Relative Risk Ranking (RRR) was conducted in 1996 as a part of the basewide effort to determine which sites may require further investigation and to prioritize those sites where further investigative work is needed. During the RRR, a site reconnaissance, a magnetic anomaly survey, and sediment sampling were conducted at IRP Site 20 (northern wharf area). Approximately 68 magnetic anomalies were identified from the magnetic anomaly survey in three areas around the former wharf pilings; however, magnetic anomalies can be the result of many types of buried metallic objects and do not necessarily indicate the presence of DMM. No visual confirmation of the magnetic anomaly sources was made. One volatile organic compound, multiple semivolatile organic compounds, one pesticide, one explosive (1,3-dinitrobenzene), and multiple inorganics were detected in the sediment. The locations of the identified magnetic anomaly area and sediment samples are shown on **Figure 2-3**.

2.2.3 Site Screening Assessment (CH2M HILL, 1996b)

The Site Screening Assessment (SSA) was conducted to evaluate 21 sites at SJCA to determine if each site required additional investigation, removal action, or no further action (NFA). As part of the SSA, the analytical results from the IRP Site 20 sediment samples collected during the RRR were used to conduct human health risk screenings (HHRSs) and ecological risk screenings (ERSs). No unacceptable risk to human receptors was identified. Ecological risk was identified for benthic organisms in the sediment; however, based on the risk screening, the risk was considered minimal and no further evaluation of ecological risk was recommended. During a July 2001 Partnering Team site visit, the Partnering Team reached a consensus for NFA for IRP Site 20 (northern wharf area) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) program based on the findings of the HHRSs and ERSs and the fact that potential risk from DMM would be addressed under the United States Navy's (Navy's) Range Program. The NFA decision was documented in the SSA.

Based on recommendations in the SSA, signs were posted in the area to prohibit intrusive activities, and the United States Army Corps of Engineers was notified of the potential presence of UXO. A note has been added to the SJCA Wharf Property Record Cards in the Internet Navy Facility Assets Data Store stating: "Unexploded ordnance may exist along all of the St. Juliens Creek Annex Wharfs." Additionally, the area is identified in the Environmental Restoration Plan Geographic Information System, which identifies areas of concern, is used during operational planning and decision-making at the facility, and is updated annually or when conditions change. The Navy's Range Program was never fully implemented and ordnance sites are now addressed under the MRP. Because site history indicates there may be DMM present, in 2008 the wharf areas (northern and southern) were included under the MRP and identified as Area UXO 1.

2.2.4 Sonar Imagery (United States Naval Underwater Construction Team, 2008)

In 2008 the Navy performed a sonar imagery survey of portions of the wharf areas. The investigation consisted of side scans using sonar technology to identify features of the sediment surface and physical anomaly sources. The northern area of interest (Wharf 3 area) was oriented in a circle in the vicinity of the pilings still present; the investigation area is shown on **Figure 2-3**. The southern wharf area of interest (Wharfs 1 and 2) was oriented in a large rectangle adjacent to the wharf and extending into the channel. The investigation detected 10 physical anomalies along the bottom of the river in the immediate vicinity of the southern wharf.

2.2.5 Preliminary Assessment (CH2M HILL, 2009)

The Preliminary Assessment (PA) report assessed the history of munitions use at the wharf areas that make up Area UXO 1. Onsite and offsite sources were researched to determine the potential for munitions to have been dropped into the water during ordnance loading operations from 1898 to the late 1970s. Although no documentation was found to confirm the presence of munitions in the vicinity of the wharf areas, anecdotal evidence obtained through individual interviews indicated there was a potential for munitions to have been dropped during loading operations, which may have resulted in DMM being present in the sediment along the wharf areas. No site visits or sampling were performed as part of the PA.

Based upon information obtained during the PA and the hazards associated with potential DMM that may be present, the PA recommended further investigation at the site. The PA suggested that the subsequent investigation should include anomaly detection and investigation in both the northern and southern wharf areas.

2.2.6 Site Inspection (CH2M HILL, 2010)

An SI was conducted to further assess whether or not previous site activities may have resulted in munitions being dropped into the water at the site. The SI consisted of a bathymetric survey to determine the depth of the river (**Figure 2-4**) and an underwater geophysical survey using DGM techniques within the northern and southern wharf areas to identify metallic anomalies that could represent potential MEC. Based on the evaluation of data from the SI, a total of 1,651 individual ferrous anomalies were detected at Area UXO 1 (**Figures 2-5 and 2-6**). The recommendation of the SI was to collect and visually inspect a subset of the anomaly sources identified during the underwater DGM survey and from areas where data could not be collected.

2.3 Basis for Further Investigation

The PA for Area UXO 1 evaluated the potential for munitions to have been dropped into the Southern Branch of the Elizabeth River during ordnance loading operations. Although there was no known official documentation of munitions being dropped in the water, anecdotal evidence suggested that munitions may have been dropped in the water and covered by the river sediment. The SI underwater DGM survey identified 1,651 anomalies within the river sediment that may represent potential MEC or non-munitions-related metallic debris. Therefore, further investigation was necessary to determine if the metallic anomalies detected during the underwater DGM survey were MEC items and to determine whether or not MC were detected in site sediment.

DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\387405STJULIENSCREEK\MAPFILES\392043_UXO_01_ESI\FIGURE2-1_BASE AND SITE LOCATION.MXD CBOWMAN 11/30/2012 8:57:40 AM

Legend

- SJCA Boundary
- Area UXO 1 Boundary
- IR Site 20

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W E
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Feet

Figure 2-1
Base and Site Location
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

CH2MHILL

DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\387405STJULIENSCREEK\MAPFILES\392043_UXO_01_ESI\FIGURE2-2_SITEFEATURES.MXD CBOWMAN 4/15/2013 1:59:47 PM

Legend

- Area UXO 1 Boundary
- SJCA Boundary
- Demolished Building
- Munitions Response Site

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Feet

Figure 2-2
Site Features
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

CH2MHILL

DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\387405STJULIENSCREEK\MAPFILES\392043_UXO_01_ESI\FIGURE2-3_HI_SAMPLOCS.MXD CBOWMAN 12/14/2012 7:02:44 AM

Legend

- Previous Sediment Sample Locations
- Magnetic Anomaly Concentration Areas (from 1996 Magnetic Anomaly Investigation)
- Area UXO 1 Boundary
- SJCA Boundary
- 2008 Side-scan Sonar Survey Area (approximated)
- Demolished Building

N W E S

0 250 500 Feet

Figure 2-3
Historical Investigation and Sample Locations
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

CH2MHILL

DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\387405STJULIENSCREEK\MAPFILES\392043_UXO_01_ESI\FIGURE2-4_BATHYMETRY.MXD CBOWMAN 11/30/2012 8:59:39 AM

Legend

- Area UXO 1 Boundary
- SJCA Boundary
- Demolished Building

Depths are relative to mean sea level.
Contours are in feet.

Source: Final Site Inspection Report, MRP Area UXO 1, St. Juliens Creek Annex, Chesapeake, VA (September 2010)

Figure 2-4
Bathymetric Survey Results
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

CH2MHILL

Legend

- Anomaly
- Area UXO 1 Boundary
- SJCA Boundary
- 2010 Site Inspection Investigation Area
- Unable to complete DGM survey
- DGM survey complete
- Demolished Building

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W E
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Figure 2-5
2010 Site Inspection Investigation
Anomalies - Northern Area
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

CH2MHILL

Legend

- Anomaly
- SJCA Boundary
- 2010 Site Inspection Investigation Area
- Unable to complete DGM survey
- DGM survey complete
- Demolished Building

N
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0 100 200 Feet

Figure 2-6
2010 Site Inspection Investigation
Anomalies - Southern Area
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

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SECTION 3

Physical Characteristics

3.1 Regional Land Use

The facility is bordered to the north by the Norfolk and Western Railroad and the City of Portsmouth, which includes residential, commercial, and industrial areas; to the west by the City of Chesapeake, which includes residential, commercial, and industrial areas; to the south by St. Juliens Creek; and to the east by the Southern Branch of the Elizabeth River. Most of the surrounding areas are developed and include residences, schools, recreational areas, and shipping facilities for several large industries. Some undeveloped areas are located in various areas surrounding the facility. There are many neighboring industrial properties near SJCA, with a large concentration along tidally influenced water bodies, such as the Southern Branch of the Elizabeth River and its tributaries.

The Elizabeth River is used for industrial, commercial, and recreational use. The Southern Branch of the Elizabeth River is a main waterway along the Atlantic Intracoastal Waterway, which is described in more detail in the following section.

3.2 Regional and Facility-wide Physiography, Climate, and Surface Water Hydrology

SJCA is located in the eastern part of the Atlantic Coastal Plain Physiographic Province in Chesapeake, Virginia. Low elevations and relatively flat relief, with few elevations greater than 25 feet above mean sea level (msl), characterize this part of the Coastal Plain. SJCA lies within the Deep Creek Swale, with natural elevations ranging from sea level to less than 20 feet above msl in the northeastern portion of the facility. A map showing the topography of SJCA is provided as **Figure 3-1**.

The area encompassing SJCA lies in the James River drainage basin and receives an average of approximately 46 inches of precipitation annually (FWEI, 1995). Between 50 percent and 70 percent of the precipitation is removed from the area via runoff along the relatively flat topography and via evapotranspiration. The remaining 30 percent to 50 percent of precipitation recharges the surficial aquifer system by percolating through the upper soils. Approximately 90 percent of recharged groundwater returns to surface water streams as base flow.

The Southern Branch of the Elizabeth River defines the eastern boundary of SJCA. St. Juliens Creek, which is a tributary of the Southern Branch of the Elizabeth River, defines the southern boundary of SJCA. The St. Juliens Creek headwaters originate near the Brentwood District of Portsmouth, and the shoreline consists primarily of residential housing. St. Juliens Creek provides drainage for residential areas of Portsmouth and Chesapeake; however, near its confluence with the Southern Branch of the Elizabeth River, St. Juliens Creek also receives drainage from several industrial facilities on the creek's southern shore as well as drainage from SJCA. St. Juliens Creek can accommodate larger commercial vessels at its mouth, as well as personal vessels in the area west of SJCA.

From SJCA, the Southern Branch of the Elizabeth River flows north approximately 10 miles to its confluence with the James River. The James River then discharges into the Chesapeake Bay. The Southern Branch of the Elizabeth River is part of the Intracoastal Waterway System. It is connected to regional water bodies to the south of the James River drainage divide by manmade drainage systems. The Southern Branch of the Elizabeth River is connected to Currituck Sound in North Carolina by the Albemarle and Chesapeake Canal. It is also connected to the Albemarle Sound in North Carolina by the Dismal Swamp Canal. Currituck Sound is a northeastern extension of the larger Albemarle Sound. The Southern Branch of the Elizabeth River and its tributaries (including Blows Creek and St. Juliens Creek) are part of a tidal estuary system, and are defined as estuarine waters (VAC, 2011). In the vicinity of SJCA, the mean tide range of the Elizabeth River is approximately 2.8 feet and the spring tide range is approximately 3.4 feet. Fresh water inflow to the system is minimal, composed principally of drainage from the

Dismal Swamp and stormwater runoff (Fluor Daniel GTI, Inc., 1997). The National Oceanic and Atmospheric Administration (NOAA) navigational chart for Area UXO 1 is provided as **Figure 3-2**.

The climate of the Virginia Peninsula is influenced by the moderating effects of the Atlantic Ocean. This results in mild winters and long, warm summers. High humidity frequently occurs along the coast and less frequently inland. Ground fog is frequent in the late summer, especially during the early morning hours. Freezing temperatures occur intermittently from October through March. Average monthly temperatures in the area range from approximately 40 degrees Fahrenheit (°F) in January to 80°F in July.

3.3 Facility Hydrogeology

The hydrogeologic units beneath SJCA are composed of three main uppermost (that is, youngest) hydrostratigraphic units known as the Columbia aquifer, Yorktown confining unit, and Yorktown-Eastover aquifer and their corresponding geologic units. These units make up the uppermost 100 to 200 feet beneath the SJCA facility and are the units most likely impacted by historical site operations. In the vicinity of Area UXO 1, the Yorktown confining unit is incised due to the presence of the Southern Branch of the Elizabeth River. Consequently, the Yorktown aquifer is hydraulically connected to the overlying Columbia sediments and river sediments. Due to the upward vertical gradient in the vicinity of the river, both the Columbia and Yorktown aquifers discharge into the Southern Branch of the Elizabeth River and St. Juliens Creek.

3.4 Ecological Settings and Natural Resources

The ecological setting of the site determines the type of ecological receptors that may be expected to inhabit or use the site. This section presents a general description of the environmental setting of the Southern Branch of the Elizabeth River.

The Southern Branch of the Elizabeth River contains estuarine habitats that range from shallow sand and mud flats and tidal streams less than 3 feet deep to trenches up to 43 feet deep (NOAA, 1999). Although the river is capable of providing habitats for a wide variety of aquatic species, many of the habitats associated with the river have been compromised by urban and industrial activities (CH2M HILL, 2009).

Trawl surveys by the Virginia Institute of Marine Science indicate that the Southern Branch of the Elizabeth River provides habitat for numerous estuarine and marine fish species, including:

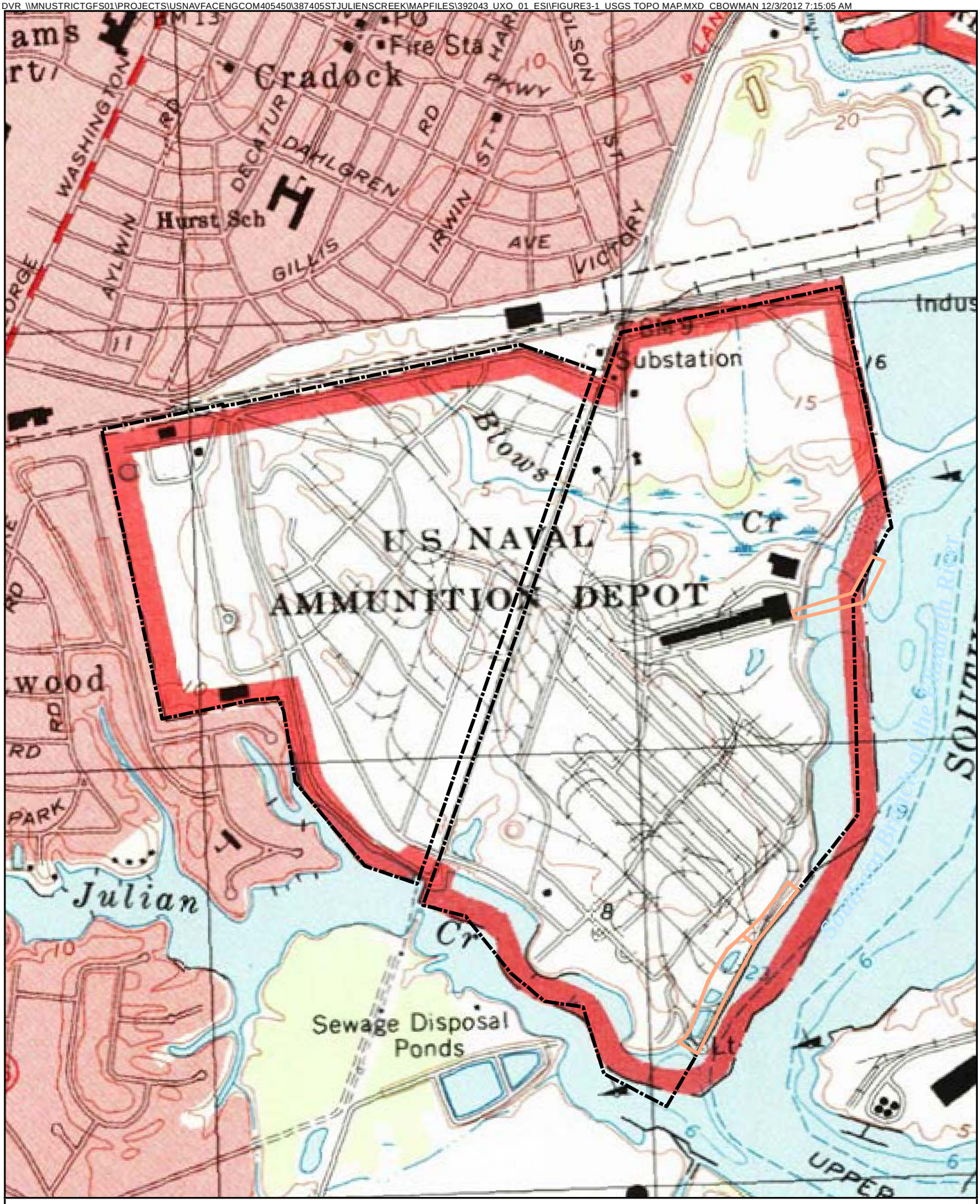
- Year-round resident fish species such as: bay anchovy, oyster toadfish, sheepshead minnow, killifishes, silversides, pipefish, gobies, and hogchoker that spend their entire lives in the river, as well as bluefish, mullets, pinfish, butterfish, and the sciaenids (croaker, weakfish, seatrout, spot, and drum) that spawn offshore in coastal waters and migrate to the estuary as juveniles, where they may spend several years foraging and maturing, and may be found on a seasonal basis as adults (NOAA, 1999).
- Migratory fish species such as: juvenile and adult white perch in tidal freshwater reaches; striped bass, American shad, blueback herring, and alewife in freshwater areas; and juvenile American eels (NOAA, 1999).
- Shell fish such as blue crab, grass shrimp, eastern oyster, and northern quahog.
- Hampton Roads, near the Elizabeth River outlet in Chesapeake Bay, supports substantial commercial and recreational fisheries. Popular recreational catches are bluefish, croaker, spot, weakfish, flounder, blue crab, oyster, and quahog. However, the Virginia Department of Health (VDH) condemned the collection of molluscan shellfish in May 2009 and has established advisories for a variety of fish species and blue crabs throughout the entire Elizabeth River. A list of the current fish advisories can be found on the VDH website (http://www.vdh.state.va.us/epidemiology/DEE/PublicHealthToxicology/Advisories/JamesRiver.htm).

In addition, riparian wetlands are located sporadically throughout the river. The wetlands are generally in a disturbed condition and are of very low functional value based on their small size, low vegetation diversity, scattered vegetation, disturbed soils, and very minimal wildlife usage. These wetlands are narrow fringe marshes interspersed along the tributaries to the river, often abutting developed uplands. Vegetation in the wetlands generally consists of salt-tolerant grasses and sedges with low shrubs along the higher upland edge. Their small

size limits the utility of these habitats for wildlife. The overall value of the wetlands is considered to be further diminished by surface water and sediment contamination in the Elizabeth River. Despite such conditions, these riparian habitats do support small but stable populations of wildlife, most prominently muskrat (NOAA, 1992).

3.5 Cultural Resources

An archeological survey, conducted by R. Christopher and Associates, Inc., identified the southeastern portion of SJCA, including the wharf areas, as a historic district eligible for listing in the National Register of Historic Places. The defined period of significance, spanning the years 1907 to 1919, encompasses the period during which SJCA helped produce the majority of the Mark VI mines used in the North Sea Mine Barrage (Navy, 2008). Additional information regarding cultural resources at SJCA is presented in the Programmatic Agreement for the Navy's Historic Building in Hampton Roads (NAVFAC, 1999).



Legend

Area UXO 1 Boundary

SJCA Boundary

N
W E
S

0 500 1,000
Feet

Figure 3-1
Topographic Map
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

Source: USGS Norfolk South, VA Topoquad, 1994.

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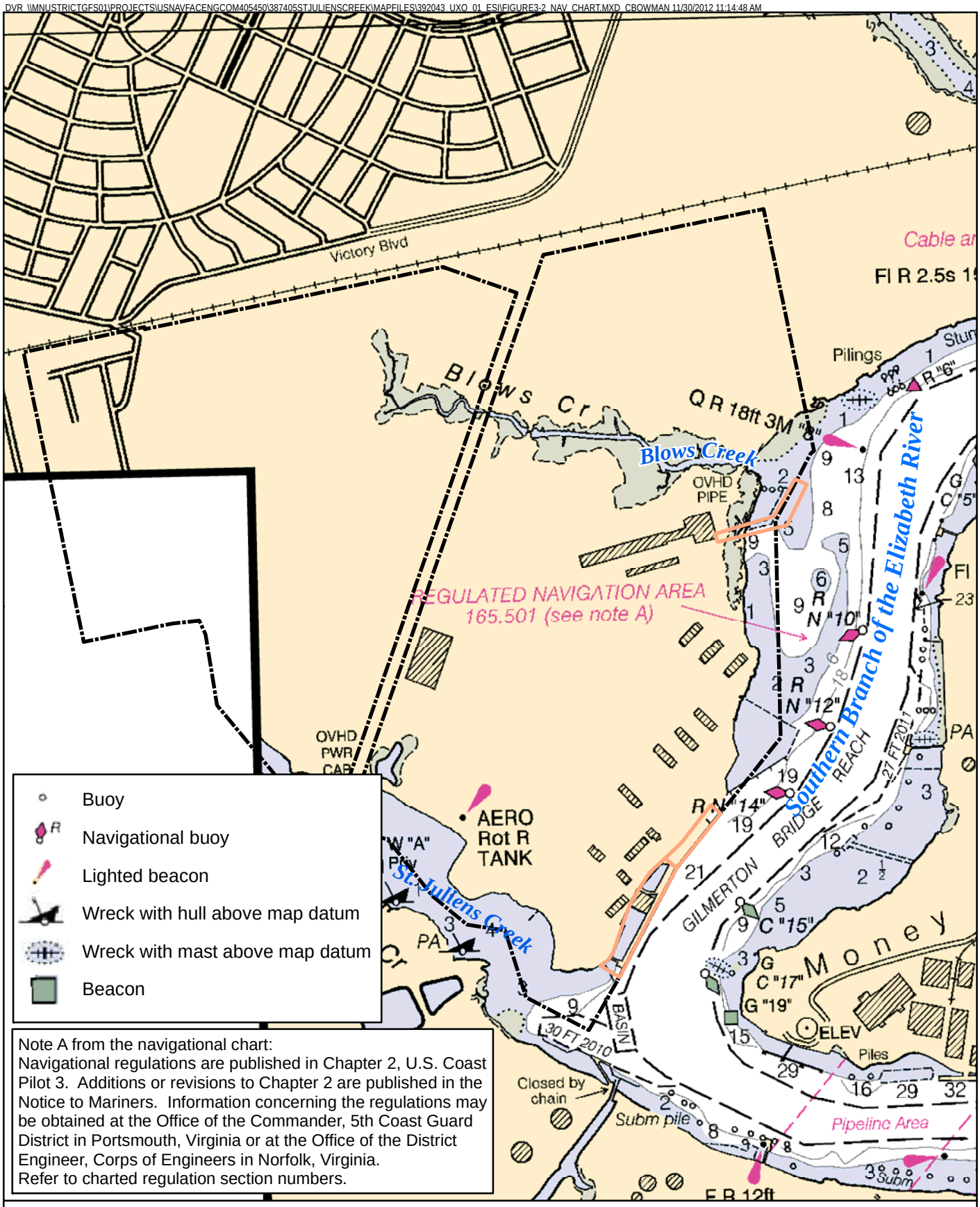


Note A from the navigational chart:
Navigational regulations are published in Chapter 2, U.S. Coast Pilot 3. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 5th Coast Guard District in Portsmouth, Virginia or at the Office of the District Engineer, Corps of Engineers in Norfolk, Virginia.
Refer to charted regulation section numbers.

Legend
SJCA Boundary
Area UXO 1 Boundary

N
W E
S

0 500 1,000
Feet

Source: NOAA Norfolk Harbor and Elizabeth River Nautical Chart (Chart 12253), 2012.

Figure 3-2
Navigational Chart
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

CH2MHILL

SECTION 4

Investigation Methodology

This section summarizes the field investigation procedures of the ESI at Area UXO 1. The investigation activities and data presented below are from the July and August 2012 ESI activities, which were conducted in accordance with the ESI work plan (CH2M HILL, 2012a), SAP (CH2M HILL, 2012b), and ESS (CH2M HILL, 2012c), except as noted in Section 4.5. As a part of the development of the ESS, two separate Munitions Response Sites (MRSs) were established for Area UXO 1, which represent the areas in which the ESI was performed (**Figure 4-1**). The ESI investigation activities consisted of metallic debris recovery, inspection of the metallic debris for the presence of MEC, sediment sampling for select MC, and management and disposal of investigation-derived waste (IDW).

4.1 Mobilization

Mobilization of personnel, equipment, and materials and site set-up activities began on July 30, 2012, and included the following:

- Delivery of 10 tons of sand, a portable toilet facility, one roll-off container (sediment storage), and five 55-gallon drums (storage of munitions debris)
- Establishment of the open detonation area including filling and staging sandbags for use as engineering controls during destruction of MEC, if required
- Establishment of the material staging area and barge loading area
- Positioning of, via tug boat, the crane barge and the support barge, which carried the long-reach excavator with raking attachment, electromagnet, penetrator plate, and two roll-off containers for the storage of non-munitions-related metallic debris recovered during the ESI activities

4.2 Anomaly Investigation

The ESI consisted of metallic debris acquisition with an electromagnet deployed by a crane secured to the barge deck and sediment sampling at 15 investigation locations, approximately 20 feet by 20 feet, whose coordinates are presented in **Table 4-1** and locations are shown on **Figure 4-1**.

A 400-linear-foot silt curtain was deployed to minimize the migration of suspended sediment in the water column in the river during metallic debris acquisition activities. Metallic debris was acquired through the use of a barge-mounted Ohio Magnetics, Inc., 72-inch Super Loadstar electromagnet, with an average lifting capacity of 5,640 pounds, and a raking system consisting of a Caterpillar 320 excavator with a 55-foot long-reach boom and steel I-beams welded on the excavator bucket. An additional component of the metallic debris acquisition system was a penetrator plate, which consisted of a sheet of fabricated steel with six 24-inch-long spikes attached to the steel sheet. The intent of the penetrator plate was to extend the reach of the electromagnet below the sediment surface. Two 110-foot-by-30-foot barges were placed perpendicular to one another, and the silt curtain was setup in between the two barges. The crane, electromagnet, and penetrator plate were on one barge, and the roll-off containers and long-reach excavator were on the other barge. The conceptual layout of the crane and barge system is shown on **Figure 4-2**.

At each investigation location, the electromagnet was lowered to the river bed with the 85-ton crane, energized to attract ferromagnetic material within its magnetic field, then raised to the barge deck and de-energized over a screen while positioned over a roll-off container to collect the material that had accumulated on the electromagnet. The material released onto the screen was inspected by qualified UXO technicians to determine whether or not the material contained MEC. Following the initial removal of metallic debris by the electromagnet, a rake was lowered and used to disturb the riverbed to potentially bring additional metallic debris closer to the sediment surface. Once the sediment at the anomaly source location was disturbed, the electromagnet was deployed again using the same process previously described. In addition, the penetrator plate was attached to

and deployed with the electromagnet, intending to increase the magnetic reach of the electromagnet deeper into the sediment. Following completion of the first two investigation locations, the investigation team discovered that less debris was recovered using the penetrator plate than using the electromagnet alone and discontinued its use, with the exception of using it occasionally as an additional measure to disturb the river bottom.

Sediment adhered to the metallic debris was removed by the UXO technicians during inspection of the debris. The sediment was either used for sample collection or returned to the river within the silt curtain. Extraneous sediment was washed from the metallic debris using water from the river. The wash-water was released back into the river because it was being released within the silt curtain and did not cause an increase in turbidity outside of the silt curtain.

4.3 Sediment Sampling

Composite sediment samples were collected from the sediment adhering to the electromagnet and recovered metallic debris at each of the 15 investigation locations and analyzed for the select explosives listed as follows by USEPA methods SW-846 8330A, 8330A modified, 6850, and 353.2 modified in accordance with the SAP (CH2M HILL, 2012b).

- High melting explosives (HMX)
- Cyclotrimethylenetrinitramine (RDX)
- 1,3,5-Trinitrobenzene
- 1,3-Dinitrobenzene
- Tetryl
- Nitrobenzene
- 2,4,6-Trinitrotoluene (TNT)
- 4-Amino-2,6-dinitrotoluene
- 2-Amino-4,6-dinitrotoluene
- 2,4-Dinitrotoluene
- 2,6-Dinitrotoluene
- 2-Nitrotoluene
- 3-Nitrotoluene
- 4-Nitrotoluene
- Pentaerythritol tetranitrate (PETN)
- Nitroglycerin
- Nitrocellulose
- Nitroguanidine
- Perchlorate

4.4 Investigation-Derived Waste Management

IDW in the form of personal protective equipment was generated during the ESI and disposed of as solid waste. Liquid (such as decontamination fluids) and sediment IDW was not generated during the ESI due to the use of disposable sampling equipment and *de minimus* amounts of extraneous sediment generated during the metallic debris investigation.

4.5 Deviations from the Work Plan

Although efforts were taken to conduct the investigation in accordance with the ESI work plan (CH2M HILL, 2012a), there were instances where the investigation team deviated from the work plan. The deviations from the work plan are detailed as follows:

- Modifications in sample locations were required, as the barges could not maneuver to three of the selected sample locations due to shallow water. Upon discovery of the shallow water conditions, which prohibited access to Locations 1, 2, and 3, CH2M HILL reviewed the DGM data and selected alternate locations using the

same logic that was used in selecting the proposed locations (**Figure 4-1**). In accordance with the SAP, team approval of changes in sample locations was not required. However, the alternate locations and logic were communicated to the SJCA Tier I Partnering Team 1 day prior to investigating the alternate locations to allow for team input if desired. NAVFAC Mid-Atlantic approved the change in locations and no concerns were raised by EPA or VDEQ. Therefore, the investigation continued with the alternate locations.

- After the first two investigation locations, the penetrator plate was mainly used as an additional method of raking the river bottom. The investigation team discovered during the ESI that the penetrator plate does not pick up metallic debris as well as the magnet alone and takes additional time to be magnetized, which can have a negative effect on productivity. The penetrator plate can be useful as an alternative method of raking the sediment if the investigation location is in an area where the water is deeper than the reach of the excavator rake.

4.6 Quality Assurance and Quality Control

Quality assurance (QA)/quality control (QC) samples were collected in accordance with the SAP (CH2M HILL, 2012b), Department of the Navy (Navy), and CH2M HILL protocols, and the *Final Master Project Plan, St. Juliens Creek Annex, Chesapeake, Virginia* (CH2M HILL, 2003). QA/QC samples consisted of field blanks, equipment blanks, duplicates, and matrix spike and matrix spike duplicates. Additionally, a temperature blank was included in each cooler used to transport samples to the subcontracted laboratory (Empirical Laboratories of Nashville, Tennessee).

Routine field inspections and observations verified that the objectives of the ESI complied with the ESI work plan, specifically Section 5, Quality Control Plan (QCP) (CH2M HILL, 2012a). The work plan QCP divided the planning, field operations, and reporting into specific definable features of work (DFOWs) and established the responsible party, audit procedure(s), QC frequency, pass/fail criteria, and actions if criteria are failed for each. QC inspections during the ESI included verification of training and qualifications, inspections of equipment and site setup/layout, and confirmation of compliance with plans. The Project Manager ensured that all planning documents were approved and that coordination was completed prior to mobilization. The Field Team Leader confirmed that training requirements and qualifications were correct. Inspections of the crane, metal detectors, hand-held global positioning system (GPS), silt curtain, oil-absorbent boom, electromagnet, long-reach excavator, tug boat (to include the navigation system), rigging, and barges. The inspections of the crane, silt curtain, oil-absorbent boom, electromagnet, long-reach excavator, tug boat (to include the navigation system), rigging, and barges was conducted by the Crofton Construction crew consisting of a boat captain, crane operator, rigging supervisor, and deck hand. The inspections of the metal detectors and hand-held GPS were conducted by the Ordnance & Explosives Remediation, Inc. (OER), crew consisting of three UXO technicians. The inspections were overseen by the Field Team Leader, Senior Unexploded Ordnance Supervisor (SUXOS), and Unexploded Ordnance Quality Control Specialist (UXOQCS). The UXOQCS verified compliance with the project plans. The three-phase inspection system, consisting of preparatory, initial, and follow-up inspections for the applicable DFOWs was utilized during the ESI. Detailed records of subcontractor activities were maintained in the Daily Reports (**Appendix A**), field notes (**Appendix B**), and other supporting forms of documentation as the work dictated. There were no substantive deviations from the QCP and no “fails” of the pass/fail criteria established for the DFOWs.

In accordance with the ESS (CH2M HILL, 2012c), selected metallic debris and surrounding river-bottom sediment collected using an electromagnet and brought to the surface were inspected by three subcontractor UXO technicians from OER consisting of two UXO Technicians II who were supervised by a UXO Technician III. A UXOQCS/UXO Safety Officer was onsite to oversee the UXO-related health and safety and QC operations at the site, and a SUXOS was onsite to oversee the execution of all UXO-related onsite activities.

A Naval Ordnance Safety and Security Activity audit was conducted on August 9, 2012, to inspect the onsite practices and facilities to determine if the work practices at the site were in compliance with the ESS, the ESI work plan, other work planning documents, and standard explosive safety measures. The project was found to be in compliance.

4.7 Uncertainty

As a result of the current and historical industrial operations in the watershed of the Southern Branch of the Elizabeth River, various chemicals are known to be present in river sediment; however, reference concentrations of explosives residues in sediment in the water body are not available. Therefore, there is uncertainty with whether chemical detections during this ESI are a result of offsite contributions or a contaminant release at Area UXO 1.

TABLE 4-1

Anomaly Source Location Coordinates

Area UXO 1 ESI Report

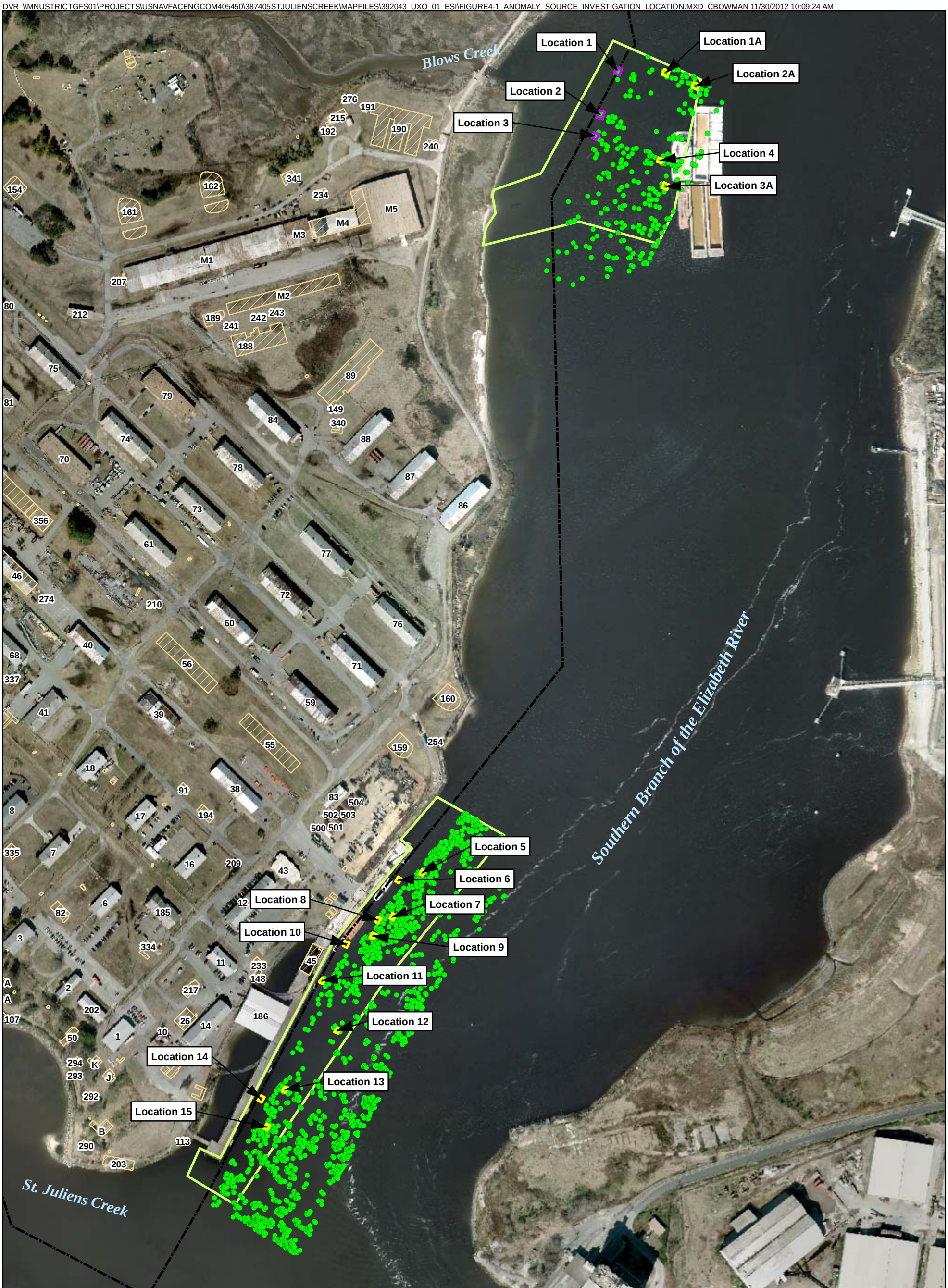
St. Juliens Creek Annex

Chesapeake, VA

	Corner 1		Corner 2		Corner 3		Corner 4	
Location	Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
1*	12125659.76797	3454873.876821	12125679.21117	3454868.498879	12125671.76499	3454844.505160	12125652.73551	3454849.469389
1A	12125826.66280	3454865.675950	12125845.01350	3454858.196640	12125837.54600	3454839.643190	12125819.02470	3454847.191080
2*	12125600.61094	3454721.640576	12125619.64076	3454717.503774	12125611.78053	3454691.855203	12125592.33733	3454698.060571
2A	12125928.78570	3454820.325320	12125947.13640	3454812.846000	12125939.66890	3454794.292560	12125921.14760	3454801.840450
3*	12125583.23630	3454645.522618	12125600.19755	3454640.972103	12125592.33733	3454621.115187	12125576.61722	3454626.906842
3A	12125825.61360	3454472.261380	12125843.96430	3454464.782070	12125836.49680	3454446.228630	12125817.97550	3454453.776510
4	12125806.38743	3454558.647792	12125822.55964	3454553.849245	12125818.61214	3454539.638644	12125802.38481	3454543.637980
5	12124986.82804	3452088.444727	12124999.95499	3452083.719015	12124989.97863	3452067.441489	12124977.90155	3452072.692134
6	12124905.44008	3452064.290904	12124916.99190	3452056.939541	12124907.54047	3452041.187276	12124894.93846	3452048.013378
7	12124885.48704	3451937.745882	12124895.98866	3451930.394519	12124888.11236	3451912.016603	12124874.98542	3451919.892899
8	12124832.97861	3451924.618611	12124847.15575	3451919.892899	12124835.60394	3451901.514983	12124823.52719	3451908.341085
9	12124815.12563	3451869.484863	12124829.82803	3451863.708956	12124820.90187	3451847.956363	12124807.24966	3451852.157142
10	12124721.01230	3451840.653556	12124737.90302	3451834.430800	12124728.12417	3451817.540085	12124713.90044	3451824.651948
11	12124642.78182	3451713.529139	12124652.56067	3451709.084266	12124644.55970	3451691.304446	12124631.22508	3451698.416308
12	12124693.45363	3451540.177451	12124705.89947	3451535.732578	12124697.89883	3451519.730642	12124684.56389	3451525.064621
13	12124511.21220	3451335.711325	12124524.54682	3451329.488240	12124515.65707	3451313.486632	12124503.21123	3451319.709388
14	12124430.31472	3451304.596886	12124442.76056	3451299.262907	12124432.98171	3451280.594309	12124418.75799	3451288.595277
15	12124449.87243	3451206.808695	12124461.42916	3451201.474717	12124454.31730	3451184.584002	12124440.09357	3451189.917981

*Locations could not be investigated due to water depths being too shallow to access the area via barge

DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\387405STJULIENSCREEK\MAPFILES\392043_UXO_01_ESI\FIGURE4-1_ANOMALY_SOURCE_INVESTIGATION_LOCATION.MXD CBOWMAN 11/30/2012 10:09:24 AM



Legend

- Anomaly
- Anomaly source investigation location
- Locations not investigated
- Munitions Response Site
- Demolished Building
- SJCA Boundary

N
W E
S

0 160 320
Feet

Figure 4-1
Anomaly Source Investigation Locations
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

Notes:
Locations 1, 2, and 3 were replaced with alternate locations1A, 2A, and 3A during the investigation.

CH2MHILL

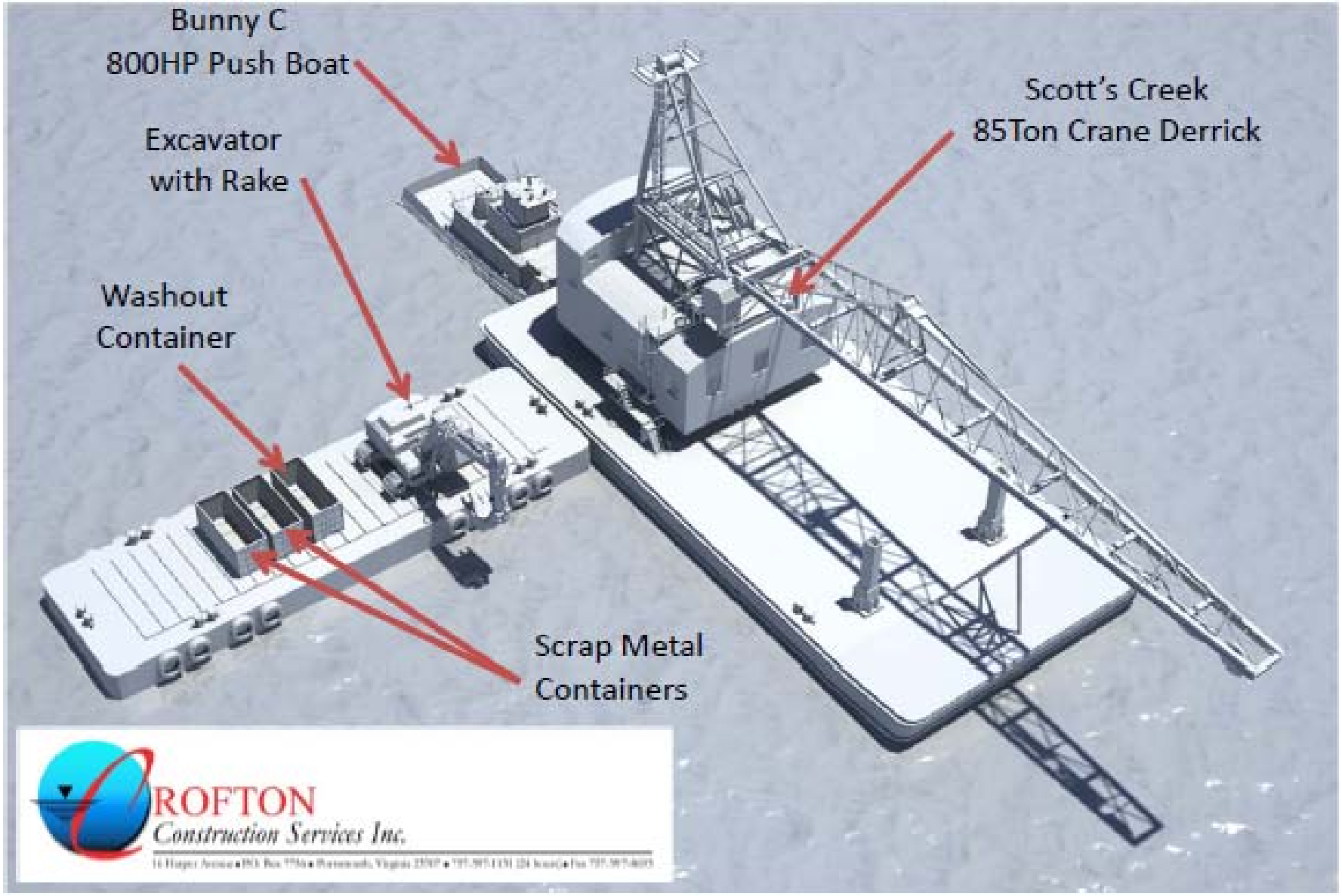


Figure 4-2
Anomaly Investigation Equipment Layout
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

SECTION 5

Investigation Results

This section describes the results of the Area UXO 1 ESI, which included the investigation of 15 locations and the collection of sediment samples at each investigation location. The updated conceptual site model (CSM), based on the results of the ESI, is also presented in this section.

5.1 Anomaly Investigation Results

A total of 15 locations, approximately 20 feet by 20 feet in area, were investigated during the ESI. A total of 1,580 of metallic debris was discovered during the ESI and did not include any MEC. The items recovered during the ESI consisted of the following metallic debris:

- Small shackle
- Crain hook
- Anchor chain link
- 2-foot-long piece of rebar
- 15-pound piece of angle iron
- Gas cylinder cap
- 2-inch-by-4-inch steel plate
- 4-inch-by-8-inch steel plate
- 8-foot metal pole
- Doorknob
- 8-foot-long, 2-inch diameter steel pipe
- Hammer
- Band saw cover
- 18-inch-long metal banding material
- Pier bolts
- Railroad spikes
- 70-foot-long, 1-inch diameter cable
- Welding rods

The various types of recovered items demonstrate that the electromagnet would have been effective in recovering a variety of DMM, if present.

5.2 Sediment Analytical Results

Analytical data reports were submitted in hard copy and electronic format to the CH2M HILL internal data validator. Procedures outlined in the *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-media, Multi-concentration* (USEPA, 1994) were used for validation, as applicable. A data usability assessment was conducted in accordance with the SAP (CH2M HILL, 2012b). Analytical results are presented in **Table 5-1**. The data validation summary reports and data usability assessment are provided in **Appendix C** and **Appendix D**, respectively.

Sediment samples were collected from sediment that was recovered with the electromagnet from 15 locations. As shown on **Figure 5-1**, 2,4,6-TNT was the only analyte detected. This compound was detected at Locations 8, 9, and 10, which are located in the central portion of the southern wharf area. All 2,4,6-TNT concentrations were less than the human health risk project action limit (PAL). The detection at Location 10 (0.266 milligram per kilogram [mg/kg]) exceeded the ecological risk PAL (0.13 mg/kg).

5.3 Conceptual Site Model

The results of the ESI were used to update the CSM profile presented in the SI report (CH2M HILL, 2010); the revised CSM is presented on **Figure 5-2**. The CSM summarizes the site conditions, potentially impacted receptors

and exposure pathways, and land use data for the site. Additional receptors and exposures pathways that are not on the CSM were evaluated as discussed in the risk screening sections (Sections 6 and 7).

5.4 Munitions Response Site Prioritization Protocol

In accordance with 32 Code of Federal Regulations 179.5, the Munitions Response Site Prioritization Protocol (MRSPP) has been updated to reflect the information gathered during this investigation (**Appendix E**). The Department of Defense's (DoD's) approach is to assign each MRS a relative priority based on the greatest potential hazards posed by UXO, DMM, or MC (DoD, 2007). A Priority 1 MRS contains the highest potential hazard, while a Priority 8 MRS contains the lowest potential hazard. Prior to the ESI effort, the Area UXO 1 MRSPP rating was Priority 4, which was driven by the Explosive Hazard Evaluation Module rating. Based on the results of the ESI, the MRSPP has been reevaluated and the revised MRSPP rating is "No Known or Suspected Hazard."

TABLE 5-1
Analytical Data
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, VA

Sample ID	Human Health PALs	Ecological PALs	SJUXO1-SD001A-0004	SJUXO1-SD002A-0004	SJUXO1-SD003A-0004	SJUXO1-SD003AP-0004	SJUXO1-SD004-0004	SJUXO1-SD005-0003	SJUXO1-SD006-0003	SJUXO1-SD007-0004	SJUXO1-SD008-0004	SJUXO1-SD009-0005
Sample Date			8/14/12	8/13/12	8/10/12	8/10/12	8/9/12	8/1/12	8/2/12	8/2/12	8/2/12	8/3/12
Chemical Name												
Explosives (MG/KG)												
1,3,5-Trinitrobenzene	2,200	7	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.174 U
1,3-Dinitrobenzene	6.1	NC	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.326 B	2.24 B
2,4,6-Trinitrotoluene	36	0.13	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.123 J	0.0998 J
2,4-Dinitrotoluene	16	3.184	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.776 B	0.464 B
2,6-Dinitrotoluene	61	0.55	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.224 B
2-Amino-4,6-dinitrotoluene	150	NC	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.194 B	0.205 B
2-Nitrotoluene	29	NC	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.174 U
3-Nitrotoluene	6.1	NC	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.497 B	0.74 B
4-Amino-2,6-dinitrotoluene	150	NC	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.174 U
4-Nitrotoluene	240	NC	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.174 U
HMX	3,800	115	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.174 U
Nitrobenzene	48	0.021	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.174 U
Nitroglycerin	6.1	NC	0.435 U	0.476 U	0.5 U	0.5 U	0.5 U	0.455 U	0.5 U	0.476 U	0.5 U	0.435 U
Nitroguanidine	6,100	NC	0.0952 U	0.0909 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0952 U	0.1 U	0.0952 U	0.1 U
PETN	120	NC	0.435 U	0.476 U	0.5 U	0.5 U	0.5 U	0.455 U	0.5 U	0.476 U	0.5 U	0.435 U
RDX	56	891	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.174 U
Tetryl	240	0.072	0.174 U	0.19 U	0.2 U	0.2 U	0.2 U	0.182 U	0.2 U	0.19 U	0.2 U	0.174 U
Explosives (UG/G)												
Nitrocellulose	1.E+05	NC	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Explosives (UG/KG)												
Perchlorate	55,000	NC	14.1 U	26.3 U	20.8 U	15.1 U	16.7 U	24.7 U	21.1 U	25.3 U	32.8 U	19.2 U

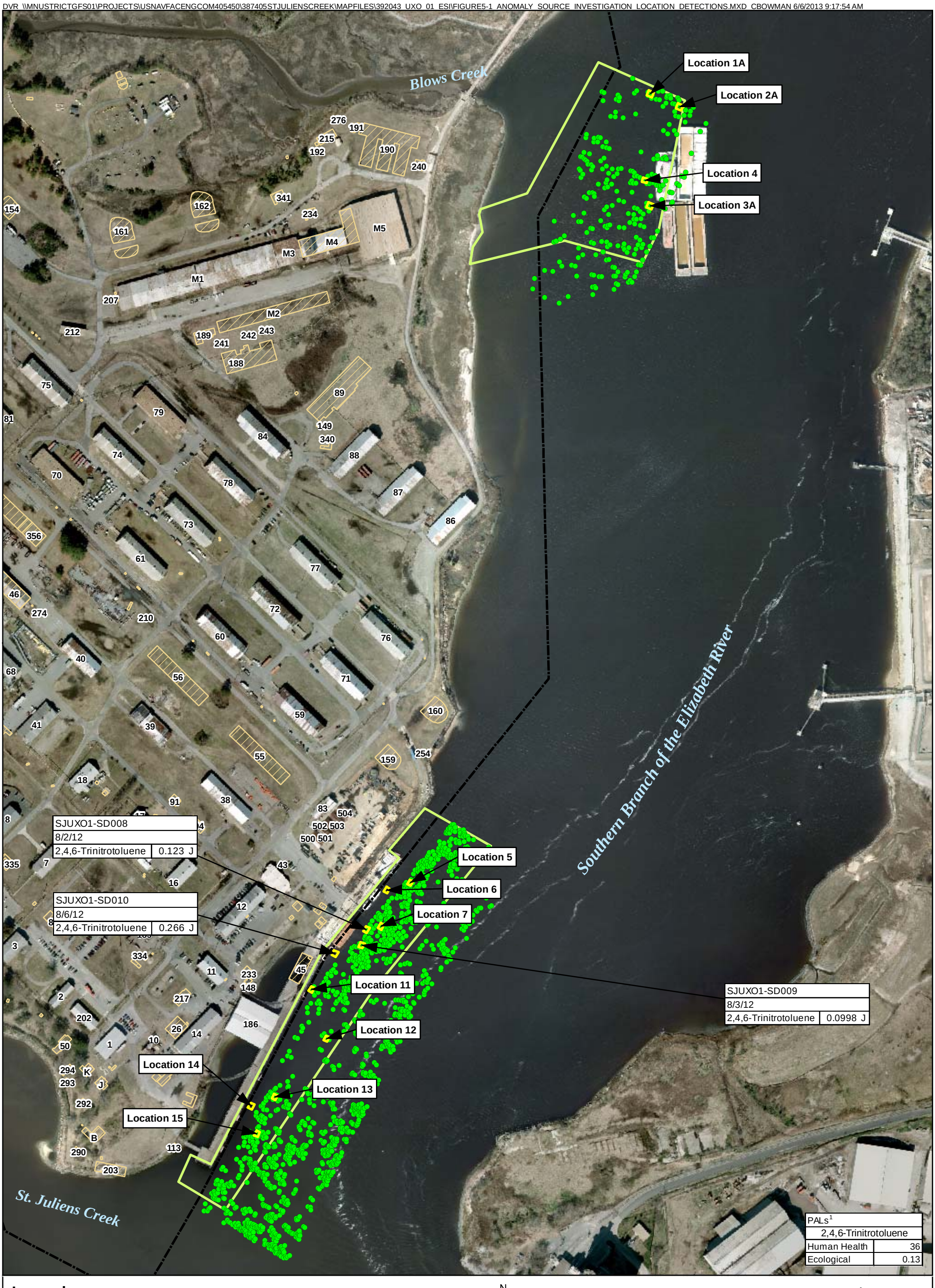
Notes:
B - Analyte not detected above the level reported in blanks
J - Analyte present. Value may or may not be accurate or precise
MG/KG - Milligrams per kilogram
NS - Not sampled
U - The material was analyzed for, but not detected
UG/G - Micrograms per gram
UG/KG - Micrograms per kilogram
NC - No Criteria
Shading indicates detection
Bold indicates exceedance of human health and/or ecological PAL

TABLE 5-1
Analytical Data
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, VA

Sample ID	Human Health PALs	Ecological PALs	SJUXO1-SD010-0004	SJUXO1-SD010P-0004	SJUXO1-SD011-0004	SJUXO1-SD012-0004	SJUXO1-SD013-0004	SJUXO1-SD014-0003	SJUXO1-SD015-0004
Sample Date			8/6/12	8/6/12	8/6/12	8/7/12	8/7/12	8/8/12	8/8/12
Chemical Name									
Explosives (MG/KG)									
1,3,5-Trinitrobenzene	2,200	7	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
1,3-Dinitrobenzene	6.1	NC	0.142 B	0.145 B	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,4,6-Trinitrotoluene	36	0.13	**0.266 J**	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,4-Dinitrotoluene	16	3.184	0.108 B	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2,6-Dinitrotoluene	61	0.55	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2-Amino-4,6-dinitrotoluene	150	NC	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
2-Nitrotoluene	29	NC	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
3-Nitrotoluene	6.1	NC	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
4-Amino-2,6-dinitrotoluene	150	NC	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
4-Nitrotoluene	240	NC	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
HMX	3,800	115	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
Nitrobenzene	48	0.021	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
Nitroglycerin	6.1	NC	0.435 U	0.476 U	0.476 U	0.476 U	0.476 U	0.476 U	0.5 U
Nitroguanidine	6,100	NC	0.1 U	0.0909 U	0.0909 U	0.0952 U	0.1 U	0.1 U	0.1 U
PETN	120	NC	0.435 U	0.476 U	0.476 U	0.476 U	0.476 U	0.476 U	0.5 U
RDX	56	891	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
Tetryl	240	0.072	0.174 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.2 U
Explosives (UG/G)									
Nitrocellulose	1.E+05	NC	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Explosives (UG/KG)									
Perchlorate	55,000	NC	18.6 U	24.2 U	19.4 U	13.2 U	25.4 U	12.5 U	23.9 U

Notes:
B - Analyte not detected above the level reported in blanks
J - Analyte present. Value may or may not be accurate or precise
MG/KG - Milligrams per kilogram
NS - Not sampled
U - The material was analyzed for, but not detected
UG/G - Micrograms per gram
UG/KG - Micrograms per kilogram
NC - No Criteria
Shading indicates detection
Bold indicates exceedance of human health and/or ecological PAL

DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\387405STJULIENSCREEK\MAPFILES\392043_UXO_01_ESI\FIGURE5-1_ANOMALY_SOURCE_INVESTIGATION_LOCATION_DETECTIONS.MXD CBOWMAN 6/6/2013 9:17:54 AM



Legend

- Anomaly
- Anomaly source investigation location
- Munitions Response Site
- Demolished Building
- SJCA Boundary

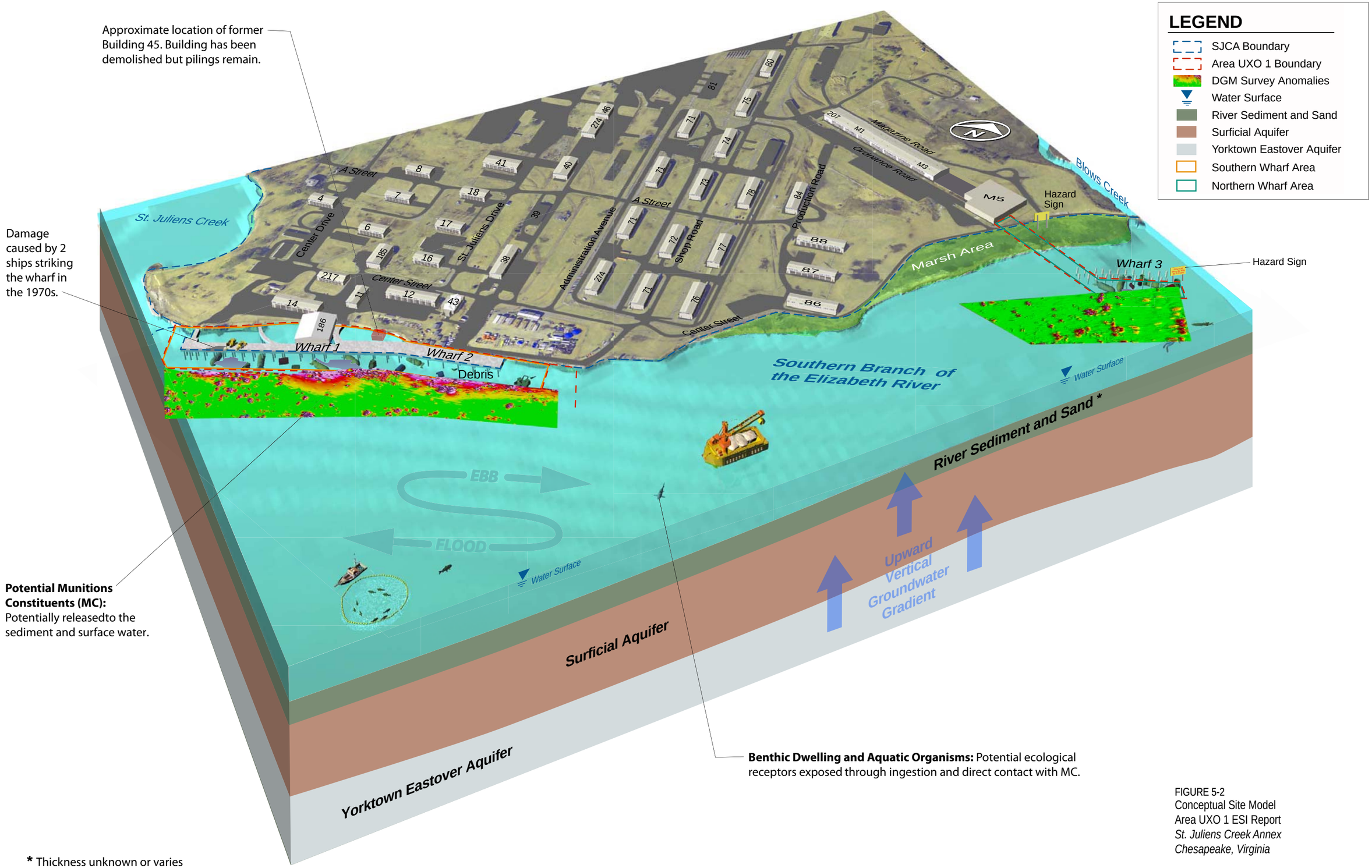
N W E S

0 160 320 Feet

Figure 5-1
Anomaly Source Investigation Detections
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

Notes:
J - Analyte present. Value may or may not be accurate or precise
All concentrations in milligrams per kilogram (mg/kg)

CH2MHILL



* Thickness unknown or varies

FIGURE 5-2
Conceptual Site Model
Area UXO 1 ESI Report
St. Juliens Creek Annex
Chesapeake, Virginia

CH2MHILL

SECTION 6

Human Health Risk Screening

A HHRS was performed to assess the potential for human health risks associated with exposure to sediment at Area UXO 1 of SJCA. The results of the HHRS provide a preliminary indication of potential risks from chemicals of potential concern (COPCs) and are used to evaluate whether or not future unrestricted use of the site is acceptable or if the site requires further evaluation (for example, additional data collection or a baseline risk assessment). The HHRS was performed in a phased approach, described as follows.

The validated data evaluated in the HHRS included 15 sediment samples collected in August 2012. A review of the data identified the following criteria for data usability:

- Estimated values flagged with a J qualifier were treated as detected concentrations.
- Data qualified with a B (blank contamination) were used in the risk screening as if the constituents were not detected.
- For duplicate samples, the maximum concentration between the two samples was used as the sample concentration.
- The maximum detected concentrations in sediment were compared to the PALs established in the SAP, which were the adjusted USEPA residential soil Regional Screening Levels (RSLs) (USEPA, 2012) multiplied by 10 in order to account for sediment exposure and for the non-carcinogenic constituents divided by 10 to account for cumulative exposure to multiple constituents that may affect the same target organ. This was done following USEPA Region 3 guidance since exposure to sediment is expected to be significantly less than exposure to soil, and there are no human health screening levels for sediment. RSLs based on carcinogenic effects were not adjusted. Therefore, RSLs based on non-carcinogenic effects were used as presented in the RSL table (10 times the residential soil RSL divided by 10), and RSLs based on carcinogenic effects were multiplied by 10. **Table 6-1** shows the risk-based screening for sediment at Area UXO 1. The only constituent detected in sediment is 2,4,6-TNT; however, the maximum detected concentration is below the applicable screening level. In addition to comparing the detected concentrations to the screening levels, the detection limits for non-detected analytes were compared to the screening levels. All of the detection limits were below the applicable screening values.

Exposure to sediment at Area UXO 1 of SJCA is not expected to result in any unacceptable human health risks.

TABLE 6-1

Occurrence, Distribution and Selection of Chemicals of Potential Concern

Area UXO 1 ESI Report

St. Juliens Creek Annex

Chesapeake, VA

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Sediment	118-96-7	2,4,6-Trinitrotoluene	1.0E-01 J	2.7E-01 J	MG/KG	SJUXO1-SD010-0004	3/15	0.1 - 0.4	2.7E-01	NA	3.6E+01 N	N/A	N/A	NO	BSL

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening.
[3] Background values not available.
[4] Oak Ridge National Laboratory (ORNL). May 2012. Regional Screening Levels for Chemical Contaminants at Superfund Sites. [Online].
Available: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm. Ten times adjusted (noncarcinogenic RSLs adjusted by dividing by 10) residential soil RSLs.
[5] Rationale Codes

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/
To Be Considered
J = Estimated Value
N = Noncarcinogenic
N/A = Not available, not applicable

SECTION 7

Ecological Risk Screening

An ERS was performed to assess the potential for ecological risks associated with exposure to explosives in sediment at Area UXO 1. The results of the ERS provide a preliminary indication of potential risks to benthic invertebrates from COPCs, and are used to evaluate whether or not ecological risk at the site is acceptable or if the site requires further evaluation (for example, additional data collection or a baseline risk assessment).

7.1 Problem Formulation

At Area UXO 1, the sediments in the wharf area provide habitat for benthic invertebrates. Consequently, chemical concentrations in sediment were screened to determine if explosives in sediment have the potential to pose risk to benthic invertebrates. No other potential ecological exposure pathways were identified for evaluation at Area UXO 1.

7.2 Effects Evaluation and Exposure Estimate

The presence of chemicals in sediment at concentrations that could adversely affect ecological receptors was evaluated by comparing maximum chemical concentrations detected in sediment to the sediment ecological PALs established in the SAP. The PALs were established based on Revised Region 3 Biological Technical Assistance Group (BTAG) Screening Levels (USEPA, 1995). In cases where BTAG screening values were unavailable, PALs were established from relevant, peer-reviewed literature. In instances where a PAL could not be established based on either BTAG or literature sources, any detection of the associated chemical was considered significant. The lower of freshwater and marine values was conservatively selected for the evaluation of this brackish-water habitat (**Table 7-1**). Hazard quotients (HQs) were calculated by dividing the maximum detected concentrations by the sediment screening value.

For locations with multiple data points (such as when a parent and duplicate sample were available), data were reduced to the value of the greatest detected concentration or highest method detection limit if there was no detection.

7.3 Risk Calculation

Chemical concentrations in sediment samples collected during the August 2012 sampling event were compared to sediment screening values as presented in **Table 7-2**. The objective of this comparison was to determine if chemicals are present in sediment at concentrations that could represent a potential risk to benthic invertebrates.

Of the 19 chemicals that were analyzed for, only one chemical, 2,4,6-TNT, was detected. The maximum-based HQ for 2,4,6-TNT exceeded 1 (HQ = 2), but had a low magnitude of exceedance and was detected in only 3 of 15 samples. Because 80 percent of samples did not contain 2,4,6-TNT and the magnitude of exceedance was low, the potential for impacts to communities of benthic invertebrates is also expected to be low. The remaining chemicals analyzed for at the site were not detected in sediments. To be conservative, these chemicals were screened against available benchmarks using one half of the maximum method detection limit. Screening values were available for seven of these analytes. Two analytes had HQs less than 1, while five analytes had HQs greater than 1.

7.4 Uncertainties

7.4.1 Screening Values

The screening values used in this ERS were derived based on the lower of the available literature-based toxicity values for freshwater and saltwater benthic organisms. However, further evaluation indicated that this water body should be classified as marine. A review of the Virginia Administrative Code (9VAC25-260-410 and 9VAC25-260-140) identified the Southern Branch of the Elizabeth River as an estuarine water to which marine criteria should be applied, rather than freshwater. Furthermore, the sampled portion of this water body has a salinity that

is high enough to be classified as an estuarine/marine environment. Historical salinity data from the Southern Branch of the Elizabeth River in the vicinity of Area UXO 1 in 2004 in association with the Blows Creek Baseline Ecological Risk Assessment ranged from 1.20 percent to 1.29 percent, which is indicative of an estuarine/marine environment. Therefore, estuarine/marine screening values are expected to provide a more accurate representation of the toxicity of the constituents to benthic organisms at Area UXO 1.

Although 2,4,6-TNT had an HQ greater than 1 using the freshwater ecological screening value of 0.13 mg/kg (from Talmage and Opresko, 1996), the HQ would be less than 1 using available estuarine/marine screening values. Twenty-eight day chronic laboratory bioassays conducted with the estuarine amphipod *Leptocheirus plumulosus* and the marine polycheate *Neathes arenaceodentata*, for example, resulted in No Observed Effect Concentrations (NOECs) of 116 mg/kg and 275 mg/kg, respectively (Green et al., 1999). A 10-day acute laboratory bioassay conducted with the marine amphipod *Eohaustorius estuarius* resulted in a NOEC of 20 mg/kg (Rosen and Lotufo, 2005). These estuarine/marine values suggest that the value used for 2,4,6-TNT in the ERS is likely to overestimate the potential for risk to benthic organisms at Area UXO 1.

7.4.2 Non-Detected Analytes

Although five of the analytes that were not detected had HQs greater than 1 using one half of the maximum method detection limit, there is uncertainty associated with the predicted risk from chemicals that were not detected. Assuming that non-detect chemicals are present at one half the method detection limit is conservative, and overall risk from non-detected chemicals is considered low.

7.5 Conclusions

Only one chemical, 2,4,6-TNT, was detected in 3 of 15 samples. The maximum-based HQ for 2,4,6-TNT exceeded 1 (HQ = 2), but had a low magnitude of exceedance. Although 2,4,6-TNT exceeded the HQ of 1, the screening value used is likely to overestimate the potential risk to benthic organisms at the site from exposure to the constituent. If a more realistic screening value were used, the HQ would be below 1. While there is uncertainty associated with the predicted risk from chemicals that were not detected, the overall risk from non-detected chemicals is negligible. Therefore, exposure to explosives in sediment at Area UXO 1 is not expected to result in any ecological risks.

TABLE 7-1

Sediment Screening Values

Area UXO 1 ESI Report

St. Juliens Creek Annex

Chesapeake, VA

Analyte	Sediment Screening Values		Source
	Freshwater	*Marine*	
Explosives (mg/kg)			
1,3,5-Trinitrobenzene	0.0024	--	Talmage et al., 1999*
1,3-Dinitrobenzene	0.007	--	Talmage et al., 1999*
2,4,6-Trinitrotoluene	0.13	--	Talmage and Opresko, 1995*
2,4-Dinitrotoluene	0.23	--	Talmage and Opresko, 1995*
2,6-Dinitrotoluene	--	0.55	Nipper et al., 2002
2-Amino-4,6-dinitrotoluene	--	--	--
2-Nitrotoluene	--	--	--
3-Nitrotoluene	--	--	--
4-Amino-2,6-dinitrotoluene	--	--	--
4-Nitrotoluene	--	--	--
HMX	0.005	--	Talmage et al., 1999*
Nitrobenzene	0.51	--	TCEQ, 2006
Nitroglycerin	--	--	--
Nitroguanidine	--	--	--
PETN	--	--	--
RDX	0.01	--	Talmage et al., 1999*
Tetryl	--	--	--
Explosives (ug/kg)			
Nitrocellulose	--	--	--
Perchlorate	--	--	--

Notes

Result for nondetects is equal to 1/2 of the method detection limit (MDL)

* Screening value is based on 1% organic carbon

TABLE 7-2

Chemicals in Sediment Compared to Sediment Screening Values

Area UXO 1 ESI Report

St. Juliens Creek Annex

Chesapeake, VA

Chemicals	N	Detects	Maximum Method Detection Limit	Maximum Result	Screening Value	Maximum Hazard Quotient
Explosives (mg/kg)						
1,3,5-Trinitrobenzene	15	0	0.2	0.1	0.0024	42
1,3-Dinitrobenzene	15	0	2.24	1.12	0.007	160
2,4,6-Trinitrotoluene	15	3	0.2	0.266	0.13	**2.0**
2,4-Dinitrotoluene	15	0	0.776	0.388	0.23	1.7
2,6-Dinitrotoluene	15	0	0.224	0.112	0.55	0.2
2-Amino-4,6-dinitrotoluene	15	0	0.205	0.1025	--	--
2-Nitrotoluene	15	0	0.2	0.1	--	--
3-Nitrotoluene	15	0	0.74	0.37	--	--
4-Amino-2,6-dinitrotoluene	15	0	0.2	0.1	--	--
4-Nitrotoluene	15	0	0.2	0.1	--	--
HMX	15	0	0.2	0.1	0.005	20
Nitrobenzene	15	0	0.2	0.1	0.51	0.2
Nitroglycerin	15	0	0.5	0.25	--	--
Nitroguanidine	15	0	0.1	0.05	--	--
PETN	15	0	0.5	0.25	--	--
RDX	15	0	0.2	0.1	0.01	10
Tetryl	15	0	0.2	0.1	--	--
Explosives (ug/kg)						
Nitrocellulose	15	0	2	1	--	--
Perchlorate	15	0	32.8	16.4	--	--

Notes

Maximum values for non-detects are based on 1/2 of the method detection limit (MDL)

Hazard quotients in **bold** exceed 1 for detected chemicals

* Screening value is based on 1% organic carbon

mg/kg - milligram per kilogram

N - sample size

ug/kg - microgram per kilogram

SECTION 8

Conclusions and Recommendations

The UFP-SAP (CH2M HILL, 2012b) identified several environmental questions to be addressed by the ESI. In addition, the work plan (CH2M HILL, 2012a) included a QCP that established DFOWs and pass/fail criteria to verify that the investigation would achieve the desired outcome. The environmental questions and the ESI data supporting their resolution are discussed below.

1. Are DMM present in the sediment within the selected underwater areas of DGM anomalies at Area UXO 1?
   - The ESI included the acquisition of metallic debris at 15 locations. No evidence of DMM was observed during the ESI at Area UXO 1. The work plan QCP included a pass/fail criterion, which stated that an investigation location would pass the criterion if at least one piece of metallic debris was recovered from that investigation location. Field records indicate that this criterion was met at each of the 15 investigation locations. Additionally, although there was no set pass/fail requirement associated with dimensions or weights of items recovered because there was no particular type of DMM known to be present, the dimensions and weights of items recovered indicate the electromagnet would have been effective in recovering a variety of DMM, if present.
2. Has the presence of DMM in site sediment resulted in the release of contaminants to the surrounding environment?
   - Because no evidence of DMM was observed during the ESI, there is no indication that DMM has released contaminants to the surrounding environment. The ESI included the collection of sediment samples at 15 investigation locations. 2,4,6-TNT was detected at three of the 15 sediment sampling locations; however, the concentrations were low and isolated, and the source of the 2,4,6-TNT is not known. Because reference data are not available, there is uncertainty as to whether the detections are associated with an offsite source or indicate a release of environmental contaminants associated with the anomalies.
3. What is the overall explosive risk associated with DMM in sediment?
   - Because no evidence of DMM was observed during the ESI, the MRSPP has been reevaluated with a revised rating of “No Known or Suspected Hazard,” as discussed in Section 5.4. Additionally, the human health and ecological risk screenings performed using the sediment analytical data concluded that there were no unacceptable human health or ecological risks.

The ESI resulted in no MEC being identified at any of the investigation locations, limited detections of chemical concentrations in sediment, and no unacceptable human health or ecological risks. Based on the results of the ESI, no further investigation of anomaly sources or analytical sampling to characterize the nature and extent of contamination or to further evaluate the presence of MEC is warranted for Area UXO 1. Site closure is recommended.

SECTION 9

References

This Section lists the documents consulted in the preparation of this report; not all texts included herein are specifically cited in the text.

Buchman, M.F. 2008. *NOAA Screening Quick Reference Tables.* NOAA OR&R Report 08-1, Seattle, WA, Office of Response and Restoration Division, National Oceanic and Atmospheric Administration. 34 pp.

CH2M HILL. 1996a. *Relative Risk Ranking System Data Collection Report St Juliens Creek Annex to the Norfolk Naval Base, Chesapeake, Virginia.* April.

CH2M HILL. 1996b. *Site Screening Assessment Report, St Juliens Creek Annex to the Norfolk Naval Base, Chesapeake, Virginia.* June.

CH2M HILL. 2003. *Final Master Project Plan, St. Juliens Creek Annex, Chesapeake, Virginia*. July.

CH2M HILL. 2009. *Preliminary Assessment Report. St. Juliens Creek Annex, Chesapeake, Virginia.* June.

CH2M HILL. 2010. *Site Inspection Report, Munitions Response Area UXO 1, St. Juliens Creek Annex, Chesapeake, Virginia*. September.

CH2M HILL. 2012a. *Anomaly Acquisition and Investigation Work Plan, Munitions Response Area UXO 1, St. Juliens Creek Annex, Chesapeake, Virginia*. June.

CH2M HILL. 2012b. *Sampling and Analysis Plan, Anomaly Acquisition and Investigation Area UXO 1, St. Juliens Creek Annex, Chesapeake, Virginia.* June.

CH2M HILL. 2012c. *Explosives Safety Submission for Area UXO 1 Site Inspection, St. Juliens Creek Annex, Chesapeake, Virginia.* February.

Department of Defense (DoD). 2007. *Munitions Response Site Prioritization Protocol Primer.* April.

Fluor Daniel GTI, Inc. 1997. *Draft Groundwater Remedial Investigation Work Plan for Atlantic Wood Industries, Inc.* May.

Foster Wheeler Environmental, Inc. (FWEI). 1995. *Final Remedial Investigation/Risk Assessment/Feasibility Study Report, Norfolk Naval Shipyard, Portsmouth, Virginia*. March.

Naval Energy and Environmental Support Activity (NEESA). 1981. *Navy Assessment and Control of Installation Pollutants: Initial Assessment Study of St. Juliens Creek Annex, Norfolk Naval Shipyard, Portsmouth, Virginia.* NEESA 13-001. August.

Naval Facilities Engineering Command (NAVFAC). 1999. *Programmatic Agreement for the Navy's Historic Building in Hampton Roads.* November.

Nipper, M., R.S. Carr, J.M. Biedenbach, R.L. Hooten, and K. Miller. 2002. Toxicological and Chemical Assessment of Ordnance Compounds in Marine Sediments and Porewaters. Marine Pollution Bulletin, 44: 789-806.

National Oceanic and Atmospheric Administration (NOAA). 1992. *Ecological Risk Assessment for Atlantic Wood Industries*. April.

Naval Facilities Engineering Command (NAVFAC). 2007. *Ecological Risk Assessment Tier 1 Screening, Supplemental RI at Operable Unit 2, Jackson Park Housing Complex/Naval Hospital Bremerton, Bremerton, Washington.* Draft. April.

NOAA. 1999. *Coastal Hazardous Waste Site Review, USN Norfolk Naval Shipyard, Norfolk, Virginia, CERCLIS #VA1170024813*.

Talmage, S.S., D.M. Opresko, C.J. Maxwell, C.J.E. Welsh, F.M. Cretella, P.H. Reno, and F.B. Daniel. 1999. Nitroaromatic Munition Compounds: Environmental Effects and Screening Values. Reviews of Environmental Contamination and Toxicology. 161:1-156.

Talmage, S.S., and D.M. Opresko. 1995. Draft Ecological Criteria Documents for Explosives, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Texas Commission on Environmental Quality. 2006. Update to Guidance for Conducting Ecological Risk Assessments at Remediation Sites In Texas RG-263 (Revised). Remediation Division. January. http://www.tceq.state.tx.us/assets/public/remediation/eco/0106eragupdate.pdf.

United States Environmental Protection Agency (USEPA). 1994. *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-media, Multi-concentration*. September.

USEPA. 1995. *Revised Region 3 Biological Technical Assistance Group (BTAG) Screening Levels.*

USEPA. 2012. *Regional Screening Levels for Chemicals at Superfund Sites*. May.

United States Naval Underwater Construction Team. 2008. *Survey Data, St. Juliens Creek Annex, Portsmouth, Virginia*. September 8.

United States Navy (Navy). 2008. *Draft Historical Overview of SJCA Historic District, Chesapeake, Virginia.* December.

Virginia Administrative Code (VAC). 2011. *9 VAC 25-260 Virginia Water Quality Standards*. 6 January.

Appendix A
Daily Reports

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/01/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 001

SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle	
AM WEATHER: Fair	PM WEATHER: Fair	MAX TEMP: 86 F	MIN TEMP: 78 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP, demolition SOP, and Crofton boat safety daily brief. Mike Thomas (NAVFAC) onsite to inspect crane and issue crane permit. Setup at Location 5 and completed the investigation at Location 5 to include collecting one sediment sample.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☒	☒	☐
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☒ Yes ☐ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)	
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours	30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours	70
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**	100
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report	0
		Total Work Hours From Start of Construction	100

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging, and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	10	0	0
Long-Reach Excavator	Caterpillar 320	Dana Thomas	5	5	0
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	10	0	0
Tug Boat	Bunny C	Michael Mahlmann	10	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/01/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 001
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator/Deck Hand	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Deck Hand/Rigger	10
Wallace Pittman	Anomaly Investigation	Crofton Construction	Deck Hand/Rigger	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD005-0003 (sediment from Location 5)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.02 22:26:42 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	5

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and labeled "empty" and turned upside down.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

One (1) hour delay due to lightning in the area. One (1) hour delay due to having to replace a torn portion of the upper floating tube section of the turbidity curtain.

VISITORS TO THE SITE: George DeMetropolis (CH2M HILL), Dave Pryor (CH2M HILL), Mike Skeean (CH2M HILL), Ric Traver (CH2M HILL), Stephen Brand (CH2M HILL)

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (preparatory phase checklist, iniital phase checklist), crane inspection report, crane operating permit, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.02 22:26:24 -04'00'

SITE MANAGER'S SIGNATURE

08/01/12

DATE

FORM B-1b

Preparatory Inspection Checklist
(Part I)

Contract No.: N62470-11-D-8012

Date: 1 Aug 2012

TITLE AND NO. OF TECHNICAL SECTION: Work Plan Section 5.2 (DFOW and the Three-Phase Control Process)

DFOW-Field Operations

A. Planned Attendees:

	Name	Position	Company
1)	Nelson Figeac	UXOQC/Safety	CH2M HILL
2)	Ted Dingle	SUXO Supervisor	CH2M HILL
3)	Nate Price	Field Team Leader	CH2M HILL
4)	Henry Thrift	UXO Team Leader	OER
5)	Ricardo Fuciarelli	UXO Tech II	OER
6)	Matthew Farrell	UXO Tech II	OER
7)	Michael Mahlmann	Captain	Crofton
8)	Dana Thomas	Rigger Supervisor	Crofton
9)	Wallace Pitman	Deck Hand	Crofton
10)	Mike Smith	Crane Operator	Crofton
11)			

B. Submittals required to begin work:

	Item	Submittal No.	Action Code
1)	MPPEH/MDAS Certification Letter	N/A	Approved
2)	Crane Operator Permit	N/A	Approved
3)	Excavator Operator Letter	N/A	Approved
4)	Notice to Mariners	N/A	Approved
5)	USACE and VMRC Approval	N/A	Received
6)			
7)			
8)			

I hereby certify, that to the best of my knowledge and belief, that the above required materials delivered to the job site are the same as those submitted and approved.

Nelson Figeac

Contractor Quality Control Systems Manager

FORM B-1b (Continued)

Preparatory Inspection Checklist
(Part I)

Contract No.: N62470-11-D-8012

Date: 1 Aug 2012

C. Equipment to be used in executing work:

1) Crofton barge with crane/electromagnet and associated equipment
2) Hand held radios
3) Cat 320L Excavator
4)
5)

D. Work areas examined to ascertain that all preliminary work has been completed:

NAVFAC Inspector conducted crane inspection and certification at 0800
Excavator check out/inspection, Turbidity curtain deployed

E. Methods and procedures for performing Quality Control, including specific testing requirements:

All metal debris will be visually inspected by UXOQC and OER FTL. Measured out on barge EZ distance and marked with cones. Verified personnel qualifications and approval from base CO for MPPEH/MDAS certification

The above methods and procedures have been identified from the project plans and will be performed as specified for the Definable Feature of Work.

Nelson Figeac

Contractor Quality Control Systems Manager

FORM B-1b (Continued)

Preparatory Inspection Checklist
(Part II)

A. Persons in attendance: See Meeting Attendance Sheet (attached)

B. Because of mutual understanding developed during review of preparatory outline and Contract Requirements: (Contract items not specifically covered during the preparatory inspection conference are assumed to be in strict conformance with the contract requirements.)

Load out barge with all required equipment and personnel. Barge captain will get vessel underway and station over location 5 for anomaly investigation. Will deploy turbidity curtain and hook up electromagnet to crane. Will deploy electromagnet within the 20ft by 20ft box for investigation, magnet will be energized and brought back to the surface for releasing the material over the inspection screen. UXO OER personnel will investigate material to make sure there is no explosive hazards . Process will continue till crane operator has covered the entire 20ft by 20ft box on his GPS plot.

The items noted above constitute a memorandum of mutual understanding and will be performed as planned and specified.

Nelson Figeac

MEC QCS

Technical Representative

FORM B-2b

Initial Phase Check List

Contract No.: N62470-11-D-8012

Date: 1 Aug 2012____

Title and No. of Technical Section: Work Plan Section 5.2 (DFOW and the Three-Phase Control Process)

DFOW-Field Operations

Description and Location of Work Inspected: UXO 1 Location 5

A. Key Personnel Present:

	Name	Position	Company
1)	Nelson Figeac	UXOQC/Safety	CH2M HILL
2)	Ted Dingle	SUXO Supervisor	CH2M HILL
3)	Nate Price	Field Team Leader	CH2M HILL
4)	Henry Thrift	UXO Team Leader	OER
5)	Ricardo Fuciarelli	UXO Tech II	OER
6)	Matthew Farrell	UXO Tech II	OER
7)	Michael Mahlmann	Captain	Crofton
8)	Dana Thomas	Rigger Supervisor	Crofton
9)	Wallace Pitman	Deck Hand	Crofton
10)	Mike Smith	Crane Operator	Crofton

B. Materials being used are in strict compliance with the contract plans and specifications: Yes X_ No ____

If not, explain: _____

C. Procedures and/or work methods witnessed are in strict compliance with the contract specifications: Yes X No ___

If not, explain: _____

D. Workmanship is acceptable: Yes X___ No ____

State where improvement is needed: _____

E. Workmanship is free of safety violations: Yes X___ No ____

If no, corrective action taken: _____

Nelson Figeac

MEC QCS

AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11 Location: Chesapeake, Va Date: 1 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation

Task Personnel:

See attached list.

List Tasks:
Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Clear and high of 89F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment**: **Be aware of surroundings**.
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

DAILY PRE-TASK SAFETY PLAN (PTSP)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
__ Thermal/lined	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	__ GFCI/extension cords
_X_ Respiratory	__ Shoring	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
__ Flotation device	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	__ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	__ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	__ Heavy equipment	_X_ Competent person
__ Manifest for T&D for specific lots	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

DAILY PRE-TASK SAFETY PLAN (PTSP)

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck.
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion..

Attendees:

Name Printed:	**Signature**:
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
George DeMetropolis – CH2M HILL	
DAWA THOMAS	DAWA THOMAS
WALLACE PITTMAN	
Michael J Mahlmann Captain	
Gilbert L. Rodriguez, NAVFAC ML	
MIKE SMITH	

Meeting Conducted By: Nelson Figeac

Name Printed

Signature

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 12-9674 Date: 08/01/12

Foreman: Operator: M. SMITH

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours			

Serial No: 805-126306 Make: WILEY Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: [signature] Date: 08/01/2012

CROFTON Construction Services, Inc.

CONTRACTOR CRANE OPERATING PERMIT

NAVFAC MIDLANT CONTRACTOR CRANE OPERATING PERMIT

8/9/2012

DATE ISSUED

8/11/2012

EXPIRATION DATE

CONTRACTING AGENT PHONE # & NAME NAVFAC

KRISTA PARRA 757-341-03954

CONTRACT # N62470-08-D-1000(CTO-WE10)

AUTHORIZED LOCATION STJ,S

CRANE CONTRACTOR CROFTON CRANE RENTAL

CRANE NUMBER CB14464

BULKHEAD

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 ___ Day Aug 1, 12 Date Wed Trip# ___

Trip Data: Departed From: Portsmouth, NH Enroute to: ___

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer AB	W Pottman		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited.
[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]

B. Steering System

1. Steering System—Main pump ☑ OK ☐ N/R
2. Steering system—Alternate Pump ☑ OK ☐ N/R
3. Steering angle, maximum to port ☑ OK ☐ N/R
4. Steering angle, maximum to starboard ☑ OK ☐ N/R
5. Flanking rudders ☑ N/A ~~☐ OK ☐ N/R~~
6. All steering stations work ☑ OK ☐ N/R
7. Steering system linkage ☑ OK ☐ N/R
8. Rudder angle indicator is accurate ☑ N/A ~~☐ OK ☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A) ~~☐ OK ☐ N/R~~
2. Radar #2 (Identify: Furuno) ☑ OK ☐ N/R
   [What time did radar stop working? ___]
3. Port searchlight #1 works ☑ OK ☐ N/R
4. Starboard searchlight #2 works ☑ OK ☐ N/R
5. VHF-FM Radio #1 (Identify: Sailor) ☑ OK ☐ N/R
6. VHF-FM Radio #2 (Identify: Sailor) ☑ OK ☐ N/R
7. Magnetic compass, compensated ☐ N/A ☑ OK ☐ N/R
8. Deviation Table is accurate ☐ N/A ☑ OK ☐ N/R
9. Swing meter (Illuminated) ☑ N/A ~~☐ OK ☐ N/R~~
10. Depth sounder works ☐ N/A ☑ OK ☐ N/R
11. Automatic Indentification System ☐ N/A ☑ OK ☐ N/R
12. Loran-C/GPS receiver works ☐ N/A ☑ OK ☐ N/R
13. Intercom and PA system tested ☐ N/A ☑ OK ☐ N/R
14. General alarm system tested ☐ N/A ☑ OK ☐ N/R
15. Navigation lights work ☑ OK ☐ N/R
16. Whistle tested ☑ OK ☐ N/R
17. Fire alarm panel ☑ OK ☐ N/R
    [Report all navigational equipment that fails in service.]

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale) ☑ OK ☐ Not Avail.
2. Coast Guard Light List (LL) ☑ OK ☐ Not Avail.
3. Local Notice to Mariners (LNM) ☑ OK ☐ Not Avail.
4. Tide Tables ☐ N/A ☑ OK ☐ Not Avail.
5. Tidal Current Tables ☐ N/A ☑ OK ☐ Not Avail.
6. U.S. Coast Pilot ☐ N/A ☑ OK ☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]* ☑ OK ☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection) ☑ N/A ☐ OK ☐ N/R
2. Towline free of knots ☐ OK ☐ N/R
3. Towing wire has a spliced or poured socket ☐ OK ☐ N/R
4. Towing wire has no wire clips ~~☐ OK ☐ N/R~~
5. Terminal gear ☐ OK ☐ N/R
6. Chafing gear ☐ OK ☐ N/R
7. Shock line ☐ OK ☐ N/R
8. Towing bridles and gear ☐ OK ☐ N/R
9. Towing engine, winch, and capstan(s) ~~☐ OK~~ ☐ N/R
10. Towing winch brake ☐ OK ~~☐ N/R~~
11. Towing hawser used ___ Hours & ___ Miles

F. Towline & terminal gear for towing alongside or pushing ahead

1. Face wires appropriate for horsepower of vessel ☐ N/A ☑ OK ☐ N/R
2. Face wires appropriate for tow arrangement ☐ N/A ☑ OK ☐ N/R
3. Face wires/couplings serviceable ☐ N/A ☑ OK ☐ N/R
4. Winch Condition ☑ OK ☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage ☑ OK ☐ N/R
2. Check propulsion machinery ☑ OK ☐ N/R
3. Check other machinery ☑ OK ☐ N/R
4. Check all gauges ☑ OK ☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage ☑ YES ☐ NO
2. Check pre-sailing plan with crew ☑ YES ☐ NO
3. Deck secured for sea or voyage ☑ YES ☐ NO
4. Weather forecast checked ☑ YES ☐ NO
5. Generator(s) operate satisfactorily ☑ YES ☐ N/R
6. Watertight doors and hatches ☑ OK ☐ N/R
7. Fuel shutoff valve operable ☑ YES ☐ N/R

I. Barge(s)

1. Navigation lights work ☐ OK ☐ N/R
2. Hatches secured ☐ OK ☐ N/R
3. Load line ☐ N/A ☐ OK
4. List and trim ☐ OK ☐ N/R
5. Anchoring system operational ☐ N/A ☐ OK ☐ N/R
6. Emergency pick-up line deployed ☐ N/A ☐ OK ☐ N/R
7. Deck lines secured ☐ OK ☐ NO
8. Towing bridles, pendant, and gear ☐ OK ☐ N/R
9. Tow diagram and barge info available ☐ OK ☐ N/R

Time	Code (Letter)	Item (Number)	8/1/12 EXPLANATION OF EACH ENTRY
0001			Sailing C St Julian's Creek Job
0630			Ved out boat Per CFR 33 Part 164 UP & Away
1710			See C St Julian's Creek C Mile 5

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made. **Signature of Master**

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/02/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 002

SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle	
AM WEATHER: Fair	PM WEATHER: Fair	MAX TEMP: 91 F	MIN TEMP: 72 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Locations 6, 7, and 8. Completed the investigation at Locations 6 and 7 and began investigating Location 8. Collected one sediment sample from each of the three locations.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 70
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 100
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 100 Total Work Hours From Start of Construction: 200

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging, and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	10	0	0
Long-Reach Excavator	Caterpillar 320	Dana Thomas	5	5	0
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	10	0	0
Tug Boat	Bunny C	Michael Mahlmann	10	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/02/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 002
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Wallace Pittman	Anomaly Investigation	Crofton Construction	Deck Hand	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD006-0003 (sediment from Location 6)	CH2M HILL	Nathaniel Price
SJUXO1-SD007-0004 (sediment from Location 7)	CH2M HILL	Nathaniel Price
SJUXO1-SD008-0004 (sediment from Location 8)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.03 12:25:28 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	4

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured with sand bags.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

None

VISITORS TO THE SITE: Ric Traver (CH2M HILL) and representatives from EPA, VDEQ, NAVFAC, and CH2M HILL for a Partnering Team site visit.

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.03 12:26:06 -04'00'

SITE MANAGER'S SIGNATURE

08/02/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 2Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

Field Operations, SJCA UXO1 Locations 6, 7 & 8 Chesapeake Va. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlmann, Dana Thomas, Wallace Pitman, Mike Smith.

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Nate Price collected soil samples from Locations 6, 7 & 8

MEC QCS: Nelson Figeac **Date: 2 Aug 2012**

AGVIQ
AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL
JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 2 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Clear and high of 93F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment**: **Be aware of surroundings**.
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
__ Thermal/lined	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	__ GFCI/extension cords
_X_ Respiratory	__ Shoring	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
__ Flotation device	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	__ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	__ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	__ Heavy equipment	_X_ Competent person
__ Manifest for T&D for specific lots	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck.
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion..
9. Conduct Barge Safety Brief.

Attendees:

Name Printed:	**Signature:**
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	DANA THOMAS
Wallace Pitman-Crofton	
Mike Smith-Crofton	
RIC TRAVER - CH2M HILL	

Meeting Conducted By: Nelson Figeac

Name Printed

Signature

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 17-9674 Date: 08/02/2012

Foreman: Operator: M. SMITH

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours			

Serial No: Make: WALCY Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: M. V. [illegible] Date: 08/02/2012

CROFTON

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 _____ Day Tue Date Aug 2, 12 Trip# _____

Trip Data: Departed From: Portsmouth, VA Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer AB	W Pittman		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited. *[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]*

B. Steering System

1. Steering System—Main pump ☑ OK ☐ N/R
2. Steering system—Alternate Pump ☑ OK ☐ N/R
3. Steering angle, maximum to port ☑ OK ☐ N/R
4. Steering angle, maximum to starboard ☑ OK ☐ N/R
5. Flanking rudders ☑ N/A ~~☐ OK ☐ N/R~~
6. All steering stations work ☑ OK ☐ N/R
7. Steering system linkage ☑ OK ☐ N/R
8. Rudder angle indicator is accurate ☑ N/A ~~☐ OK ☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A) ~~☐ OK ☐ N/R~~
2. Radar #2 (Identify: FURUNO) ☑ OK ☐ N/R
   [What time did radar stop working? _____]
3. Port searchlight #1 works ☑ OK ☐ N/R
4. Starboard searchlight #2 works ☑ OK ☐ N/R
5. VHF-FM Radio #1 (Identify: Standard) ☑ OK ☐ N/R
6. VHF-FM Radio #2 (Identify: Standard) ☑ OK ☐ N/R
7. Magnetic compass, compensated ☐ N/A ☑ OK ☐ N/R
8. Deviation Table is accurate ☐ N/A ☑ OK ☐ N/R
9. Swing meter (Illuminated) ☑ N/A ~~☐ OK ☐ N/R~~
10. Depth sounder works ☐ N/A ☑ OK ☐ N/R
11. Automatic Indentification System ☐ N/A ☑ OK ☐ N/R
12. Loran-C/GPS receiver works ☐ N/A ☑ OK ☐ N/R
13. Intercom and PA system tested ☐ N/A ☑ OK ☐ N/R
14. General alarm system tested ☐ N/A ☑ OK ☐ N/R
15. Navigation lights work ☑ OK ☐ N/R
16. Whistle tested ☑ OK ☐ N/R
17. Fire alarm panel ☑ OK ☐ N/R
    [Report all navigational equipment that fails in service.]

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale) ☑ OK ☐ Not Avail.
2. Coast Guard Light List (LL) ☑ OK ☐ Not Avail.
3. Local Notice to Mariners (LNM) ☐ OK ☐ Not Avail.
4. Tide Tables ☐ N/A ☑ OK ☐ Not Avail.
5. Tidal Current Tables ☐ N/A ☑ OK ☐ Not Avail.
6. U.S. Coast Pilot ☐ N/A ☑ OK ☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]* ☑ OK ☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection) ☑ N/A ☐ OK ☐ N/R
2. Towline free of knots ☐ OK ☐ N/R
3. Towing wire has a spliced or poured socket ☐ OK ☐ N/R
4. Towing wire has no wire clips ☐ OK ☐ N/R
5. Terminal gear ☐ OK ☐ N/R
6. Chafing gear ☐ OK ☐ N/R
7. Shock line ☐ OK ☐ N/R
8. Towing bridles and gear ☐ OK ☐ N/R
9. Towing engine, winch, and capstan(s) ☐ OK ☐ N/R
10. Towing winch brake ☐ OK ☐ N/R
11. Towing hawser used _____ Hours & _____ Miles

F. Towline & terminal gear for towing alongside or pushing ahead

1. Face wires appropriate for horsepower of vessel ☐ N/A ☑ OK ☐ N/R
2. Face wires appropriate for tow arrangement ☐ N/A ☑ OK ☐ N/R
3. Face wires/couplings serviceable ☐ N/A ☑ OK ☐ N/R
4. Winch Condition ☑ OK ☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage ☑ OK ☐ N/R
2. Check propulsion machinery ☑ OK ☐ N/R
3. Check other machinery ☑ OK ☐ N/R
4. Check all gauges ☑ OK ☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage ☑ YES ☐ NO
2. Check pre-sailing plan with crew ☑ YES ☐ NO
3. Deck secured for sea or voyage ☑ YES ☐ NO
4. Weather forecast checked ☑ YES ☐ NO
5. Generator(s) operate satisfactorily ☑ YES ☐ N/R
6. Watertight doors and hatches ☑ OK ☐ N/R
7. Fuel shutoff valve operable ☑ YES ☐ N/R

I. Barge(s)

1. Navigation lights work ☐ OK ☐ N/R
2. Hatches secured ☐ OK ☐ N/R
3. Load line ☐ N/A ☐ OK
4. List and trim ☐ OK ☐ N/R
5. Anchoring system operational ☐ N/A ☐ OK ☐ N/R
6. Emergency pick-up line deployed ☐ N/A ☐ OK ☐ N/R
7. Deck lines secured ☐ OK ☐ NO
8. Towing bridles, pendant, and gear ☐ OK ☐ N/R
9. Tow diagram and barge info available ☐ OK ☐ N/R

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Time	Code (Letter)	Item (Number)	8/2/12 EXPLANATION OF EACH ENTRY
0001			St/Rig @ Portsmouth, VA St Julian Cr
0630			Vessel out Port CFR 33 Part 164 UP & Rig
0730-0755			Shift to Mark 6
1045			Finished Mark 6 Move to Mark 7
1115			In Place @ Mark 7
1430			Move to Mark 8
1455			Arr @ Mark 8
1650			Sec @ Dock

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/03/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 003

SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle	
AM WEATHER: Fair	PM WEATHER: Fair	MAX TEMP: 93 F	MIN TEMP: 75 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Locations 9 and 10 (setup at Location 8 on 08/02/12). Completed the investigation at Locations 8 and 9 and began investigating Location 10. Collected one sediment sample from Location 9.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 70
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 100
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 200 Total Work Hours From Start of Construction: 300

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging, and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	10	0	0
Long-Reach Excavator	Caterpillar 320	Dana Thomas	5	5	0
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	10	0	0
Tug Boat	Bunny C	Michael Mahlmann	10	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/03/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 003
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Garry Williams	Anomaly Investigation	Crofton Construction	Deck Hand	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD009-0005 (sediment from Location 6)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.05 21:47:50 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	4

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured with sand bags.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*:**

None

VISITORS TO THE SITE: Hope Wilson (CH2M HILL)

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.05 21:48:01 -04'00'

SITE MANAGER'S SIGNATURE

08/03/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 3Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

Field Operations, Site investigation at SJCA UXO1 Locations 8, 9 and 10 Chesapeake Va. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlman, Dana Thomas, Garry Williams, Mike Smith. No MPPEH, MEC or MD was found for the day. Only found general scrap metal such as bolts, rebar, pipe and steel cable. Put all items after being inspected and washed off in cultural debris roll off container. Croton will leave barge and tug secured to the pier on base for the weekend. All base security personnel have been notified.

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Nate Price collected soil sample from Location 9.

MEC QCS: Nelson Figeac **Date: 3 Aug 2012**

AGVIQ
AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL
JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 3 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Field Operations-Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Clear and high of 98F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment**: **Be aware of surroundings**.
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
__ Thermal/lined	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	__ GFCI/extension cords
_X_ Respiratory	__ Shoring	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
X Flotation device	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	__ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	__ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	__ Heavy equipment	_X_ Competent person
__ Manifest for T&D for specific lots	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

DAILY PRE-TASK SAFETY PLAN (PTSP)

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck.
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion.
9. Use tag lines when handling work boat while putting it in and out of the water.

Attendees:

Name Printed:	**Signature:**
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	
Mike Smith-Crofton	
Garry Williams	
Hope Wilson / CH2M HILL	

Meeting Conducted By: Nelson Figeac

Name Printed

Signature

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 12-9674 Date: 08/03/2012

Foreman: D. THOMAS Operator: M. SMITH

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		FUEL AT 4639 HRS
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours	4639		

Serial No: 805-1263056 Make: WILEY Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: [signature] Date: 08/03/2012

CROFTON

Crofton Construction Services, Inc.

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 _____ Day Fri _____ Date Aug 3, 12 _____ Trip# _____

Trip Data: Departed From: Portsmouth, VA _____ Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer O.S.	G Williams		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited.
[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]

B. Steering System

1. Steering System—Main pump ☑ OK ☐ N/R
2. Steering system—Alternate Pump ☑ OK ☐ N/R
3. Steering angle, maximum to port ☑ OK ☐ N/R
4. Steering angle, maximum to starboard ☑ OK ☐ N/R
5. Flanking rudders ☑ N/A ~~☐ OK ☐ N/R~~
6. All steering stations work ☑ OK ☐ N/R
7. Steering system linkage ☑ OK ☐ N/R
8. Rudder angle indicator is accurate ☑ N/A ~~☐ OK ☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A) ~~☐ OK ☐ N/R~~
2. Radar #2 (Identify: Furuno) ☑ OK ☐ N/R
   [What time did radar stop working? _____*]*
3. Port searchlight #1 works ☑ OK ☐ N/R
4. Starboard searchlight #2 works ☑ OK ☐ N/R
5. VHF-FM Radio #1 (Identify: Stolo) ☑ OK ☐ N/R
6. VHF-FM Radio #2 (Identify: Stolo) ☑ OK ☐ N/R
7. Magnetic compass, compensated ☐ N/A ☑ OK ☐ N/R
8. Deviation Table is accurate ☐ N/A ☑ OK ☐ N/R
9. Swing meter (Illuminated) ☑ N/A ~~☐ OK ☐ N/R~~
10. Depth sounder works ☐ N/A ☑ OK ☐ N/R
11. Automatic Indentification System ☐ N/A ☑ OK ☐ N/R
12. Loran-C/GPS receiver works ☐ N/A ☑ OK ☐ N/R
13. Intercom and PA system tested ☐ N/A ☑ OK ☐ N/R
14. General alarm system tested ☐ N/A ☑ OK ☐ N/R
15. Navigation lights work ☑ OK ☐ N/R
16. Whistle tested ☑ OK ☐ N/R
17. Fire alarm panel ☑ OK ☐ N/R
    [Report all navigational equipment that fails in service.]

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale) ☑ OK ☐ Not Avail.
2. Coast Guard Light List (LL) ☑ OK ☐ Not Avail.
3. Local Notice to Mariners (LNM) ☐ OK ☐ Not Avail.
4. Tide Tables ☐ N/A ☑ OK ☐ Not Avail.
5. Tidal Current Tables ☐ N/A ☑ OK ☐ Not Avail.
6. U.S. Coast Pilot ☐ N/A ☑ OK ☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]* ☑ OK ☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection) ☑ N/A ☐ OK ☐ N/R
2. Towline free of knots ☐ OK ☐ N/R
3. Towing wire has a spliced or poured socket ☐ OK ☐ N/R
4. Towing wire has no wire clips ☐ OK ☐ N/R
5. Terminal gear ☐ OK ☐ N/R
6. Chafing gear ☐ OK ☐ N/R
7. Shock line ☐ OK ☐ N/R
8. Towing bridles and gear ☐ OK ☐ N/R
9. Towing engine, winch, and capstan(s) ☐ OK ☐ N/R
10. Towing winch brake ☐ OK ☐ N/R
11. Towing hawser used _____ Hours & _____ Miles

F. Towline & terminal gear for towing alongside or pushing ahead

1. Face wires appropriate for horsepower of vessel ☐ N/A ☑ OK ☐ N/R
2. Face wires appropriate for tow arrangement ☐ N/A ☑ OK ☐ N/R
3. Face wires/couplings serviceable ☐ N/A ☑ OK ☐ N/R
4. Winch Condition ☑ OK ☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage ☑ OK ☐ N/R
2. Check propulsion machinery ☑ OK ☐ N/R
3. Check other machinery ☑ OK ☐ N/R
4. Check all gauges ☑ OK ☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage ☑ YES ☐ NO
2. Check pre-sailing plan with crew ☑ YES ☐ NO
3. Deck secured for sea or voyage ☑ YES ☐ NO
4. Weather forecast checked ☑ YES ☐ NO
5. Generator(s) operate satisfactorily ☑ YES ☐ N/R
6. Watertight doors and hatches ☑ OK ☐ N/R
7. Fuel shutoff valve operable ☑ YES ☐ N/R

I. Barge(s)

1. Navigation lights work ☐ OK ☐ N/R
2. Hatches secured ☐ OK ☐ N/R
3. Load line ☐ N/A ☐ OK
4. List and trim ☐ OK ☐ N/R
5. Anchoring system operational ☐ N/A ☐ OK ☐ N/R
6. Emergency pick-up line deployed ☐ N/A ☐ OK ☐ N/R
7. Deck lines secured ☐ OK ☐ NO
8. Towing bridles, pendant, and gear ☐ OK ☐ N/R
9. Tow diagram and barge info available ☐ OK ☐ N/R

Time	Code (Letter)	Item (Number)	8/3/12 EXPLANATION OF EACH ENTRY
0001			St/By @ St Julians Creek Annex
0630			Jed out boat Per CPR 33 Part 164 UP & Run
0720			In mark 8 St/By
1031			Moving to Mark 9
1045			All Stc @ Mark 9
1405			moving to Mark 10
1435			USCG Boat 411456 came by Didn't slow down. They
—	—	—	were called on 16 & 13 Their boat wasn't out to
—	—	—	slow them down with tugboat. They didn't listen to
—	—	—	Horn that was blown 5 times & then over & over.
—	—	—	There was called in to the Katy Bee boat
1450			In place @ Mark 10
1600			Sec @ Jobsite

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made. Signature of Master

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/06/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 004
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac / SUXOS: Ted Dingle	
AM WEATHER: Fair	PM WEATHER: Rain/Thunderstorms / MAX TEMP: 89 F	MIN TEMP: 75 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Location 11 (setup at Location 10 on 08/03/12). Completed the investigation at Locations 10 and 11. Collected one sediment sample from Locations 10 and 11.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 72
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 102
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 300 Total Work Hours From Start of Construction: 402

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging, and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	9	0	0
Long Reach Excavator	Caterpillar 320	Dana Thomas	3	4	2
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	9	0	0
Tug Boat	Bunny C	Michael Mahlmann	9	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/06/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 004
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Garry Williams	Anomaly Investigation	Crofton Construction	Deck Hand	10
Lennon Smith	Anomaly Investigation	Crofton Construction	Mechanic	2

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD010-0004 (sediment from Location 10)	CH2M HILL	Nathaniel Price
SJUX01-SD011-0004 (sediment from Location 11)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price	SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.06 22:18:09 -04'00'
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.		

NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	4

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured with sand bags.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

Site work delayed 1 hour due to heavy rain and lightning in the work area during investigation activities.

VISITORS TO THE SITE: None

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.06 22:18:34 -04'00'

SITE MANAGER'S SIGNATURE

08/06/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 6Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

Field Operations, Site investigation at SJCA UXO1 Locations 10 and 11 Chesapeake Va. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlman, Dana Thomas, Garry Williams, Mike Smith. No MPPEH or MEC was found for the day. Found one 5in projectile nose protective shipping cap classified as MDAS and some general scrap metal such as bolts, rebar, pipe and steel cable. Put all items after being inspected and washed off in cultural debris roll off container and MDAS was put in a lockable 55gl drum and 1348 completed. Crofton excavator got a small leak on boom cylinder. It was shut down and not used. Crofton came with another barge took the excavator on it to take back to the shop for repairs. Will take one day to repair and bring back for operation.

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Nate Price collected soil samples from Locations 10 and 11.

MEC QCS: Nelson Figeac **Date: 6 Aug 2012**

AGVIQ
AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL
JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 6 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Field Operations-Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Chance of afternoon thunderstorms and 77F in the AM with a high of 88F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment: Be aware of surroundings and make good eye contact with operator if need to pass by.**
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
_X_ Hard Hat	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	_X_ GFCI/extension cords
_X_ Respiratory	_X_ Turbidity curtain	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
_X_ PFD	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	_X_ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	_X_ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	_X_ Heavy equipment	_X_ Competent person
_X_ NAVFAC Crane Inspection/certification	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck and onboard barge.
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion.
9. Use tag lines when handling work boat while putting it in and out of the water.

Attendees:

Name Printed:	**Signature:**
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	
Mike Smith-Crofton	
Garry Williams-Crofton	
LENNON FSMTHSR	

Meeting Conducted By: Nelson Figeac

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 9674 Date: 08/06/2012

Foreman: Operator: M. SMITH

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours	4698		

Serial No: 805 - 1263056 Make: WILEY Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: [signature] Date: 08/06/2012

CROFTON

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 _____ Day Mon Date Aug 6, 12 Trip# _____

Trip Data: Departed From: Portsmouth, VA Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer O.S.	G Williams		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited. *[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]*

B. Steering System

1. Steering System—Main pump		☑ OK	☐ N/R
2. Steering system—Alternate Pump		☑ OK	☐ N/R
3. Steering angle, maximum to port		☑ OK	☐ N/R
4. Steering angle, maximum to starboard		☑ OK	☐ N/R
5. Flanking rudders	☑ N/A	~~☐ OK~~	~~☐ N/R~~
6. All steering stations work		☑ OK	☐ N/R
7. Steering system linkage		☑ OK	☐ N/R
8. Rudder angle indicator is accurate	☑ N/A	~~☐ OK~~	~~☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/S)		~~☐ OK~~	~~☐ N/R~~
2. Radar #2 (Identify: furuno)		☑ OK	☐ N/R
[What time did radar stop working? _____]			
3. Port searchlight #1 works		☑ OK	☐ N/R
4. Starboard searchlight #2 works		☑ OK	☐ N/R
5. VHF-FM Radio #1 (Identify: Standard)		☑ OK	☐ N/R
6. VHF-FM Radio #2 (Identify: Shakespeare)		☑ OK	☐ N/R
7. Magnetic compass, compensated	☐ N/A	☑ OK	☐ N/R
8. Deviation Table is accurate	~~☐ N/A~~	~~☑ OK~~	~~☐ N/R~~
9. Swing meter (Illuminated)	☑ N/A	~~☑ OK~~	~~☐ N/R~~
10. Depth sounder works	☐ N/A	☑ OK	☐ N/R
11. Automatic Indentification System	☐ N/A	☑ OK	☐ N/R
12.Loran-C/GPS receiver works	☐ N/A	☑ OK	☐ N/R
13. Intercom and PA system tested	☐ N/A	☑ OK	☐ N/R
14. General alarm system tested	☐ N/A	☑ OK	☐ N/R
15. Navigation lights work		☑ OK	☐ N/R
16. Whistle tested		☑ OK	☐ N/R
17. Fire alarm panel		☑ OK	☐ N/R

[Report all navigational equipment that fails in service.]

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale)		☑ OK	☐ Not Avail.
2. Coast Guard Light List (LL)		☑ OK	☐ Not Avail.
3. Local Notice to Mariners (LNM)		☑ OK	☐ Not Avail.
4. Tide Tables	☐ N/A	☑ OK	☐ Not Avail.
5. Tidal Current Tables	☐ N/A	☑ OK	☐ Not Avail.
6. U.S. Coast Pilot	☐ N/A	☑ OK	☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]*		☑ OK	☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection)	☑ N/A	☐ OK	☐ N/R
2. Towline free of knots		☐ OK	☐ N/R
3. Towing wire has a spliced or poured socket		☐ OK	☐ N/R
4. Towing wire has no wire clips		☐ OK	☐ N/R
5. Terminal gear		☐ OK	☐ N/R
6. Chafing gear		☐ OK	☐ N/R
7. Shock line		☐ OK	☐ N/R
8. Towing bridles and gear		☐ OK	☐ N/R
9. Towing engine, winch, and capstan(s)		☐ OK	☐ N/R
10. Towing winch brake		☐ OK	☐ N/R
11. Towing hawser used _____ Hours & _____ Miles			

F. Towline & terminal gear for towing alongside or pushing ahead

1.Face wires appropriate for horsepower of vessel	☐ N/A	☑ OK	☐ N/R
2. Face wires appropriate for tow arrangement	☐ N/A	☑ OK	☐ N/R
3. Face wires/couplings serviceable	☐ N/A	☑ OK	☐ N/R
4. Winch Condition		☑ OK	☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage		☑ OK	☐ N/R
2. Check propulsion machinery		☑ OK	☐ N/R
3. Check other machinery		☑ OK	☐ N/R
4. Check all gauges		☑ OK	☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage		☑ YES	☐ NO
2. Check pre-sailing plan with crew		☑ YES	☐ NO
3. Deck secured for sea or voyage		☑ YES	☐ NO
4. Weather forecast checked		☑ YES	☐ NO
5. Generator(s) operate satisfactorily		☑ YES	☐ N/R
6. Watertight doors and hatches		☑ OK	☐ N/R
7. Fuel shutoff valve operable		☑ YES	☐ N/R

I. Barge(s)

1. Navigation lights work		☐ OK	☐ N/R
2. Hatches secured		☐ OK	☐ N/R
3. Load line	☐ N/A	☐ OK	
4. List and trim		☐ OK	☐ N/R
5. Anchoring system operational	☐ N/A	☐ OK	☐ N/R
6. Emergency pick-up line deployed	☐ N/A	☐ OK	☐ N/R
7. Deck lines secured		☐ OK	☐ NO
8. Towing bridles, pendant, and gear		☐ OK	☐ N/R
9. Tow diagram and barge info available		☐ OK	☐ N/R

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Time	Code (Letter)	Item (Number)	8/6/12 EXPLANATION OF EACH ENTRY
0001			St/By @ St Julien Creek Annex Jobsite
0630			Rec out boat Per CPR 33 Part 164 UP & Ready
0730			Move to Scott's Creek & St/By Mark 10
1130-1135			Move to Mark 11
1530			Sec @ Dock Dis to Storm

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made.

Signature of Master

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

Memphis Monroe Asian Marine

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/07/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 005

SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle	
AM WEATHER: Light Rain	PM WEATHER: Light Rain	MAX TEMP: 84 F	MIN TEMP: 75 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Locations 12 and 13 (setup at Location 11 on 08/06/12). Completed the investigation at Locations 11 and 12 and began at Location 13. Collected one sediment sample from Locations 12 and 13.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 80
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 110
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 402 Total Work Hours From Start of Construction: 512

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging, and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	10	0	0
Long-Reach Excavator	Caterpillar 320	Dana Thomas	0	1	9
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	10	0	0
Tug Boat	Bunny C	Michael Mahlmann	10	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/07/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 005
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Garry Williams	Anomaly Investigation	Crofton Construction	Deck Hand	10
Wallace Pittman	Anomaly Investigation	Crofton Construction	Deck Hand	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD012-0004 (sediment from Location 12)	CH2M HILL	Nathaniel Price
SJUX01-SD013-0004 (sediment from Location 13)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.07 19:02:29 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	4

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured with sand bags.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

The long reach excavator was taken offsite today to be repaired and will be back onsite in operation on Wednesday, August 8. The penetrator plate was used in place of the long-reach excavato to rake the river bottom.

VISITORS TO THE SITE: None

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.07 19:02:40 -04'00'

SITE MANAGER'S SIGNATURE

08/07/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 7Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

Field Operations, Site investigation at SJCA UXO1 Locations 11, 12 & 13 Chesapeake Va will use electromagnet and raking operations. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlman, Dana Thomas, Garry Williams, Mike Smith, Wallace Pitman. No MPPEH or MEC was found for the day. Found some general scrap metal such as bolts, rebar, pipe and steel cable. Put all items after being inspected and washed off in cultural debris roll off container. Crofton took extra barge with excavator back to the yard for repairs.

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Observed testing of Fisher metal detector in test grid by Rick Fuciarelli- Passed

Nate Price collected soil samples from Locations 12 and 13.

Crane daily inspection done by Mike Smith-passed

Turbidity curtain still enact and in place

Checked MDAS drum on barge and lock still on with no signs of tamper

MEC QCS: Nelson Figeac **Date: 7 Aug 2012**

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 9674 Date: 08/07/2012

Foreman: Operator: M SMITH

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours	4705		

Serial No: 805-1268056 Make: Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: [signature] Date: 08/07/2012

CROFTON

Crofton Construction Services, Inc.

AGVIQ
AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL
JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 7 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Field Operations-Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Chance of afternoon thunderstorms and 77F in the AM with a high of 87F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment**: **Be aware of surroundings and make good eye contact with operator if need to pass by.**
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
_X_ Hard Hat	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	_X_ GFCI/extension cords
_X_ Respiratory	_X_ Turbidity curtain	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
_X_ PFD	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	_X_ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	_X_ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	_X_ Heavy equipment	_X_ Competent person
_X_ NAVFAC Crane Inspection/certification	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck and onboard barge. Evacuation route-3 Blast on tug horn, gat on Bunny C meet at bldg 43 for head count and further instructions
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion.
9. Use tag lines when handling work boat while putting it in and out of the water.
10. MEC Awareness and 3R training

Attendees:

Name Printed:	**Signature**:
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	
Mike Smith-Crofton	
Wallace Pitman-Crofton	
Barry Williams - Crafton	

Meeting Conducted By: Nelson Figeac

Name Printed Signature

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 Day Tue Date Aug 7, 12 Trip# _____

Trip Data: Departed From: Portsmouth VA Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer AB	W Pittman		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited.
[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]

B. Steering System

1. Steering System—Main pump		☑ OK	☐ N/R
2. Steering system—Alternate Pump		☑ OK	☐ N/R
3. Steering angle, maximum to port		☑ OK	☐ N/R
4. Steering angle, maximum to starboard		☑ OK	☐ N/R
5. Flanking rudders	☑ N/A	~~☐ OK~~	~~☐ N/R~~
6. All steering stations work		☑ OK	☐ N/R
7. Steering system linkage		☑ OK	☐ N/R
8. Rudder angle indicator is accurate	☑ N/A	~~☐ OK~~	~~☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A)		~~☐ OK~~	~~☐ N/R~~
2. Radar #2 (Identify: Furuno)		☑ OK	☐ N/R
[What time did radar stop working? _____]			
3. Port searchlight #1 works		☑ OK	☐ N/R
4. Starboard searchlight #2 works		☑ OK	☐ N/R
5. VHF-FM Radio #1 (Identify: Standard)		☑ OK	☐ N/R
6. VHF-FM Radio #2 (Identify: Standard)		☑ OK	☐ N/R
7. Magnetic compass, compensated	☐ N/A	☑ OK	☐ N/R
8. Deviation Table is accurate	☐ N/A	☑ OK	☐ N/R
9. Swing meter (Illuminated)	☑ N/A	~~☐ OK~~	~~☐ N/R~~
10. Depth sounder works	☐ N/A	☑ OK	☐ N/R
11. Automatic Indentification System	☐ N/A	☑ OK	☐ N/R
12.Loran-C/GPS receiver works	☐ N/A	☑ OK	☐ N/R
13. Intercom and PA system tested	☐ N/A	☑ OK	☐ N/R
14. General alarm system tested	☐ N/A	☑ OK	☐ N/R
15. Navigation lights work		☑ OK	☐ N/R
16. Whistle tested		☑ OK	☐ N/R
17. Fire alarm panel		☑ OK	☐ N/R
[Report all navigational equipment that fails in service.]			

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale)		☑ OK	☐ Not Avail.
2. Coast Guard Light List (LL)		☑ OK	☐ Not Avail.
3. Local Notice to Mariners (LNM)		☐ OK	☐ Not Avail.
4. Tide Tables	☐ N/A	☑ OK	☐ Not Avail.
5. Tidal Current Tables	☐ N/A	☑ OK	☐ Not Avail.
6. U.S. Coast Pilot	☐ N/A	☑ OK	☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]*		☑ OK	☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection)	☑ N/A	☐ OK	☐ N/R
2. Towline free of knots		☐ OK	☐ N/R
3. Towing wire has a spliced or poured socket		☐ OK	☐ N/R
4. Towing wire has no wire clips		☐ OK	☐ N/R
5. Terminal gear		☐ OK	☐ N/R
6. Chafing gear		☐ OK	☐ N/R
7. Shock line		☐ OK	☐ N/R
8. Towing bridles and gear		☐ OK	☐ N/R
9. Towing engine, winch, and capstan(s)		☐ OK	☐ N/R
10. Towing winch brake		☐ OK	☐ N/R
11. Towing hawser used _____ Hours & _____ Miles			

F. Towline & terminal gear for towing alongside or pushing ahead

1.Face wires appropriate for horsepower of vessel	☐ N/A	☑ OK	☐ N/R
2. Face wires appropriate for tow arrangement	☐ N/A	☑ OK	☐ N/R
3. Face wires/couplings serviceable	☐ N/A	☑ OK	☐ N/R
4. Winch Condition		☑ OK	☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage	☑ OK	☐ N/R
2. Check propulsion machinery	☑ OK	☐ N/R
3. Check other machinery	☑ OK	☐ N/R
4. Check all gauges	☑ OK	☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage	☑ YES	☐ NO
2. Check pre-sailing plan with crew	☑ YES	☐ NO
3. Deck secured for sea or voyage	☑ YES	☐ NO
4. Weather forecast checked	☑ YES	☐ NO
5. Generator(s) operate satisfactorily	☑ YES	☐ N/R
6. Watertight doors and hatches	☑ OK	☐ N/R
7. Fuel shutoff valve operable	☑ YES	☐ N/R

I. Barge(s)

1. Navigation lights work		☐ OK	☐ N/R
2. Hatches secured		☐ OK	☐ N/R
3. Load line	☐ N/A	☐ OK	
4. List and trim		☐ OK	☐ N/R
5. Anchoring system operational	☐ N/A	☐ OK	☐ N/R
6. Emergency pick-up line deployed	☐ N/A	☐ OK	☐ N/R
7. Deck lines secured		☐ OK	☐ NO
8. Towing bridles, pendant, and gear		☐ OK	☐ N/R
9. Tow diagram and barge info available		☐ OK	☐ N/R

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Time	Code (Letter)	Item (Number)	8/7/12 EXPLANATION OF EACH ENTRY
0001			St/Ry e Website St Julian Creek Annex
0630			Vcd out boat Per CFR 33 Part 164 UP & Running
0710			on Mark 11
0945			Man to Bio Mark 12
1400-1420			Man to Mark 13
1700			Secure Dock

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made. Signature of Master

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/08/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 006

SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle	
AM WEATHER: Cloudy	PM WEATHER: Partly Cloudy	MAX TEMP: 84 F	MIN TEMP: 74 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Locations 14 and 15 (setup at Location 13 on 08/07/12). Completed the investigation at Locations 13 and 14 and began at Location 15. Collected one sediment sample from Locations 14 and 15.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 80
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 110
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 512 Total Work Hours From Start of Construction: 622

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, tug boat, rigging and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	10	0	0
Tug Boat	Bunny C	Michael Mahlmann	10	0	0
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	10	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/08/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 006
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Garry Williams	Anomaly Investigation	Crofton Construction	Deck Hand	10
Wallace Pittman	Anomaly Investigation	Crofton Construction	Deck Hand	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD014-0003 (sediment from Location 14)	CH2M HILL	Nathaniel Price
SJUX01-SD015-0004 (sediment from Location 15)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.09 08:02:48 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	4

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured with sand bags.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

The penetrator plate was used in place of the long-reach excavato to rake the river bottom.

VISITORS TO THE SITE: None

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.09 08:03:06 -04'00'

SITE MANAGER'S SIGNATURE

08/08/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 8Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

Field Operations, Site investigation at SJCA UXO1 Locations 13, 14 & 15 Chesapeake Va will use electromagnet and raking operations. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlman, Dana Thomas, Garry Williams, Mike Smith, Wallace Pitman. No MPPEH or MEC was found for the day. Found some general scrap metal such as bolts, rebar, pipe and steel cable. Put all items after being inspected and washed off in cultural debris roll off container. Samples were taken at locations 14 and 15

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Observed test out Fisher metal detector in test grid-Mathew Ferrell- Passed

Nate Price collected soil samples from Locations 14 and 15.

Crane daily inspection done by Mike Smith-passed

Turbidity curtain still enact and in place

Checked MDAS drum on barge and lock still on with no signs of tamper

MEC QCS: Nelson Figeac **Date: 8 Aug 2012**

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 9674 Date: 08/08/2012

Foreman: Operator: M. SMITH

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours	4714		

Serial No: 805-123056 Make: WALEY Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: [signature] Date: 08/08/2012

CROFTON

Crofton Construction Services, Inc.

AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 8 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Field Operations-Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Chance of afternoon thunderstorms and 76F in the AM with a high of 88F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment: Be aware of surroundings and make good eye contact with operator if need to pass by.**
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
_X_ Hard Hat	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	_X_ GFCI/extension cords
_X_ Respiratory	_X_ Turbidity curtain	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
_X_ PFD	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	_X_ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	_X_ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	_X_ Heavy equipment	_X_ Competent person
_X_ NAVFAC Crane Inspection/certification	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck and onboard barge. Evacuation route-3 Blast on tug horn, gat on Bunny C meet at bldg 43 for head count and further instructions
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion.
9. Use tag lines when handling work boat while putting it in and out of the water.
10. MEC Awareness and 3R training

Attendees:

Name Printed:	**Signature**:
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	
Mike Smith-Crofton	
Wallace Pitman-Crofton	
Garry Williams	

Meeting Conducted By: Nelson Figeac

Name Printed Signature

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 _____ Day Wed Date Aug 8, 12 Trip# _____

Trip Data: Departed From: Portsmouth, VA Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer AB	W Pittman		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited. *[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]*

B. Steering System

1. Steering System—Main pump		☑ OK	☐ N/R
2. Steering system—Alternate Pump		☑ OK	☐ N/R
3. Steering angle, maximum to port		☑ OK	☐ N/R
4. Steering angle, maximum to starboard		☑ OK	☐ N/R
5. Flanking rudders	☑ N/A	~~☐ OK~~	~~☐ N/R~~
6. All steering stations work		☑ OK	☐ N/R
7. Steering system linkage		☑ OK	☐ N/R
8. Rudder angle indicator is accurate	☑ N/A	~~☐ OK~~	~~☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A)		~~☐ OK~~	~~☐ N/R~~
2. Radar #2 (Identify: furuno)		☑ OK	☐ N/R
[What time did radar stop working? _____*]*			
3. Port searchlight #1 works		☑ OK	☐ N/R
4. Starboard searchlight #2 works		☑ OK	☐ N/R
5. VHF-FM Radio #1 (Identify: Standard)		☑ OK	☐ N/R
6. VHF-FM Radio #2 (Identify: Standard)		☑ OK	☐ N/R
7. Magnetic compass, compensated	☐ N/A	☑ OK	☐ N/R
8. Deviation Table is accurate	☐ N/A	☑ OK	☐ N/R
9. Swing meter (Illuminated)	☑ N/A	~~☐ OK~~	~~☐ N/R~~
10. Depth sounder works	☐ N/A	☑ OK	☐ N/R
11. Automatic Indentification System	☐ N/A	☑ OK	☐ N/R
12. Loran-C/GPS receiver works	☐ N/A	☑ OK	☐ N/R
13. Intercom and PA system tested	☐ N/A	☑ OK	☐ N/R
14. General alarm system tested	☐ N/A	☑ OK	☐ N/R
15. Navigation lights work		☑ OK	☐ N/R
16. Whistle tested		☑ OK	☐ N/R
17. Fire alarm panel		☑ OK	☐ N/R

[Report all navigational equipment that fails in service.]

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale)		☑ OK	☐ Not Avail.
2. Coast Guard Light List (LL)		☑ OK	☐ Not Avail.
3. Local Notice to Mariners (LNM)		☐ OK	☐ Not Avail.
4. Tide Tables	☐ N/A	☑ OK	☐ Not Avail.
5. Tidal Current Tables	☐ N/A	☑ OK	☐ Not Avail.
6. U.S. Coast Pilot	☐ N/A	☑ OK	☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]*		☑ OK	☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection)	☑ N/A	☐ OK	☐ N/R
2. Towline free of knots		☐ OK	☐ N/R
3. Towing wire has a spliced or poured socket		☐ OK	☐ N/R
4. Towing wire has no wire clips		☐ OK	☐ N/R
5. Terminal gear		☐ OK	☐ N/R
6. Chafing gear		☐ OK	☐ N/R
7. Shock line		☐ OK	☐ N/R
8. Towing bridles and gear		☐ OK	☐ N/R
9. Towing engine, winch, and capstan(s)		☐ OK	☐ N/R
10. Towing winch brake		☐ OK	☐ N/R
11. Towing hawser used _____ Hours & _____ Miles			

F. Towline & terminal gear for towing alongside or pushing ahead

1. Face wires appropriate for horsepower of vessel	☐ N/A	☑ OK	☐ N/R
2. Face wires appropriate for tow arrangement	☐ N/A	☑ OK	☐ N/R
3. Face wires/couplings serviceable	☐ N/A	☑ OK	☐ N/R
4. Winch Condition		☑ OK	☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage		☑ OK	☐ N/R
2. Check propulsion machinery		☑ OK	☐ N/R
3. Check other machinery		☑ OK	☐ N/R
4. Check all gauges		☑ OK	☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage		☑ YES	☐ NO
2. Check pre-sailing plan with crew		☑ YES	☐ NO
3. Deck secured for sea or voyage		☑ YES	☐ NO
4. Weather forecast checked		☑ YES	☐ NO
5. Generator(s) operate satisfactorily		☑ YES	☐ N/R
6. Watertight doors and hatches		☑ OK	☐ N/R
7. Fuel shutoff valve operable		☑ YES	☐ N/R

I. Barge(s)

1. Navigation lights work		☐ OK	☐ N/R
2. Hatches secured		☐ OK	☐ N/R
3. Load line	☐ N/A	☐ OK	
4. List and trim		☐ OK	☐ N/R
5. Anchoring system operational	☐ N/A	☐ OK	☐ N/R
6. Emergency pick-up line deployed	☐ N/A	☐ OK	☐ N/R
7. Deck lines secured		☐ OK	☐ NO
8. Towing bridles, pendant, and gear		☐ OK	☐ N/R
9. Tow diagram and barge info available		☐ OK	☐ N/R

Time	Code (Letter)	Item (Number)	8/8/12 EXPLANATION OF EACH ENTRY
			Stby @ Jetside St Julian's Creek
0601			Lec out boat Per CFR 33 Part 164 UPS Ramp
0630			Arr @ Mark 13
0715			Move to Mark 14
0815-835			Move to Mark 15
1200-1218			Sep Boat
1700			

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made. Signature of Master

Barbara Borges

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

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CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/09/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 007

SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle	
AM WEATHER: Clear	PM WEATHER: Clear	MAX TEMP: 88 F	MIN TEMP: 74 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Location 4. Began the investigation at Location 4. Collected one sediment sample from Location 4. NOSSA onsite to conduct a project audit. Long reach excavator transported back to barge from Crofton shop after being repaired.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 70
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 100
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 622 Total Work Hours From Start of Construction: 722

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging, and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	10	0	0
Tug Boat	Bunny C	Michael Mahlmann	10	0	0
Long Reach Excavator	Caterpillar 320	Dana Thomas	5	0	5
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	10	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/09/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 007
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Wallace Pittman	Anomaly Investigation	Crofton Construction	Deck Hand	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD004-0004 (sediment from Location 4)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.09 23:01:43 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	4

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured with sand bags.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

Tug boat and barge could not move to Location 4 until approximately 1200 due to tidal conditions and shallow conditions in the vicinity of Location 4.

VISITORS TO THE SITE: Doug Murray (NOSSA) and Krista Parra (NAVFAC RPM)

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.09 23:02:07 -04'00'

SITE MANAGER'S SIGNATURE

08/09/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 9Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

We moved the crane barge at 0700 this morning from location 15 due to an unscheduled large tanker ship coming thru channel. NOSSA Audit conducted by Doug Murray. Had two minor findings from audit and both have been corrected. We performed a function test of the electromagnet for the NOSSA audit at location 5. Field Operations, Site investigation at SJCA UXO 1 Location 4, will use electromagnet and raking operations. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlmann, Dana Thomas, Mike Smith, Wallace Pitman. No MPPEH or MEC was found for the day. Found some general scrap metal such as bolts and steel cable. Put all items after being inspected and washed off in cultural debris roll off container. Samples were taken at location 4.

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Observed test out Fisher metal detector in test grid-Rick Fuciarelli- Passed

Nate Price collected soil samples from Location 4.

Crane daily inspection done by Mike Smith-passed

Turbidity curtain still intact and in place

Checked MDAS drum on barge and lock still on with no signs of tamper.

MEC QCS: Nelson Figeac **Date: 9 Aug 2012**

AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 9 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Field Operations-Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Chance of afternoon thunderstorms and 76F in the AM with a high of 88F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment: Be aware of surroundings and make good eye contact with operator if need to pass by.**
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

DAILY PRE-TASK SAFETY PLAN (PTSP)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
_X_ Hard Hat	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	_X_ GFCI/extension cords
_X_ Respiratory	_X_ Turbidity curtain	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
_X_ PFD	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	_X_ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	_X_ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	_X_ Heavy equipment	_X_ Competent person
_X_ NAVFAC Crane Inspection/certification	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

DAILY PRE-TASK SAFETY PLAN (PTSP)

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck and onboard barge. Evacuation route-3 Blast on tug horn, gat on Bunny C meet at bldg 43 for head count and further instructions
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion.
9. Use tag lines when handling work boat while putting it in and out of the water.
10. MEC Awareness and 3R training

Attendees:

Name Printed:	**Signature**:
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	
Mike Smith-Crofton	
Wallace Pitman-Crofton	
Doug Murray-NOSSA	
Krista Parra	Krista Parra

Meeting Conducted By: Nelson Figeac

Name Printed

Signature

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 4674 Date: 08/09/2012

Foreman: Operator: M. V. Smith

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism	✓	✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours	4724		

Serial No: 806-126 3056 Make: GILEY Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: M. V. Smith Date: 08/09/2012

CROFTON

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK-LIST

Time Period: 0001 to 2400 _____ Day Thur Date Aug 9, 12 Trip# _____

Trip Data: Departed From: Portsmouth, VA Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer AB	W Pittman		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited. *[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]*

B. Steering System

1. Steering System—Main pump		☑ OK	☐ N/R
2. Steering system—Alternate Pump		☑ OK	☐ N/R
3. Steering angle, maximum to port		☑ OK	☐ N/R
4. Steering angle, maximum to starboard		☑ OK	☐ N/R
5. Flanking rudders	☑ N/A	~~☐ OK~~	~~☐ N/R~~
6. All steering stations work		☑ OK	☐ N/R
7. Steering system linkage		☑ OK	☐ N/R
8. Rudder angle indicator is accurate	☑ N/A	~~☐ OK~~	~~☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A)		~~☐ OK~~	~~☐ N/R~~
2. Radar #2 (Identify: FURUNO)		☑ OK	☐ N/R
[What time did radar stop working? _____]			
3. Port searchlight #1 works		☑ OK	☐ N/R
4. Starboard searchlight #2 works		☑ OK	☐ N/R
5. VHF-FM Radio #1 (Identify: Standard)		☑ OK	☐ N/R
6. VHF-FM Radio #2 (Identify: Standard)		☑ OK	☐ N/R
7. Magnetic compass, compensated	☐ N/A	☑ OK	☐ N/R
8. Deviation Table is accurate	☐ N/A	☑ OK	☐ N/R
9. Swing meter (Illuminated)	☑ N/A	~~☐ OK~~	~~☐ N/R~~
10. Depth sounder works	☐ N/A	☑ OK	☐ N/R
11. Automatic Indentification System	☐ N/A	☑ OK	☐ N/R
12. Loran-C/GPS receiver works	☐ N/A	☑ OK	☐ N/R
13. Intercom and PA system tested	☐ N/A	☑ OK	☐ N/R
14. General alarm system tested	☐ N/A	☑ OK	☐ N/R
15. Navigation lights work		☑ OK	☐ N/R
16. Whistle tested		☑ OK	☐ N/R
17. Fire alarm panel		☑ OK	☐ N/R
[Report all navigational equipment that fails in service.]			

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale)		☑ OK	☐ Not Avail.
2. Coast Guard Light List (LL)		☑ OK	☐ Not Avail.
3. Local Notice to Mariners (LNM)		☐ OK	☐ Not Avail.
4. Tide Tables	☐ N/A	☑ OK	☐ Not Avail.
5. Tidal Current Tables	☐ N/A	☑ OK	☐ Not Avail.
6. U.S. Coast Pilot	☐ N/A	☑ OK	☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]*		☑ OK	☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection)	☑ N/A	☐ OK	☐ N/R
2. Towline free of knots		☐ OK	☐ N/R
3. Towing wire has a spliced or poured socket		☐ OK	☐ N/R
4. Towing wire has no wire clips		☐ OK	☐ N/R
5. Terminal gear		☐ OK	☐ N/R
6. Chafing gear		☐ OK	☐ N/R
7. Shock line		☐ OK	☐ N/R
8. Towing bridles and gear		☐ OK	☐ N/R
9. Towing engine, winch, and capstan(s)		☐ OK	☐ N/R
10. Towing winch brake		☐ OK	☐ N/R
11. Towing hawser used _____ Hours & _____ Miles			

F. Towline & terminal gear for towing alongside or pushing ahead

1. Face wires appropriate for horsepower of vessel	☐ N/A	☑ OK	☐ N/R
2. Face wires appropriate for tow arrangement	☐ N/A	☑ OK	☐ N/R
3. Face wires/couplings serviceable	☐ N/A	☑ OK	☐ N/R
4. Winch Condition		☑ OK	☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage		☑ OK	☐ N/R
2. Check propulsion machinery		☑ OK	☐ N/R
3. Check other machinery		☑ OK	☐ N/R
4. Check all gauges		☑ OK	☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage		☑ YES	☐ NO
2. Check pre-sailing plan with crew		☑ YES	☐ NO
3. Deck secured for sea or voyage		☑ YES	☐ NO
4. Weather forecast checked		☑ YES	☐ NO
5. Generator(s) operate satisfactorily		☑ YES	☐ N/R
6. Watertight doors and hatches		☑ OK	☐ N/R
7. Fuel shutoff valve operable		☑ YES	☐ N/R

I. Barge(s)

1. Navigation lights work		☑ OK	☐ N/R
2. Hatches secured		☐ OK	☐ N/R
3. Load line	☑ N/A	☐ OK	
4. List and trim		☐ OK	☐ N/R
5. Anchoring system operational	☐ N/A	☐ OK	☐ N/R
6. Emergency pick-up line deployed	☐ N/A	☐ OK	☐ N/R
7. Deck lines secured		☐ OK	☐ NO
8. Towing bridles, pendant, and gear		☐ OK	☐ N/R
9. Tow diagram and barge info available		☐ OK	☐ N/R

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Time	Code (Letter)	Item (Number)	8/9/12 EXPLANATION OF EACH ENTRY
0001			SB/By @ St. Julian Creek Annex
0630			Secured out boat Per CFR 33 Part 164 UP & Ready
0700			On Mark 15
0725			Moving to Mark 5
0745			Arr @ Mark 5
1232			Mov to Mark 4
1305			Arr @ Mark 4
1630			U/W w/B to Dock
1645			Sec C Dec

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made. Signature of Master

Cora Cacinch

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/10/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 008

SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle	
AM WEATHER: Clear	PM WEATHER: Clear/Windy	MAX TEMP: 88 F	MIN TEMP: 78 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Location 3A (setup at Location 4 on 08/09/12). Completed the investigation at Location 4 and began the investigation at Location 3A. Collected one sediment sample from Location 3A.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 70
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 100
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 722 Total Work Hours From Start of Construction: 822

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	8	1	0
Tug Boat	Bunny C	Michael Mahlmann	9	0	0
Long Reach Excavator	Caterpillar 320	Dana Thomas	4	5	0
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	9	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/10/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 008
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Wallace Pittman	Anomaly Investigation	Crofton Construction	Deck Hand	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD003A-0004 (sediment from Location 3A)	CH2M HILL	Nathaniel Price
SJUXO1-SD003AP-0004 (sediment from Location 3A; duplicate)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.11 22:14:28 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	4

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured with sand bags.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

Due to winds over 25 mph the crane operation was stopped and 1 hour of production time was lost. The strong winds also caused a delay in moving the barge from Location 4 to Location 3A.

VISITORS TO THE SITE: None

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.11 22:14:43 -04'00'

SITE MANAGER'S SIGNATURE

08/10/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 10Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

Field Operations, Site investigation at SJCA UXO1 Locations 4 and 3A, will use electromagnet and raking operations. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlmann, Dana Thomas, Mike Smith, Wallace Pitman. No MPPEH or MEC was found for the day. Found some general scrap metal such as bolts, and steel cable. Put all items after being inspected/QC'd and washed off in cultural debris roll off container. Samples were taken at location 3A. We had to standby IAW crane safety regulations because winds got greater than 25mph. Did some research on trying to positively identify the MDAS item and after doing some cleaning of the item determined that it is a cap for a gas cylinder such as an oxygen cylinder bottle and not a piece related to any munitions. Reclassified it as metal scrap and noted it on the 1348 form on file.

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Observed test out Fisher metal detector in test grid-Rick Fuciarelli- Passed

Nate Price collected soil samples from Location 3A.

Crane daily inspection done by Mike Smith-passed

Turbidity curtain still intact and in place

MEC QCS: Nelson Figeac **Date: 10 Aug 2012**

AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 10 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Field Operations-Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Cloudy, chance of thunderstorms and 77F in the AM with a high of 90F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment: Be aware of surroundings and make good eye contact with operator if need to pass by.**
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
_X_ Hard Hat	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	_X_ GFCI/extension cords
_X_ Respiratory	_X_ Turbidity curtain	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
_X_ PFD	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	_X_ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	_X_ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	_X_ Heavy equipment	_X_ Competent person
_X_ NAVFAC Crane Inspection/certification	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck and onboard barge. Evacuation route-3 Blast on tug horn, gat on Bunny C meet at bldg 43 for head count and further instructions
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion.
9. Use tag lines when handling work boat while putting it in and out of the water.
10. MEC Awareness and 3R training

Attendees:

Name Printed:	**Signature**:
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	
Mike Smith-Crofton	
Wallace Pitman-Crofton	

Meeting Conducted By: Nelson Figeac

Name Printed Signature

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 9674 Date: 08/10/2012

Foreman: Operator: M. Smith

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours	4734		

Serial No: 805-12C305C Make: Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: Date: 08/10/2012

Crofton Construction Services, Inc.

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 _____ Day Fri Date Aug 10, 12 Trip# _____

Trip Data: Departed From: Portsmouth, VA Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer SB	W Pittman		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited. *[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]*

B. Steering System

1. Steering System—Main pump		☑ OK	☐ N/R
2. Steering system—Alternate Pump		☑ OK	☐ N/R
3. Steering angle, maximum to port		☑ OK	☐ N/R
4. Steering angle, maximum to starboard		☑ OK	☐ N/R
5. Flanking rudders	☑ N/A	~~☐ OK~~	~~☐ N/R~~
6. All steering stations work		☑ OK	☐ N/R
7. Steering system linkage		☑ OK	☐ N/R
8. Rudder angle indicator is accurate	☑ N/A	~~☐ OK~~	~~☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A)		~~☐ OK~~	~~☐ N/R~~
2. Radar #2 (Identify: Furuno)		☑ OK	☐ N/R
[What time did radar stop working? _____]			
3. Port searchlight #1 works		☑ OK	☐ N/R
4. Starboard searchlight #2 works		☑ OK	☐ N/R
5. VHF-FM Radio #1 (Identify: Standard)		☑ OK	☐ N/R
6. VHF-FM Radio #2 (Identify: Standard)		☑ OK	☐ N/R
7. Magnetic compass, compensated	☐ N/A	☑ OK	☐ N/R
8. Deviation Table is accurate	☐ N/A	☑ OK	☐ N/R
9. Swing meter (Illuminated)	☑ N/A	~~☐ OK~~	~~☐ N/R~~
10. Depth sounder works	☐ N/A	☑ OK	☐ N/R
11. Automatic Indentification System	☐ N/A	☑ OK	☐ N/R
12. Loran-C/GPS receiver works	☐ N/A	☑ OK	☐ N/R
13. Intercom and PA system tested	☐ N/A	☑ OK	☐ N/R
14. General alarm system tested	☐ N/A	☑ OK	☐ N/R
15. Navigation lights work		☑ OK	☐ N/R
16. Whistle tested		☑ OK	☐ N/R
17. Fire alarm panel		☑ OK	☐ N/R

[Report all navigational equipment that fails in service.]

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale)		☑ OK	☐ Not Avail.
2. Coast Guard Light List (LL)		☑ OK	☐ Not Avail.
3. Local Notice to Mariners (LNM)		☐ OK	☐ Not Avail.
4. Tide Tables	☐ N/A	☑ OK	☐ Not Avail.
5. Tidal Current Tables	☐ N/A	☑ OK	☐ Not Avail.
6. U.S. Coast Pilot	☐ N/A	☑ OK	☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]*		☑ OK	☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection)	☑ N/A	☐ OK	☐ N/R
2. Towline free of knots		☐ OK	☐ N/R
3. Towing wire has a spliced or poured socket		☐ OK	☐ N/R
4. Towing wire has no wire clips		☐ OK	☐ N/R
5. Terminal gear		☐ OK	☐ N/R
6. Chafing gear		☐ OK	☐ N/R
7. Shock line		☐ OK	☐ N/R
8. Towing bridles and gear		☐ OK	☐ N/R
9. Towing engine, winch, and capstan(s)		☐ OK	☐ N/R
10. Towing winch brake		☐ OK	☐ N/R
11. Towing hawser used _____ Hours & _____ Miles			

F. Towline & terminal gear for towing alongside or pushing ahead

1. Face wires appropriate for horsepower of vessel	☐ N/A	☑ OK	☐ N/R
2. Face wires appropriate for tow arrangement	☐ N/A	☑ OK	☐ N/R
3. Face wires/couplings serviceable	☐ N/A	☑ OK	☐ N/R
4. Winch Condition		☑ OK	☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage		☑ OK	☐ N/R
2. Check propulsion machinery		☑ OK	☐ N/R
3. Check other machinery		☑ OK	☐ N/R
4. Check all gauges		☑ OK	☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage		☑ YES	☐ NO
2. Check pre-sailing plan with crew		☑ YES	☐ NO
3. Deck secured for sea or voyage		☑ YES	☐ NO
4. Weather forecast checked		☑ YES	☐ NO
5. Generator(s) operate satisfactorily		☑ YES	☐ N/R
6. Watertight doors and hatches		☑ OK	☐ N/R
7. Fuel shutoff valve operable		☑ YES	☐ N/R

I. Barge(s)

1. Navigation lights work		☐ OK	☐ N/R
2. Hatches secured		☐ OK	☐ N/R
3. Load line	☐ N/A	☐ OK	
4. List and trim		☐ OK	☐ N/R
5. Anchoring system operational	☐ N/A	☐ OK	☐ N/R
6. Emergency pick-up line deployed	☐ N/A	☐ OK	☐ N/R
7. Deck lines secured		☐ OK	☐ NO
8. Towing bridles, pendant, and gear		☐ OK	☐ N/R
9. Tow diagram and barge info available		☐ OK	☐ N/R

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Airgas Lee

995977

Time	Code (Letter)	Item (Number)	8/10/12 EXPLANATION OF EACH ENTRY
0001			Safety C Portsmouth, VA St Julien's Creek Annex
0630			Vessel out boat Per CFR 33 Part 164 off Runway
0720			All C Mark 4
1120-1140			Move to Mark 3A
1540			U/W U/B 3rd Dock
1550			Sec Cle

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made. Signature of Master

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/13/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 009

SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle	
AM WEATHER: Clear	PM WEATHER: Clear	MAX TEMP: 88 F	MIN TEMP: 76 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Location 2A (setup at Location 3A on 08/10/12). Completed the investigation at Locations 2A and 3A. Collected one sediment sample from Location 2A.

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 70
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 100
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 822 Total Work Hours From Start of Construction: 922

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	10	0	0
Tug Boat	Bunny C	Michael Mahlmann	10	0	0
Long Reach Excavator	Caterpillar 320	Dana Thomas	4	6	0
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	10	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/13/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 009
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Wallace Pittman	Anomaly Investigation	Crofton Construction	Deck Hand	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD002A-0004 (sediment from Location 2A)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.14 23:15:43 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	1	NO OF DRUMS:	4

INSPECTION RESULTS: The roll-off box is empty and secure. The drums are empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured with sand bags.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

Unable to move the barge to Location 1A due to the low tide shallow water depth. Will move to Location 1A on the morning of 08/14/12 during high tide.

VISITORS TO THE SITE: None

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.14 23:15:55 -04'00'

SITE MANAGER'S SIGNATURE

08/13/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 13Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

Field Operations, Site investigation at SJCA UXO1 Locations 3A and 2A, will use electromagnet and raking operations. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlmann, Dana Thomas, Mike Smith, Wallace Pitman. No MPPEH or MEC was found for the day. Found some general scrap metal such as bolts, and steel plate pieces. Put all items after being inspected/QC'd and washed off in cultural debris roll off container. Samples were taken at location 2A. We completed the rest of 3A and all of 2A. Attempted to move the crane barge to location 1A but the water depth was to shallow due to low tide. Will attempt first thing in the morning since high tide is at 7am.

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Observed test out Fisher metal detector in test grid-Rick Fuciarelli- Passed

Nate Price collected soil samples from Location 2A.

Crane daily inspection done by Mike Smith-passed

Turbidity curtain still intact and in place

MEC QCS: Nelson Figeac **Date: 13 Aug 2012**

AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 13 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Field Operations-Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Slight chance of rain and 72F in the AM with a high of 87F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment**: **Be aware of surroundings and make good eye contact with operator if need to pass by.**
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
_X_ Hard Hat	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	_X_ GFCI/extension cords
_X_ Respiratory	_X_ Turbidity curtain	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
_X_ PFD	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	_X_ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	_X_ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	_X_ Heavy equipment	_X_ Competent person
_X_ NAVFAC Crane Inspection/certification	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck and onboard barge. Evacuation route-3 Blast on tug horn, gat on Bunny C meet at bldg 43 for head count and further instructions
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion.
9. Use tag lines when handling work boat while putting it in and out of the water.
10. MEC Awareness and 3R training

Attendees:

Name Printed:	**Signature**:
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	DANA Thomas
Mike Smith-Crofton	
Wallace Pitman-Crofton	

Meeting Conducted By: Nelson Figeac

Name Printed

Signature

DAILY CRANE INSPECTION REPORT

To Be Completed Daily By The Operator

Job No. 9674 Date: 08/10/2012

Foreman: Operator: M. Smith

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours	4734		

Serial No: 805-12C305C Make: Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: Date: 08/10/2012

Crofton Construction Services, Inc.

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 _____ Day Mon Date Aug 13, 12 Trip# _____

Trip Data: Departed From: Portsmouth, VA Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer AB	W Pittman		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited. *[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]*

B. Steering System

1. Steering System—Main pump ☑ OK ☐ N/R
2. Steering system—Alternate Pump ☑ OK ☐ N/R
3. Steering angle, maximum to port ☑ OK ☐ N/R
4. Steering angle, maximum to starboard ☑ OK ☐ N/R
5. Flanking rudders ☑ N/A ~~☐ OK ☐ N/R~~
6. All steering stations work ☑ OK ☐ N/R
7. Steering system linkage ☑ OK ☐ N/R
8. Rudder angle indicator is accurate ☑ N/A ~~☐ OK ☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A) ~~☐ OK ☐ N/R~~
2. Radar #2 (Identify: Furuno) ☑ OK ☐ N/R
   [What time did radar stop working? _____*]*
3. Port searchlight #1 works ☑ OK ☐ N/R
4. Starboard searchlight #2 works ☑ OK ☐ N/R
5. VHF-FM Radio #1 (Identify: Shore) ☑ OK ☐ N/R
6. VHF-FM Radio #2 (Identify: Shore) ☑ OK ☐ N/R
7. Magnetic compass, compensated ☐ N/A ☑ OK ☐ N/R
8. Deviation Table is accurate ☐ N/A ☑ OK ☐ N/R
9. Swing meter (Illuminated) ☑ N/A ~~☐ OK ☐ N/R~~
10. Depth sounder works ☐ N/A ☑ OK ☐ N/R
11. Automatic Indentification System ☐ N/A ☑ OK ☐ N/R
12. Loran-C/GPS receiver works ☐ N/A ☑ OK ☐ N/R
13. Intercom and PA system tested ☐ N/A ☑ OK ☐ N/R
14. General alarm system tested ☐ N/A ☑ OK ☐ N/R
15. Navigation lights work ☑ OK ☐ N/R
16. Whistle tested ☑ OK ☐ N/R
17. Fire alarm panel ☑ OK ☐ N/R
    [Report all navigational equipment that fails in service.]

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale) ☑ OK ☐ Not Avail.
2. Coast Guard Light List (LL) ☑ OK ☐ Not Avail.
3. Local Notice to Mariners (LNM) ☐ OK ☐ Not Avail.
4. Tide Tables ☐ N/A ☑ OK ☐ Not Avail.
5. Tidal Current Tables ☐ N/A ☑ OK ☐ Not Avail.
6. U.S. Coast Pilot ☐ N/A ☑ OK ☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]* ☑ OK ☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection) ☑ N/A ☐ OK ☐ N/R
2. Towline free of knots ☐ OK ☐ N/R
3. Towing wire has a spliced or poured socket ☐ OK ☐ N/R
4. Towing wire has no wire clips ☐ OK ☐ N/R
5. Terminal gear ☐ OK ☐ N/R
6. Chafing gear ☑ OK ☐ N/R
7. Shock line ☐ OK ☐ N/R
8. Towing bridles and gear ☐ OK ☐ N/R
9. Towing engine, winch, and capstan(s) ☐ OK ☐ N/R
10. Towing winch brake ☐ OK ☐ N/R
11. Towing hawser used _____ Hours & _____ Miles

F. Towline & terminal gear for towing alongside or pushing ahead

1. Face wires appropriate for horsepower of vessel ☐ N/A ☑ OK ☐ N/R
2. Face wires appropriate for tow arrangement ☐ N/A ☑ OK ☐ N/R
3. Face wires/couplings serviceable ☐ N/A ☑ OK ☐ N/R
4. Winch Condition ☑ OK ☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage ☑ OK ☐ N/R
2. Check propulsion machinery ☑ OK ☐ N/R
3. Check other machinery ☑ OK ☐ N/R
4. Check all gauges ☑ OK ☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage ☑ YES ☐ NO
2. Check pre-sailing plan with crew ☑ YES ☐ NO
3. Deck secured for sea or voyage ☑ YES ☐ NO
4. Weather forecast checked ☑ YES ☐ NO
5. Generator(s) operate satisfactorily ☑ YES ☐ N/R
6. Watertight doors and hatches ☑ OK ☐ N/R
7. Fuel shutoff valve operable ☑ YES ☐ N/R

I. Barge(s)

1. Navigation lights work ☐ OK ☐ N/R
2. Hatches secured ☐ OK ☐ N/R
3. Load line ☐ N/A ☐ OK
4. List and trim ☐ OK ☐ N/R
5. Anchoring system operational ☐ N/A ☐ OK ☐ N/R
6. Emergency pick-up line deployed ☐ N/A ☐ OK ☐ N/R
7. Deck lines secured ☐ OK ☐ NO
8. Towing bridles, pendant, and gear ☐ OK ☐ N/R
9. Tow diagram and barge info available ☐ OK ☐ N/R

© Marine Education Textbooks, Inc.

PM 5132 | Fuel on board 4000 | STBD M 5007
PG 1550 | | STBD G 1855

Time	Code (Letter)	Item (Number)	8/13/12 EXPLANATION OF EACH ENTRY
0001			St/By @ St Julian's Creek Annex Jobsite
0630			Vessel out boat Per CFR 33 Part 164 UP & Running
0720			u/w L/B to Mark 3A
0726			Arr Mark 3A St/By
1000 -	1030		Shift to Mark 2A
1035			L/B to NNSY to Shift Barge @ Bush
1100			Arr @ NNSY
1140			Finished Shifting @ NNSY L/B to Scott's Creek
1200			Arr @ Scott's Creek
1545			Secure @ Dock

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made. Signature of Master

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

Stacy Manson

Day
757-472-2203

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/14/12 REVISION NO: REVISION DATE:
CTO NO: CTO WE10 (CLEAN 1000) and CTO WE11 (CLEAN 8012)	PROJECT NAME/LOCATION: SJCA UXO 1 Anomaly Acquisition and Investigation	REPORT NO: 010
SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac / SUXOS: Ted Dingle	
AM WEATHER: Clear	PM WEATHER: Clear / MAX TEMP: 88 F	MIN TEMP: 76 F

SUMMARY OF WORK PERFORMED TODAY

Reviewed PTSP and Crofton boat safety daily brief. Setup at Location 1A. Completed the investigation at Location 1A. Collected one sediment sample from Location 1A. Began demobilization. Clearfield onsite to pick up empty IDW rolloff dumpster. Shipped eight (8) sediment samples and three (3) equipment blanks (see attached COC).

DEFINABLE FEATURES OF WORK STATUS

DFOW No.	Definable Feature Of Work	Preparatory	Initial	Follow-Up
1	Planning	☐	☐	☐
2	Field Operations	☐	☐	☒
3	Final Project Reports and Closeout	☐	☐	☐

WAS PREPARATORY PHASE WORK PERFORMED TODAY? ☐ Yes ☒ No

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKLIST.

JOB SAFETY

Was A Job Safety Meeting Held This Date?	☒ Yes ☐ No	**TOTAL WORK HOURS ON JOB SITE THIS DATE** (Including Continuation Sheets)
Were there any lost-time accidents this date? (If Yes, attach copy of completed OSHA report)	☐ Yes ☒ No	CH2MHILL On-Site Hours: 30
Was a Confined Space Entry Permit Administered This Date? (If Yes, attach copy of each permit)	☐ Yes ☒ No	Subcontractor On-Site Hours: 70
Were Crane/Manlift/Trenching/Scaffold/HV Elec/High Work/Hazmat Work Done?? (If Yes, attach statement or checklist showing inspection performed)	☒ Yes ☐ No	**Total On-Site Hours This Date**: 100
Was Hazardous Material/Waste Released into the Environment? (If Yes, attach description of incident and proposed action)	☐ Yes ☒ No	Cumulative Total of Work Hours From Previous Report: 922 Total Work Hours From Start of Construction: 1,022

SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED (Include Safety Violations, Corrective Instructions Given, Corrective Actions Taken, and Results of Safety Inspections Conducted): PTSP reviewed by field team. Crane, metal detector, hand-held GPS, turbidity curtain, oil absorbent boom, electromagnet, long-reach excavator, tug boat, rigging and barges inspected and no deficiencies were identified.

EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB

DESCRIPTION OF EQUIPMENT/MATERIAL RECEIVED	MAKE/ MODEL/ MANUFACTURER	EQUIPMENT/ LOT NUMBER	INSPECTION PERFORMED BY	NUMBER/ VOLUME/ WEIGHT

EQUIPMENT USED ON JOB SITE TODAY.

EQUIPMENT DESCRIPTION	EQUIPMENT MAKE/MODEL	SAFETY CHECK PERFORMED BY	NUMBER OF HOURS		
			USED	IDLE	REPAIR
85 Ton Crane	Wiley YD (CB14464)	Michael Smith	10	0	0
Tug Boat	Bunny C	Michael Mahlmann	10	0	0
Long Reach Excavator	Caterpillar 320	Dana Thomas	4	6	0
72" Super Loadstar Electromagnet	Ohio Magnetics	Michael Smith	10	0	0

REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			**REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)**	
TASK/ACTIVITY	DATE ISSUED	DESCRIPTION	TASK/ACTIVITY	CORRECTIVE ACTION(S) TAKEN

CH2MHILL N62470-08-D-1000 CTO WE10 N62470-11-D-8012 CTO WE11	**CONTRACTOR PRODUCTION and QUALITY CONTROL REPORT** (ATTACH ADDITIONAL SHEETS IF NECESSARY)	DATE OF REPORT: 08/14/12 REVISION NO: REVISION DATE:
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SITE MANAGER: Nathaniel Price	SITE SAFETY (UXOSO/UXOQCS): Nelson Figeac	SUXOS: Ted Dingle

WORK PERFORMED TODAY

EMPLOYEE	WORK PERFORMED	EMPLOYER	TITLE/TRADE	HRS
Nathaniel Price	Anomaly Investigation	CH2M Hill	SITE MANAGER	10
Nelson Figeac	Anomaly Investigation	CH2M Hill	SITE SAFETY (UXOSO/UXOQCS)	10
Ted Dingle	Anomaly Investigation	CH2M Hill	SUXOS	10
Henry Thrift	Anomaly Investigation	OER	UXO Technician	10
Ricardo Fuciarelli	Anomaly Investigation	OER	UXO Technician	10
Matthew Ferrell	Anomaly Investigation	OER	UXO Technician	10
Michael Mahlmann	Anomaly Investigation	Crofton Construction	Boat Captain	10
Michael Smith	Anomaly Investigation	Crofton Construction	Crane Operator	10
Dana Thomas	Anomaly Investigation	Crofton Construction	Rigging Supervisor	10
Wallace Pittman	Anomaly Investigation	Crofton Construction	Deck Hand	10

SAMPLING/TESTING PERFORMED

SAMPLING/TESTING PERFORMED	SAMPLING/TESTING COMPANY	SAMPLING/TESTING PERSONNEL
SJUXO1-SD001A-0004 (sediment from Location 1A)	CH2M HILL	Nathaniel Price

ACCUMULATION/STOCKPILE AREA INSPECTION

INSPECTION PERFORMED BY:	Nathaniel Price			SIGNATURE OF INSPECTOR:	Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.14 23:15:43 -04'00'		
ACCUMULATION/ STOCKPILE AREA LOCATION	Grassy field north of Building 38.						
NO OF CONTAINERS:	0	NO OF TANKS:	0	NO OF ROLL-OFF BOXES:	0	NO OF DRUMS:	1

INSPECTION RESULTS: The drum is empty and properly labeled/stored. The sand stockpile is covered with poly sheeting and secured.

TRANSPORTATION AND DISPOSAL ACTIVITIES/SUMMARY/QUANTITIES:

None

GENERAL COMMENTS ***(changed conditions, delays, conflicts encountered, rework, directives, etc)*****:**

None

VISITORS TO THE SITE: None

LIST OF ATTACHMENTS ***(examples, as applicable: preparatory phase checklist, QC meeting minutes, safety meeting minutes, crane inspections, COCs, weight tickets, manifests, profiles, rework item list, testing plan and log, OSHA report, confined space entry permit, incident reports, etc.)***: Safety meeting minutes, MEC QCS Forms (follow-up checklist), crane inspection report, daily vessel checklist, COC

SAFETY REQUIREMENTS HAVE BEEN MET ☒

On behalf of the contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report. On behalf of the contractor, I attest that the work for which payment is requested, including stored material, is in compliance with contract requirements.

Nathaniel A Price Digitally signed by Nathaniel A Price DN: cn=Nathaniel A Price, o=CH2M HILL, ou=Engineer, email=nprice@ch2m.com, c=US Date: 2012.08.14 23:15:55 -04'00'

SITE MANAGER'S SIGNATURE

08/14/12

DATE

FORM B-3b

FOLLOW-UP CHECKLIST

Date: 14Aug2012
Contractor: CH2M HILL
Contract No: N62470-11-D-8012

Y=YES; N=NO; SEE REMARKS BLANK=NOT APPLICABLE	
WORK COMPLIES WITH CONTRACT AS APPROVED IN INITIAL PHASE	

IDENTIFY DEFINABLE FEATURE OF WORK, LOCATION, AND LIST PERSONNEL PRESENT

Field Operations, Site investigation at SJCA UXO1 Locations 1A, will use electromagnet and raking operations. Nelson Figeac, Ted Dingle, Nate Price, Henry Thrift, Rick Fuciarelli, Matthew Ferrell, Michael Mahlmann, Dana Thomas, Mike Smith, Wallace Pitman. We moved the crane barge first thing during high tide from 2A to location 1A. Found some general scrap metal such as steel plate pieces. Put all items after being inspected/QC'd and washed off in cultural debris roll off container. Samples were taken at location 1A. We completed anomaly investigation at location 1A. No MPPEH or MEC was found for the day. OER personnel will demobilize 15 Aug 2012.

TESTING PERFORMED & WHO PERFORMED TEST (Include number of samples and/or tests taken)

Observed test out Fisher metal detector in test grid-Matthew Ferrell - Passed

Nate Price collected soil samples from Location 1A.

Crane daily inspection done by Mike Smith-passed

Turbidity curtain still intact and in place

MEC QCS: Nelson Figeac **Date: 14 Aug 2012**

AGVIQ
AGVIQ ENVIRONMENTAL SERVICES
CH2M HILL
JOINT VENTURE

DAILY PRE-TASK SAFETY PLAN (PTSP)

Project: UXO1 SJCA CTO-WE11_____ Location: Chesapeake, Va_____ Date: 14 Aug 2012

Health and Safety Officer: Nelson Figeac Job Activity: Anomaly Acquisition and Investigation_____

Task Personnel:

See attached list.

List Tasks:
Field Operations-Site anomaly investigation

Tools/Equipment/Materials required (ladders, scaffolds, fall protection, cranes/rigging, heavy equipment, power tools, cords, generators, compressed gases, regulated chemical products, etc.):

Hand tools, Radios, PPE, First aid Equipment and Barge with electromagnet.

Potential H&S Hazards, including chemical, physical, safety, biological and environmental (Check all that apply):

__ Chemical burns/contact	__ Trench, excavations, cave-ins	__Ergonomics
__ Pressurized lines/equipment	_X_ **Overexertion**: Take breaks as necessary and stay hydrated	__ Chemical splash
__ Thermal burns	_X_ **Pinch points:** Look out for cables/line on deck	_X_ **Poisonous plants/insects**: Snakes, lots of Ticks, Spiders, Deere Flies and Chiggers. A new Tick called the Gulf Coast Tick in the local area. Starting to get warmer and will see more insect in the area.
__ Electrical	_X_ **Cuts/abrasions**: PPE Gloves	_X_ **Eye hazards/flying projectile**: Wear safety glasses.
_X_ **Weather conditions**: Slight chance of afternoon thunderstorm and 72F in the AM with a high of 90F	__ Spills	__ Inhalation hazard
__Heights/fall> 6'	__ **Overhead Electrical hazards**:	_X_ **Heat/cold stress:** Stay hydrated, dress in light colors, take breaks as needed.
_X_ **Noise**: Wear hearing protection when around any load noise from barge equipment	_X_ **Elevated loads:** Do **NOT** walk or stand under any load being lifted by crane-electromagnet or debris	_X_ **Water/drowning hazard: Always wear PFD's while onboard barge**
__ Explosion/fire	_X_ **Slips, trip and falls**: Practice good housekeeping and foot placement	__ **Heavy equipment**: **Be aware of surroundings and make good eye contact with operator if need to pass by.**
__Radiation	_X_ **Manual lifting**: Proper lifting techniques and use help if needed	__ Aerial lifts/platforms
__ Confined space entry	__Welding/cutting	__ Demolition

Continue on page 3 of 3 (if necessary)

Hazard Control Measures (Check all that apply):

PPE	Protective Systems	Fire Protection	Electrical
_X_ Hard Hat	__ Locate buried utilities	__ Fire extinguishers	__ Lockout/tagout
_X_ Eye	__ Competent person	__ Fire watch	__ Grounded
_X_ Dermal/hand	__ Daily inspections	__ Non-spark tools	__ Panels covered
_X_ Hearing	__ Sloping	__ Grounding/bonding	_X_ GFCI/extension cords
_X_ Respiratory	_X_ Turbidity curtain	__ Intrinsically safe equipment	__ Power tools/cord inspected
_X_ Reflective vests	__ Trench box	__Combustible materials storage	__Insulated tools/gloves
_X_ PFD	__ Barricades	__Chemical Storage	
Fall Protection	**Air Monitoring**	**Proper Equipment**	**Welding & Cutting**
__ Harness/lanyards	__ PID/FID	__ Aerial lift/ladders/scaffolds	__ Cylinders secured/capped
__ Adequate anchorage	__ Detector tubes	__ Forklift/ Heavy equipment	__ Cylinders separated/upright
__ Guardrail system	__ Radiation	__ Backup alarms	__ Flash-back arrestors
__ Covered opening	__ Personnel sampling	_X_ Hand/power tools	__ No cylinders in CSE
__ Fixed barricades	__ LEL/O2	_X_ Crane w/current inspection	__ Flame retardant clothing
__ Warning system	__ Other: personal data ram	_X_ Proper rigging	__ Appropriate goggles
		_X_ Operator qualified	
Confined Space Entry	**Medical/Emerg. Response**	**Heat/Cold Stress**	**Vehicle/Traffic**
__ Isolation	_X_ First-aid & BBP kit	_X_ Work/rest regime	_X_ Traffic Awareness
__ Air monitoring	_X_ Eye wash	_X_ Rest area	_X_ Traffic control
__ Trained personnel	_X_ FA-CPR training	_X_ Liquids available	_X_ Barricades
__ Permit completed	_X_ Route to hospital	_X_ Monitoring	_X_ Flags
__ Rescue provisions		_X_ Training	_X_ Signs
Permits	**Demolition**	**Inspections**	**Training**
__ Hot work	__ Pre-demolition survey	__ Ladders/aerial lifts	_X_ Hazwaste
__ Confined space	__ Structure condition	__ Lanyards/harness	_X_ Construction
__ Lockout/tag out	__ Isolate area/utilities	__ Scaffolds	_X_ Equipment
__ Excavation	__ Competent person	_X_ Heavy equipment	_X_ Competent person
_X_ NAVFAC Crane Inspection/certification	__ Hazmat present	_X_Cranes and rigging	_X_ Task-specific (AHA)
__ Energized work		_X_ Other: per Field Safety Plan- Metal detectors, Handheld Radios	_X_ Hazcom
__Local/Environmental			

Field Notes:

_____

_____

_____

_____

Additional Space for Project Specific Hazard Awareness (if necessary):

1. Do not use cell phones on base while driving and wear seat belts-It's the law!
2. Maintain good radio communications/cell phones as secondary means of communication
3. Consider wearing sunscreen for your own protection from UV rays
4. Do not carry cell phones/wallets near electromagnet. Will wipe them clean of all information.
5. Report all accidents/injuries and property damage to PM/Site Safety immediately.
6. Designated Site Safety vehicle is project rental from CH2M HILL.
7. Route to Hospital and Emergency Numbers will be in explosive vehicle and safety truck and onboard barge. Evacuation route-3 Blast on tug horn, gat on Bunny C meet at bldg 43 for head count and further instructions
8. Stay Hydrated and avoid long periods of time in the sun if possible. Use equipment rather than manual labor when possible to avoid over exertion and heat exhaustion.
9. Use tag lines when handling work boat while putting it in and out of the water.
10. MEC Awareness and 3R training

Attendees:

Name Printed:	**Signature**:
Nelson Figeac – CH2M HILL	
Nate Price – CH2M HILL	
Ted Dingle – CH2M HILL	
Bud Thrift – OER	
Rick Fuciarelli - OER	
Matthew Ferrell - OER	
Michael Mahlmann-Crofton Captain	
Dana Thomas-Crofton	
Mike Smith-Crofton	
Wallace Pitman-Crofton	

Meeting Conducted By: Nelson Figeac

Name Printed Signature

DAILY CRANE INSPECTION REPORT
To Be Completed Daily By The Operator

Job No. 9674 Date: 08/14/2012

Foreman: Operator: M. SMITH

(X) CHECK EACH ITEM DAILY	OK	N/A	UNSATISFACTORY OR REMARKS
1. Hooks (pins.swivels)	✓		
2. Hook Block (pins/grease fittings)	✓		
3. Boom Tip/Sheaves	✓		
4. Cable Drum (facing and becket)	✓		
5. Main Boom -structural members/pins	✓		
6. Boom Extension -structural members/pins		✓	
7. Cable Guides	✓		
8. Boom Hoist Safety Device -check valve	✓		
9. Hydraulic System -hoses, pumps, controls, reservoir		✓	
10. Hydraulic Out-Riggers -RF/LF/RR/LR		✓	
11. Power Unit, Instrumentation, Lighting System	✓		
12. Steering Mechanism		✓	
13. Cab, Platforms, Handrailing, Steps, Glass, Tires, etc.	✓		
14. Fire Extinguisher	✓		
15. Housekeeping	✓		
16. Back-up Alarm		✓	
17. Safety Charts Posted -Capacity, Radius, Hand Signals, Fanny Flag, High Voltage	✓		
18. Engine Hours	4751		

Serial No: Make: Lessor:

THIS LOG SHALL BE KEPT IN THE CRANE

Operator Signature: [signature] Date: 08/14/2012

CROFTON Construction Services, Inc.

☐ PRE-ARRIVAL ☐ PRE-SAILING OR ☑ DAILY CHECK LIST

Time Period: 0001 to 2400 _____ Day Tue _____ Date Aug 14, 12 _____ Trip# _____

Trip Data: Departed From: Portsmouth, VA _____ Enroute to: _____

A.	Crew Position	Name	Hours on Duty (From/To)	Hours Total
1.	Master	M Mahlmann		
2.	Mate (Pilot)			
3.	Engineer AB	W Pittman		
4.				
5.				

List other crewmembers on the back of this page. (A6, A7, A8, etc.)

Instructions: Each check mark shows that an inspection was performed in accordance with the Coast Guard Regulations cited.
[Abbreviations: OK = Satisfactory; N/R = Needs Repair; N/A = Not Applicable; does not apply.]

B. Steering System

1. Steering System—Main pump		☑ OK	☐ N/R
2. Steering system—Alternate Pump		☑ OK	☐ N/R
3. Steering angle, maximum to port		☑ OK	☐ N/R
4. Steering angle, maximum to starboard		☑ OK	☐ N/R
5. Flanking rudders	☑ N/A	~~☐ OK~~	~~☐ N/R~~
6. All steering stations work		☑ OK	☐ N/R
7. Steering system linkage		☑ OK	☐ N/R
8. Rudder angle indicator is accurate	☑ N/A	~~☐ OK~~	~~☐ N/R~~

C. Navigational Equipment Status:

1. Radar #1 (Identify: N/A)		~~☐ OK~~	~~☐ N/R~~
2. Radar #2 (Identify: Furuno)		☑ OK	☐ N/R
[What time did radar stop working? _____]			
3. Port searchlight #1 works		☑ OK	☐ N/R
4. Starboard searchlight #2 works		☑ OK	☐ N/R
5. VHF-FM Radio #1 (Identify: Standard)		☑ OK	☐ N/R
6. VHF-FM Radio #2 (Identify: Standard)		☑ OK	☐ N/R
7. Magnetic compass, compensated	☐ N/A	☑ OK	☐ N/R
8. Deviation Table is accurate	☐ N/A	☑ OK	☐ N/R
9. Swing meter (Illuminated)	☑ N/A	~~☐ OK~~	~~☐ N/R~~
10. Depth sounder works	☐ N/A	☑ OK	☐ N/R
11. Automatic Indentification System	☐ N/A	☑ OK	☐ N/R
12. Loran-C/GPS receiver works	☐ N/A	☑ OK	☐ N/R
13. Intercom and PA system tested	☐ N/A	☑ OK	☐ N/R
14. General alarm system tested	☐ N/A	☑ OK	☐ N/R
15. Navigation lights work		☑ OK	☐ N/R
16. Whistle tested		☑ OK	☐ N/R
17. Fire alarm panel		☑ OK	☐ N/R

[Report all navigational equipment that fails in service.]

D. Charts and publications suitable for this voyage

1. Charts/maps (up to date & large scale)		☑ OK	☐ Not Avail.
2. Coast Guard Light List (LL)		☑ OK	☐ Not Avail.
3. Local Notice to Mariners (LNM)		☐ OK	☐ Not Avail.
4. Tide Tables	☐ N/A	☑ OK	☐ Not Avail.
5. Tidal Current Tables	☐ N/A	☑ OK	☐ Not Avail.
6. U.S. Coast Pilot	☐ N/A	☑ OK	☐ Not Avail.
7. Navigation Rules *[33 CFR 88.05]*		☑ OK	☐ Not Avail.

E. Towline & terminal gear for towing astern

1. Towline (Visual Inspection)	☑ N/A	☐ OK	☐ N/R
2. Towline free of knots		☐ OK	☐ N/R
3. Towing wire has a spliced or poured socket		☐ OK	☐ N/R
4. Towing wire has no wire clips		☐ OK	☐ N/R
5. Terminal gear		☐ OK	☐ N/R
6. Chafing gear		☐ OK	☐ N/R
7. Shock line		☐ OK	☐ N/R
8. Towing bridles and gear		☐ OK	☐ N/R
9. Towing engine, winch, and capstan(s)		☐ OK	☐ N/R
10. Towing winch brake		☐ OK	☐ N/R
11. Towing hawser used _____ Hours & _____ Miles			

F. Towline & terminal gear for towing alongside or pushing ahead

1. Face wires appropriate for horsepower of vessel	☐ N/A	☑ OK	☐ N/R
2. Face wires appropriate for tow arrangement	☐ N/A	☑ OK	☐ N/R
3. Face wires/couplings serviceable	☐ N/A	☑ OK	☐ N/R
4. Winch Condition		☑ OK	☐ N/R

G. Machinery Spaces

1. Engineroom ready for sea or voyage		☑ OK	☐ N/R
2. Check propulsion machinery		☑ OK	☐ N/R
3. Check other machinery		☑ OK	☐ N/R
4. Check all gauges		☑ OK	☐ N/R

H. Safety and Miscellaneous Items

1. Enough fuel for voyage		☑ YES	☐ NO
2. Check pre-sailing plan with crew		☑ YES	☐ NO
3. Deck secured for sea or voyage		☑ YES	☐ NO
4. Weather forecast checked		☑ YES	☐ NO
5. Generator(s) operate satisfactorily		☑ YES	☐ N/R
6. Watertight doors and hatches		☑ OK	☐ N/R
7. Fuel shutoff valve operable		☑ YES	☐ N/R

I. Barge(s)

1. Navigation lights work		☐ OK	☐ N/R
2. Hatches secured		☐ OK	☐ N/R
3. Load line	☐ N/A	☐ OK	
4. List and trim		☐ OK	☐ N/R
5. Anchoring system operational	☐ N/A	☐ OK	☐ N/R
6. Emergency pick-up line deployed	☐ N/A	☐ OK	☐ N/R
7. Deck lines secured		☐ OK	☐ NO
8. Towing bridles, pendant, and gear		☐ OK	☐ N/R
9. Tow diagram and barge info available		☐ OK	☐ N/R

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Time	Code (Letter)	Item (Number)	8/14/12 EXPLANATION OF EACH ENTRY
0001			St/By @ St Julian's Creek Annex
0630			Ved out Per CFR 33 Part 164 UP & Running
0700			L/B to Jobsite
0710			Arr @ Jobsite
0730			Shift Scobbs Creek & OU504 to Mark 1A
0750			on Mark 1A
1227			Arr @ Dock to unload Crew
1245			U/W w/Scobbs Creek & OU504 to Mouth of Creek
1400			Arr @ Mouth L/B Site
1410			See ya

I certify that the information above is true and correct to the best of my knowledge and that all required checks were made. **Signature of Master**

This page is an official record. Do not remove it from this book.
Describe training sessions and drills on this page. List all participants.

EMPIRICAL LABORATORIES, LLC - CHAIN OF CUSTODY RECORD

SHIP TO: 621 Mainstream Drive, Suite 270 ♦ Nashville, TN 37228 ♦ 615-345-1115 ♦ (fax) 615-846-5426

17080

Send Results to:	Send Invoice to:	Analysis Requirements:	Lab Use Only:
Name [illegible]	Name		VOA Headspace Y N NA
Company [illegible]	Company		Field Filtered Y N NA
Address [illegible]	Address		Correct Containers Y N NA
City [illegible]	City		Discrepancies Y N NA
State, Zip [illegible]	State, Zip		Cust. Seals Intact Y N NA
Phone [illegible] 376-5111	Phone		Containers Intact Y N NA
Fax [illegible] 376-5166	Fax		Airbill #:
E-mail [illegible]	E-mail		CAR #:
Project No./Name: [illegible] 392043	Sampler's (Signature):		

Lab Use Only Lab #	Date/Time Sampled	Sample Description	Sample Matrix	Fluorides (+ nitrate)	Nitrate/Nitrite	Nitrate/Chloride	Perchlorate	Comments	No. of Bottles	Lab Use Only Containers/Pres.
	8/7/12 1030	SJVX01-S0012-0004	SD	X	X	X	X		2	
	8/7/12 1405	SJVX01-S0013-0004	SD	X	X	X	X		2	
	8/8/12 0900	SJVX01-S0014-0004	SD	X	X	X	X		2	
	8/9/12 1240	SJVX01-S0015-0004	SD	X	X	X	X		2	
	8/9/12 1320	SJVX01-S0004-0004	SD	X	X	X	X		2	
	8/10/12 1205	SJVX01-S0031-0004	SD	X	X	X	X		2	
	[illegible]	[illegible]-0031P-0004	SD	X	X	X	X		2	
	[illegible] 1220	SJVX01-S0012A-0004	SD	X	X	X	X		2	
	[illegible] 0835	SJVX01-S0014A-0004	SD	X	X	X	X		2	
	8/8/12 1645	SJVX01-FB-080812	AQ	X	X	X	X		4	
	8/10/12 1515	SJVX01-FB-081012	AQ	X	X	X	X		4	
	8/14/12 1200	SJVX01-FB-081412	AQ	X	X	X	X		4	

Sample Kit Prep'd by: (Signature)	Date/Time	Received By: (Signature)
[illegible]	8/14/12 1610	
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Relinquished by: (Signature)	Date/Time	Received By: (Signature)
Received for Laboratory by: (Signature)	Date/Time	*Temperature*

REMARKS:

Details:

Page 1 of 1

Cooler No. 1 of 2

Date Shipped 8/14/12

Shipped By NP

Turnaround

Distribution: Original and yellow copies accompany sample shipment to laboratory; Pink retained by samplers.

Appendix B
Field Notes

Location SJCA UXO 1 Date 7/30/12

Project / Client SITE INSPECTION

0655 - ARRIVE ONSITE

0700 - H&S MEETING ; N. FIGEAC, BUD THRIFT, TED DINGLE, N. PRICE

0900 - DRIVE TO CROFTON OFFICE TO TOUR BARGE

0920 - ARRIVE AT CROFTON OFFICE ; MEET W/ PETE KOLB

* ALL PERSONNEL WORKING ON WATER SHOULD HAVE TWIC CARDS

1030 - ALL PERSONNEL OFFSITE

7/30/12

Location SJCA UXO 1 Date 7/31/12

Project / Client SITE INVESTIGATION

0650 - ARRIVE ONSITE

0700 - H&S MEETING ; N. FIGEAC, B. THRIFT, R. FUCIARELLI, M. FERRELL, T. DINGLE, N. PRICE

0805 - THRASHER SAND COMPANY ONSITE TO DELIVER 10 TONS OF WASHED SAND FOR SAND BAGS

- D. POWERS, P. GARCIA, VISIT SITE
- FILL SAND BAGS
- PICKUP 5 55-GALLON DRUMS
- JOHN ALLEN (DOCK MASTER) IS OK WITH US STARTING WITH LOCATIONS 5-10

1515 - CRANE & BARGE ARRIVE AT WHARF

* BLDG 43 WHEN TRANSPORTING EXPLOSIVES JOHN DANSELL (LEAD GUY)

1700 - ALL PERSONNEL OFFSITE

7/31/12

Location SJCA UXO 1 Date 8/1/12

Project / Client SITE INVESTIGATION

0630 - ARRIVE ONSITE
0700 - H&S BRIEFING ; N. FIGEAC, N. PRICE, T. DINGLE, B. THRIFT, R. FUCIARELLI, M. FERRELL, ~~BEN REDMOND~~ NP
GEORGE DEMETROPOLIS, G. RODRIGUEZ, M. MAHLMANN, DANA THOMAS, WALLACE PITTMAN
* START AT LOCATION 5
MIKE SMITH
* B. THRIFT WILL GIVE FINAL WORD ON RELEASE OF MATERIAL OFF OF MAGNET
* B. THRIFT GAVE OVERVIEW OF DEMO SOP
* IF ANYONE GOES OVERBOARD SOMEONE HAS TO WATCH THEM AT ALL TIMES
0830 - MIKE THOMAS (NAVFAC) ONSITE TO INSPECT CRANE
0805 - SETUP TEST POINT FOR METAL DETECTOR
0845 - BEGIN SETUP OF TURBIDITY CURTAIN AND OIL ABSORBENT BOOM
1030 - DAVE PRYOR (CH2M HILL) ONSITE
1115 - BEGIN MOVING SPUDS OUT OF WATER
1120 - BEGIN MOVING TO LOCATION 5
1130 - ARRIVE AT LOCATION 5
1155 - MAGNET INTO WATER

Location SJCA UXO 1 Date 8/1/12

Project / Client SITE INVESTIGATION

- NO METAL ON FIRST ATTEMPT (MAGNET ONLY)
1200 - COLLECTED SJUXO1-SD005-0003
~~FINE PARTICLES~~, SILT, ~~10Y~~ N 3/1 (VERY DARK GRAY)
- SCRAP METAL ON SECOND ATTEMPT
- APPROXIMATELY 3FT BSS
1220 - P. KOLB, P. TRAVER, M. SKEAN ONSITE
1230 - WORK STOPPED DUE TO LIGHTNING IN AREA ; LAST LIGHTNING SPOTTED AT 1310
1340 - CONTINUE WITH MAGNET ONLY
1530 - WORK STOPPED TO REPAIR OIL ABSORBENT BOOM
1650 - LOCATION 5 ATTEMPT USING COMPACTOR PLATE (NO METAL PICKED UP)
* COMPLETED LOCATION 5
1730 - ALL PERSONNEL OFFSITE

8/1/12

Location SJCA UXO 1 Date 8/2/12

Project / Client SITE INVESTIGATION

0630 - ARRIVE ONSITE

* STAGING AREA → sand stockpile, sandbags (500)

4 Drums (5th ON BARGE), IDW ROLLOFF

0700 - H&S BRIEFING; N. FIGEAC, N. PRICE, T. DINGLE, B. THRIFT, R. FUCIARELLI, M. FERRELL, R. TRAVER, M. MAHLMANN, D. THOMAS, W. PITTMAN

0720 - CONDUCT DAILY SCHONSTADT TEST

0730 - BEGIN MOVING TO LOCATION 6

0740 - ARRIVE AT LOCATION 6

- USED RAKE ON EXCAVATOR PRIOR TO DEPLOYING MAGNET

0840 - COLLECT SJUXO1-SD006-0003

0-3 FT BSS

- PICKING UP LARGER PIECES OF SCRAP METAL AT LOCATION 6

1045 - COMPLETE LOCATION 6

1050 - BEGIN MOVING TO LOCATION 7

1115 - ARRIVE AT LOCATION 7

1135 - COLLECT SJUXO1-SD007-0004

MS/MSD SAMPLE

1145 - PARTNERING TEAM ONSITE

1230 - R. TRAVER OFFSITE

1240 - PARTNERING TEAM OFFSITE

Location SJCA UXO 1 Date 8/2/12

Project / Client SITE INVESTIGATION

1425 - COMPLETE LOCATION 7

1430 - BEGIN MOVING TO LOCATION 8

1445 - ARRIVE AT LOCATION 8

1545 - COLLECT SJUXO1-SD008-0004

* WILL FINISH LOCATION 8 TOMORROW

1700 - ALL PERSONNEL OFFSITE

End of Day 8/2/12

Location SJCA UXO 1 Date 8/3/12

Project / Client SITE INVESTIGATION

0620 - ARRIVE ONSITE
0700 - H&S BRIEFING; N. FIGEAC, N. PRICE, D. THOMAS, M. SMITH, M. MAHLMANN, B. THRIFT, T. DINGLE, GARY WILLIAMS, R. FUCCIARELLI, M. FERRELL,
• CONDUCTED METAL DETECTOR INSPECTION
• REPAIRED TURBIDITY CURTAIN
0820 - CONTINUE AT LOCATION 8
0830 - HOPE WILSON ONSITE
1015 - COMPLETE LOCATION 8
1020 - BEGIN MOVING TO LOCATION 9
1025 - HOPE WILSON. OFFSITE
1030 - ARRIVE AT LOCATION 9 BEGIN RAKING SEDIMENT
1105 - COLLECT SJUXO1-SD009-0005
1240 - WORK STOPPED DUE TO ISSUE WITH MAGNET MALFUNCTIONING (20 MIN)
1350 - COMPLETED LOCATION 9 MOVED TO LOCATION 10
1440 - BEGIN RAKING LOCATION 10
1500 - BEGIN ~~SAMPLING~~ NP INVESTIGATING LOCATION 10
~~1530 - COLLECT SJUXO1 SD010~~ NP
1700 - ALL PERSONNEL OFFSITE

Location SJCA UXO 1 Date 8/6/12

Project / Client SITE INVESTIGATION

0620 - ARRIVE ONSITE
0700 - H&S BRIEFING; N. FIGEAC, N. PRICE, T. DINGLE, B. THRIFT, R. FUCIARELLI, M. FARRELL, M. MAHLMANN, M. SMITH, D. THOMAS, G. WILLIAMS
0720 - METAL DETECTOR INSPECTION
0755 - CONT. INVESTIGATING LOCATION 10
0805 - COLLECT SJUXO1-SD010-0004
* LOCATIONS 5-10 HAVE SAME TYPE OF SEDIMENT: SANDY CLAY LOAM, MODERATELY COARSE, GLEY 1 3/1, VERY DARK GREENISH GRAY
1005 - BEGIN MOVING TO LOCATION 11
1120 - ARRIVE AT LOCATION 11
1125 - BEGIN RAKING SEDIMENT
1145 - COLLECT SJUXO1-SD011-0004
* CROFTON MECHANIC ONSITE TO REPAIR SMALL HYDRAULIC LEAK IN EXCAVATOR
* FOUND ONE PIECE OF MD SCRAP AND CHARACTERIZED IT AS MDAS (~~5IN~~ NP SHAPING CAP FOR ~~5IN~~ NP PROJECTILE)
~~155mm~~ NP PROJECTILE (5IN)

Location SJCA UXO 1 Date 8/6/12

Project / Client SITE INVESTIGATION

1520 - LIGHTNING SPOTTED, WORKERS STOPPED FOR 30 MINUTES

1545 - WORK STOPPED FOR TODAY DUE TO HEAVY RAIN AND LIGHTNING

1600 - ALL PERSONNEL OFFSITE

1745 - N. PRICE DELIVERS SAMPLES AT FEDEX

* LOCATION 11 ? SANDY CLAY LOAM, MODERATELY COARSE, GLEY 1 3/1, VERY DARK GREENISH GRAY, SHELLS IN SEDIMENT

End of Page 8/6/12

Location SJCA UXO 1 Date 8/7/12

Project / Client SITE INVESTIGATION

0630 - ARRIVE ONSITE

0650 - TEST METAL DETECTOR

0700 - H&S MEETING; N. FIGEAC, N. PRICE, B. THRIFT, R. FUCIARELLI, M. FARRELL, M. MAHLMANN, D. THOMAS, W. PITTMAN, T. DINGLE

0910 - COMPLETE LOCATION 11

0935 - BEGIN MOVING TO LOCATION 12

1010 - ARRIVE AT LOCATION 12; BEGIN INVESTIGATION

1030 - COLLECT SJUXO1-SD012-0004

* SANDY CLAY LOAM, MODERATELY COARSE, GLEY 1 3/1, VERY DARK GREENISH GRAY, SHELLS IN SEDIMENT

1350 - COMPLETE LOCATION 12

1355 - BEGIN MOVING TO LOCATION 13

1410 - ARRIVE AT LOCATION 13

1430 - BEGIN INVESTIGATING LOCATION 13

1455 - COLLECT SJUXO1-SD013-0004

* SANDY CLAY, MODERATELY COARSE, GLEY 1 3/1 VERY DARK GREENISH GRAY

1715 - ALL PERSONNEL OFFSITE

NP

Location SJCA UXO 1 Date 8/8/12

Project / Client SITE INVESTIGATION

0645 - ARRIVE ONSITE

0650 - TEST METAL DETECTOR

0700 - H&S MEETING; N. PRICE, N. FIGEAC, T. DINGLE, B THRIFT, M. FARRELL, R. FUCIARELLI, M. MAHLMANN, M. SMITH, D. THOMAS, W. PITTMAN, G. WILLIAMS

* USED COMPACTOR PLATE TO STIR UP SEDIMENT AT LOCATION 13 SINCE LONG REACH EXCAVATOR IS AT SHOP FOR REPAIRS

0830 - COMPLETE INVESTIGATION AT LOCATION 13; BEGIN MOVING TO LOCATION 14

0840 - ARRIVE AT LOCATION 14 AND BEGIN INVESTIGATION

0900 - COLLECT SJUXO1-SD014-0003

* SANDY CLAY, MODERATELY COARSE, GLEY 1 3/1, VERY DARK GREENISH GRAY, SHELLS IN SEDIMENT

1130 - COMPLETE INVESTIGATION AT LOCATION 14; BEGIN MOVING TO LOCATION 15

1150 - ARRIVE AT LOCATION 15; BEGIN INVESTIGATING

1240 - COLLECT SJUXO1-SD015-0004

* SANDY CLAY, MODERATELY COARSE, GLEY 1 3/1,

Location SJCA UXO 1 Date 8/8/12

Project / Client SITE INVESTIGATION

VERY DARK GREENISH GRAY, SHELLS IN SEDIMENT

1640 - COMPLETED INVESTIGATION AT LOCATION 15

1715 - ALL PERSONNEL OFFSITE

8/8/12

Location SJCA UXO 1 Date 8/9/12

Project / Client SITE INVESTIGATION

0630 - ARRIVE ONSITE
0650 - TEST METAL DETECTOR
0700 - H&S BRIEFING; N. PRICE, N. FIGEAC, T. DINGLE, M. FARRELL, R. FUCINELLI, B. THRIFT, M. MAHLMANN, D. THOMAS, W. PITTMAN
0713 - K. PARRA, D. MURRAY, G. RODRIGUEZ, ARRIVE AT DOCK
0735 - N. FIGEAC GIVES SAFETY BRIEFING TO K. PARRA, D. MURRAY, G. RODRIGUEZ
0740 - ARRIVE AT LOCATION 5
0840 - K. PARRA AND D. MURRAY ARRIVE ON BARGE
0955 - INVESTIGATE AT LOCATION 5 TO SHOW D. MURRAY THE OPERATION
1025 - D. MURRAY COMPLETES AUDIT AND GIVES OUTBRIEF
(1) 8 HR REFRESHER FOR BUD THRIFT
(2) ESS SPUD ISSUE
1040 - D. MURRAY AND K. PARRA OFFSITE
1100 - M. MAHLMANN, N. FIGEAC, N. PRICE, RIDE ON SKIFF BOAT TO LOCATIONS 1-3 TO TEST WATER DEPTH
LOCATION 3 → 3 FT OF WATER

Location SJCA UXO 1 Date 8/9/12

Project / Client SITE INVESTIGATION

LOCATIONS ~~1 AND~~ 2 → 3 FT OF WATER
LOCATION 1 → 10 FT OF WATER
↳ POSSIBLY DURING HIGH TIDE
LOCATION 4 → 8 FT (GO DURING HIGH TIDE)
1155 - LONG REACH EXCAVATOR BACK ONSITE
1215 - BEGIN MOVING TO LOCATION 4
1250 - ARRIVE AT LOCATION 4
1310 - BEGIN INVESTIGATION AT LOCATION 4; USED EXCAVATOR TO RAKE LOCATION
1320 - COLLECT SJUXO1-SD004-0004
* SILTY CLAY, FINE, GLEY 1 3/1, VERY DARK GREENISH GRAY, SHELLS IN SEDIMENT
1715 - ALL PERSONNEL OFFSITE

8/9/12

Location SJCA UXO1 Date 8/10/12

Project / Client SITE INVESTIGATION

0640 - ARRIVE ONSITE
0650 - TEST METAL DETECTOR
0700 - H&S BRIEFING; N. FIGEAC, N. PRICE, T. DINGLE, B. THRIFT, M. FARRELL, R. FUCIARELLI, M. MAHLMANN, D. THOMAS, W. PITTMAN, M. SMITH
0720 - ARRIVE AT LOCATION 4
• 60 FT PIECE OF CABLE
• FT PIECE OF CABLE
1010 - COMPLETE INVESTIGATION AT LOCATION 4
1030 - BEGIN MOVING TO LOCATION 3A
1130 - BEGIN INVESTIGATION AT LOCATION 3A
1205 - COLLECT SJUXO1-SD003A-0004 AND SJUXO1-SD003AP-0004
1335 - WORK STOPPED DUE TO WIND GUSTS
1530 - SHUT DOWN DUE TO STRONG WINDS
1600 - ARRIVE AT WHARF
1615 - ALL PERSONNEL OFFSITE

8/10/12

Location SJCA UXO1 Date 8/13/12

Project / Client SITE INVESTIGATION

0650 - ARRIVE ONSITE
0655 - TEST METAL DETECTOR
0700 - H&S BRIEFING; N. FIGEAC, N. PRICE, T. DINGLE, B. THRIFT, M. FARRELL, R. FUCIARELLI, W. PITTMAN, M. MAHLMANN, D. THOMAS, M. SMITH
0730 - ARRIVE AT LOCATION 3A
0915 - COMPLETE INVESTIGATION AT LOCATION 3A
0920 - MOVE TO LOCATION 2A
0940 - BEGIN INVESTIGATION AT LOCATION 2A
1220 - COLLECT SJUXO1-SD002A-0004
* SILTY CLAY, FINE, GLEY, 1 3/1, VERY DARK GREENISH GRAY, SHELLS IN SEDIMENT
1430 - COMPLETE LOCATION 2A INVESTIGATION
1440 - BEGIN MOVING TO LOCATION 1A
1530 - ARRIVE AT LOCATION 1A IN GENERAL VICINITY BUT NOT EXACTLY AT LOCATION 1A DUE TO WATER LEVEL BEING LOW DURING LOW TIDE.
1645 - ALL PERSONNEL OFFSITE

(NP)

Location SJCA UX01 Date 8/14/12

Project / Client SITE INVESTIGATION

0620 - ARRIVE ONSITE
0650 - H&S BRIEFING; N. FIGEAC, N. PRICE, T. DINGLE, B. THRIFT, R. FUCIARELLI, M. FARRELL, M. MAHLMANN, M. SMITH, D. THOMAS, W. PITTMAN
0700 - BEGIN MOVING TO LOCATION 1A
0820 - ARRIVE AT LOCATION 1A AND BEGIN INVESTIGATION
0835 - COLLECT SJUX01-SD001A-0004
* SILT CLAY, FINE, GLEY 1 3/1, VERY DARK, GREENISH GRAY, SHELLS IN SEDIMENT
1017 - N. PRICE CALLS CLEARFIELD TO HAVE THEM PICKUP THE IDW ROLLOFF (EMPTY)
1020 - N. PRICE CALLS SPIVEY RENTALS TO HAVE PORTABLE TOILET AND HAND WASH STATION PICKED UP
1135 - COMPLETE LOCATION 1A INVESTIGATION AND BEGIN DEMOBILIZING BARGE
• SCRAP METAL ONLY AT LOCATION 1A
1240 - ARRIVE AT WHARF, BEGIN UNLOADING BARGE
1400 - ALL PERSONNEL OFFSITE; N. PRICE TO FEDEX TO SHIP SAMPLES

Location SJCA UX01 Date 8/14/12

Project / Client SITE INVESTIGATION

* CLEARFIELD ONSITE AT 1333 TO PICKUP EMPTY IDW ROLLOFF
1645 - N. PRICE ARRIVES AT FEDEX
1700 - N. PRICE DEPARTS FEDEX

8/14/12

Location SJCA Date 7/30/12

Project / Client UXO 1 anomaly investigation
PN-392043.SI.SI.P2

0600 on site getting PTSB Ready
+ Review APP/WP/ESS.
0700 PTSB Brief/Work Brief.
0800 Site Tour/Read APP/
Lay down area for Sand
1000 Visit Crofton
1045 Return to site
1100 Review certs for Bud
1200 Lunch
1230 Return to do admin
for rest of day getting
files Ready.
1600 go pick up some H+S
supplies at Lowes.

Hotel for George —
Hampton Inn
1421 North Battlefield Blvd
Ches. VA 23320
757-819-5230
1800 secured for the day

Location SJCA Date 7/31/12

Project / Client UXO I Anomaly Investigation

on site get PTSP/work Brief
Ready
PTSP/work Brief went over
AHA's + SOP's Read Thru App
Had everyone sign off on it.
filled sand Bags for Demo
Operations if Required.
Talked To Denise Garcia,
John Allen + Daniel Powers on
Time of Arrival of Barge.
Picked up 5 55gl Drums for
MDAS storage.
Lunch
Returned from Lunch
Barge from Crofton is underway
To SJCA.
Barge Along side of Wharf
will set up
MET with John Allen, Mike
(Boat Capt) Discuss Leaving
Tug + barge alongside wharf.
John will Notify Navy.
Departed site To get some
supplies.

Location SJCA Date 1 Aug 12

Project / Client UXO I Anomaly Investigation

0500 Departed To Pick up
George At Hotel + Bring
him To Job site.
0600 At Hotel met w/ George
0620 Departed To site
0650 on site.
0700 Conducted PTSP/work Brief
+ Crane Safety Brief (By Capt
Mike)
DER-BUD Thrift went over
Demo SOP/MPPEH SOP
Discussed ESS + WP.
0800 NAVFAC on board crane for
conducting Crane certification
inspection. Tested Hand held Radios
0900 Passed Crane certification
will have copy on file
Start set up of Barges +
Turbidity curtain. Radios check OK
0830 George conducted and
MR AUDIT. Watched
OER personel make a
check out pit for
All metals Detector

ation _____ Date 1 Aug 12 (cont.)

ject / Client _____

Buried 2 seeds 1 Inches Deep marked Them & checked out Detector. Passed check out Test

0 started on Location 5 find nothing Related To ordnance, Collected sample of mud for analitical analysis. Loc. 5 Depth is 20 ft

Location _____ Date 2 Aug 12

Project / Client UXO 1 SJCA

0600 on site get PTSP Ready put Lee on water Coolers.

0700 PTSP/Work/Barge Briefs conducted for all Personel Load out Equipment check out Crane by Mike Smith + Excavator By Dana. Turbity Curtain still in place. Observed OER check out All metals metal Detector but will not be needed for Todays operation on a steel Barge. Radios were checked or verified They work.

0800 will be moving + starting on Location 6 NOT finding anything Related To ordnance Just General Trash.

1053 checked out + inspected all Debris from Location 6 Nothing but Cultural Debris

1200 Lunch on Loc 7/26 ft deep

ition _____ Date 2 AUG 12

ect / Client SJCA ~~SJP~~ NZ UXO 1

check + inspected The Rest
off material pulled from
Locations 7 + 8 No MD or
MPEH found only scrap
cultural Debris.
Departed for The Day.

Location _____ Date 3 AUG 12

Project / Client SJCA UXO 1

0600 on site getting paperwork
Ready for morning Briefs.
0700 PTSP/work Brief + Crane
Barge safety Brief.
Loaded Gear on barge.
0730 observed OER personal Test
fisher out on Tes grid.
Passed Function Test.
0800 Rhope Wilson come on
board for an Environmental
audit. Gave her a Safety
Brief see PTSP, + site Brief.
Escorted her on board
+ out of The 43' EZ for
non essential personnel
0900 Started on Location 8/23 pt
To finish it. Tested Radios/OK
1000 moved To Location 9/27 pt
Completed Location 10/23 pt

tion _____ Date 6 AUG 12

ct / Client UXO 1 SJCA

on site getting PTSP/work brief. Barge + Crane Ready to load on board.
PTSP/work brief + Barge brief. Start back up on location 10 to finish it up. Tested Radios/OK. Observed OER check out Fisher. Passed Function Test. Turbidity curtain still in place.
Starting on location 10 completed 10 getting ready for underway to Loc-11/25 ft
Noticed Excavator not operating ok. checked it out + has a small leak in Hyd Line called for repair.
went in Tug to check water depth for Loc-1-4. Depths are shallow can get #4 but 3, 2 + 1 are very shallow water. Possibly can do them during low tide.
NOTE collected samples at Loc 11

Location _____ Date 6 AUG 12

Project / Client _____

1200 mechanic looked at Excavator + needs new shaft seal. End of work day Crafton will ~~stay~~ Exchange Excavator out.
Filled out 1348 for the one shipping cap for 5" rounds and classified it as MDAS.

1530 Thunderstorm hit Head secured for the Day. Lots of Lightning

tion _____ Date 7AUG12

ct / Client SJCA ~~SITE S~~ nt UXO1

on site get PTSB/work Brief ready. Turbidity curtain still in place. Continue to be on/off rain, No lightning. PTSB + morning Brief. Discuss + go over Evacuation routes. Continue to work on loc 11 to finish it up then move to loc 12. Will check w/ Port ops on boat traffic since loc 12 is out on edge of channel. No boat traffic for next 2 days. Inspected debris from yesterday all items are cultural debris. Observed OER check Fisher + pass functional test on test grid. Radios check OK.

Completed loc 11 moved to loc 12/40 ft Dep.

Completed loc 12, moving to loc 13

on station at loc 13 depth 40 ft Will use Electromagnet + Rating. Inspected all material from locations that was brought up. No MEC/MPBCH just steel scrap.

Location _____ Date 7AUG12

Project / Client _____

1730 secure for the day.

lion _____ Date 8 AUG 12

ct / Client SJCA UXO 1

on site get PTSP/work Brief
Ready.
PTSP/work Brief & Barge Brief
conducted.
Cont. w/ anomaly investigation.
MAT checked out Fisher.
I observed AND Fisher
Passed Function Test.
Radios check out
Crane insp complete
Will finish Loc 13 & move
To 14 using Penetrator Plate.
moved To Loc 14 after
completing Loc 13. Depth at
Loc 14 is 30 ft.
Turbidity curtain + oil boom in
Place & inspected. All Good.
Made Red ink changes to WP+
APP.
Completed Loc 14, inspected
Items That came out of
Loc 14 + NO MEC/MPPEH Just
steel scrap. Put into Roll off.
moving To Loc 15.

Location _____ Date 8 AUG 12 (CONT.)

Project / Client _____

1200 inspected MDAS container #1
for Tamper. No sign of Tamper
& Lock is still in place.
at location 15 Depth 30 ft
using magnet only getting some
metal steel debris all scrap.

ition _____ Date 9 AUG 12

ect / Client SJCA UXO 1

on site get PTSB/work brief ready all files on board + ready for NOSSA AUDIT.
conduct PTSB/work brief.
Need to move crane right away due to a large ship coming around the channel needing room.
- underway w/ Barge + crane to Loc 5. NOSSA on pier will pick him up when we tie up.
Fisher was checked at 0700 by Fuch + passed function test on test grid.
NOSSA + RPM on board for NOSSA AUDIT.
NOSSA AUDIT DEBRIEF.
① BUD THRIFT CANNOT sign his own 8HR HAZWOPER refresher as the PRESIDENT/INSTRUCTOR of B.I.T.E. company.

Location _____ Date 9 AUG 12

Project / Client _____

② MUST PRACTICE ORDNANCE AVOIDANCE WHEN PUTTING THE SPUDS DOWN FROM THE BARGE w/CRANE.
Doug Murray will email me the B.E.M chart to use in a water situation like this.
1100 - NOSSA + RPM Departed site.
We will take small boat + buoys to check soundings at Loc 1, 2, 3 + 4.
Nelson, Nate + Capt. Mike.
1145 finished soundings + Clapton brought a barge w/ rebarred excavator back to our location.
1310 got new location from Mike Skeen to replace loc. we cannot go to. Due to shallow water.
On Loc. 4 depth 10 ft.
1700 secured magnet + departed in tug to pier.

ation Date 8/10/12

ect / Client SJCA SITE UXO 1

on site get PTSP/work Brief Ready.
PTSP/work Brief To crew. Continue
w/anomaly investigation
OBSERVED OER check out fisher
on Test GRID. Fisher Passed function
Test. Turbidity curtain still intact +
in Place. Will be in Location
4 + 3A.
inspected metal Debris from
Location 4, NO MPPEH OR MEC.
All metal SCRAP.
moved To Location 3A.
inspected all metal from 3A
NO MEC/MPPEH JUST metal scrap.
5 Shut Down Due To High winds
Greater Than 25MPH. IAW
Crane safety Regs. After Doing
Research on MDAS (one piece)
found earlier. IT APPEARS
To BE A CAP for PROTECTING
A valve on A Oxegen cylinder
Bottle. Reclassified IT AS
METAL SCRAP.
0 Secure for The DAY.

Location Date 13 AUG 12

Project / Client SJCA UXO 1

0600 on site get H+S/PTSP
+ work Brief Ready.
0700 PTSP/work Brief To Crew.
Continue w/ anomaly
investigation. Start Back
up on Loc 3A To finish
+ move To 2A.
0730 OBSERVED OER check out
fisher + PASS function
Test on Test GRID.
1000 on Location AT 2A, finished
3A inspected all Debris from
3A + NO MEC/MPPEH only
metal Debris.
1430 Completed 2A NO MEC/
MPPEH found JUST metal
Debris cultural Debris.
moving To Location 1A.
QC'd all 2A Debris.
1600 ~~Tried To move~~
Tried To move crane
Barge To Location 1A
BUT TIDE WAS TOO LOW.
1700 Secure for The DAY.

Location

Date 8/14/12

Project / Client SJCA UXO 1

0600 on site get H+S/PTSP/work brief ready. Equipment loaded on ~~bar~~ Tug Boat.

0700 PTSP/work brief. Continue with Location 1A Anomaly investigation. Will finish up for the project today

0730 observe OER check out fisher metal detector on test grid. Passed function test.

0800 start up on 1A.

1300 Completed 1A no MEC or MPPEH was found. Found only metal scrap pieces. Heading back to SJCA pier.

1320 clean up material storage area.

OER Log 1172
ST Juliens Creek, VA
Sub to CH2M Hill
Contract # N62470-11-D-8012
CTO - WE11

07/29/12 thru 08/15/12

OER Tech III H.S. THRIFT Jr
Tech II Rick Fuciarelli
Tech II Matt Ferrell

07/29/12 Fri

0800 Went to St. Juliens Naval Annex.
Located WARF and Bldg 83 and 252. Talked with Gate Guards about procedures for getting Sand on board. Procedures are. Have a TWIC Card, go to Portsmouth Naval shipyard security for Vehicle inspection and Pass.

1100 Went to Norfolk (Sewells Point) to Granger to pick up Sand Bags, Seals and bag fillers. Wrong fillers, will return if not used.

1200 Continue shopping. Called CH2M Hill, Nelson Figeac and was told that we are still on. for me to meet him Monday on site and mob other two personnel to start on Tues.

1300 Secured 5 hrs
JHO

07/30/12 Mon

0600 on site meet with CH2M Hill, Figeac UXOSO/QC, Ted Dingle SUXOS and Project Engineer Nathan Price. Had site tour. Established where personnel will watch from shore to report approaching vessels that may pass within the EZ. Went to Demo Area, unable to get in on pinpoint site.

1100 Went to Crofton Marine Land to meet Pete (Boss), Mike (captain of Tug) and Mike (crane operator and hook over set up

1300 Return to St J. Laid out plastic to place Sand.

2.

1400 Secured 8 hrs

07/31/12 Tues

0600 on site with Figueroa, OER Tech 2's Fucerella and Ferrell. Having OER Read work plan, AHA, Accident Management plan, ESS and demo SOP.

0745 10 Ton of washed sand Arrives from Elbow Road Farms, Moyock NC

0800 Start filling sand bags.

1500 Complete filling 300 sand bags

1515 Crompton Barge Arrives. Get PFD's Issued and check out setup. Crompton Tested magnet by picking up Large shackles from deck. They placed 5 Ton beam over the side and retrieved same. Completed site 5

1630 Secured 10 hrs

08/01/12 Wed

0600 on site

0700 CH2M Hill safety Brief, Cortton safety Brief OER Haz Mat / Demo Safety Brief. Check Fished Location

0800 loaded equipment. Barge positioning T and deploying Turbidity boom.

1230 Start using Magnetic

1706 Secured. No accidents, No energetic

materials found 10 hrs

08/02/12 Thur

0600 on site
0700 Safety Brief. Checked Fisher locator
0730 Getting into position to sweep site 6
1145 Complete Site 6, no ordnance found moving to Site 7
1430 Scratch bottom with Excavator in site 8.
1500 Start sweep of Site 8
1700 Secured All personnel on site have 24 hr of site supervised training, 10 hr

08/03/12 Fri

0600 on site
0700 Safety Brief. checked Fisher locator
0715 hand barge and prepare to continue site 8.
1021 complete site 8 move to site 9
1105 start site 9.
1400 Complete Site 9. move to site 10
1615 Stopped and start cleanup
1645 went to shaw site to determine where Demo site is located
1700 secured 10 hr

41

08/06/12 Mon

0650 on site

0700 Safety Brief, check Fisher, inspect vehicle

0730 Continue site 10

0935 Complete site 10 start move to site 11.

1130 In position to start site 11

1200 Problems with excavator. Overflow sucking barge to pick it up, continue Site 11.

1530 Storm approaching. Securing all equipment

1700 Secure 10 hrs

[illegible]

08/07/12 Tue

0605 on site

0700 Safety Brief check Fisher.

0745 Commence Ops Site 11

0950 Complete site 11 start move to site 12

1025 Commence site 12, Had pump suction problem. Fixed same w/electrical Tape

1341 Complete Site 12 start move to site 13

1427 Move Complete start site 13

1630 Found nothing, start shut down

1705 Secured 10 hrs

[illegible]

08/08/12 Wed

0620 on site

0700 Safety Brief, check Fisher

0740 Continue site 13 with plate.

0815 Complete site 13 start move to site 14

0840 Start site 14 with plate
0925 Remove plate, use magnet only
1133 Complete site 14, start move to site 15
1630 Complete Site 15, start clean up.
1700 Secure 10 hrs
JPR

08/09/12 Thu
0600 On site
0700 Safety Brief, check Fisher, underway to move barge for ship traffic
0740 At North end of pier over site 5, NOSSA Audit
1230 complete NOSSA Audit, move to site 4
1307 Start site 4.
1620 start clean up
1700 Secure, 10hrs
JPR

08/10/12 Fri
0610 on site
0700 Safety Brief, check Fisher, under way to site 4
0730 AT site 4, start to recover cable anomaly
1010 Mag on deck
1015 Recovered 2nd piece of cable Total 120' cable
1020 Start move to site 3A.
1140 At site 3A, start mag.
1700 Secured, found cable at 3A. High winds stopped work
10 hrs JPR

6.

08/13/12 Mon

0700 Safety Brief, Check Fisher, Load Tug and head to Site 3A.

0745 At site 3A, Reposition

0922 Complete Site 3A start move to 2A

1100 Start site 2A.

1434 Complete Site 2A start move to 1A

1630 unable to get to 1A due to low Tide

1700 secured 10 hr

08/14/12 Tue

0620 on site

0700 Safety Briot, Check Fisher, Load Tug and head to site 1A

0807 on site 1A start magnet search

1150 Complete Site 1A Nothing found Start breakdown

1400 Sign 1348 for scrap, Start getting rid of sand and barrels.

1700 Secure 10 hrs

08/15/12 Wed

Demob.

TEMP - HI - 93° LOW 82°
SUNNY, HUMID

MONDAY
30 JUL 12

TED DINGLE
NELSON FIGUEIRAC
BUD TARRANT
NATE PRICE (ARR LATER)

0700 PTSP (NELSON)

0800 - R'CED COPIES OF SITE WP/ESS; REVIEW APP

DISCUSS MATERIAL NEEDS; DONATE PLASTIC COVER FOR SAND PILE FOR LATER DELIVERY

1000 - TOUR BASE, DEMO SITE; VISIT CROFTON

1600 OFFICE; MEET PARTIAL CREW; OBSERVE BARGE, CRANE, ROLL-OFF SET-UP + TUG BUNNY "C"; DRIVE/FAM W/ RTE TO HOSP. 8 HRS

* ADMIN/FAM DAY

NEED - BINOCS

SAND DELIVERED; DUMPED ON MAT.

NO FURTHER ENTRIES

TRDuy

TEMP 95°F HI
79°F LO
P SUNNY
HUMID

TUESDAY
31 JUL 12

PERS: NELSON FIGUEIRAC
BUD TARRANT
TED DINGLE
MATT
RICK FUCIARELLI
NATE PRICE

0700 - PTSP (NELSON)

0800 FILL SAND BAGS

RUN TO AGVIQ FOR 55 GAL CONTAINERS FOR MAPEH/MDAS CONTAINMENT

REVIEW DOCS; INSTRUCTIONS BY CROFTON

SITE TOUR, MEET WORK CREW AT PROPOSED DEMO SITE; HOSPITAL RTE FAM FOR WHOLE TEAM

1600 - BARGE CRANE/CROFTON CREW AT PIERS.

1700 - LV SITE FOL, VERIFICATIONS OF DEMO SITES.

NO FURTHER ENTRIES

TRDuy

TEMP - 85° HI
74° LO
P. SUNNY
PM POSS. T.-STORM.

WEDNESDAY
01 AUG 12

FIRST DAY OF CRANE/MAG OPS - #5 LOCATION

0700 - PTSP - ARRS: N. FEGER (C); T. DENG (W) (SUHOS) 4X050
BUD TIARFET (OER); NATE PRICE (FTC)
MATT FERRERO (OER); RICK FUCIARELLA (OER)
BOAT CREW: CAPT. MIKE
RIGGER - DANA CRANE OP - M. TIRE
DECK - WALLY PITTMAN SMITH

0830 - IVS FOR FESHER MAG
SEED #1 PLAC - 3"-4" DEEP; HORIZ / WNW
SEED #2 PLAC - 6" DEEP; HORIZ, NNE (N40°)

0915 - LOAD GEAR ON BARGE + UNDERWAY
LET BARGE SLIDE NORTH TO POSIT #5

1000 LAUNCH SMALL BOAT TO DEPLOY
SILT GUARD - SCREWS CATCH/DAMAGE
SILT GUARD

1120 - USING TUG BUNNY "C", MOVE BARGE
DOWNSTREAM (NORTH) TOWARDS POSIT #5.
SILT SCREEN SEPARATES DUE TO
STRONG CURRENT (TIDE COMPOUNDED BY
ADDITIONAL FORCE FROM PROP WASH
IN SHALLOWER WATER TOWARD N. PIERS
* ARR. OF PM, MR SAFETY, REC TRAVERS
(PHC) TO OBSERVE OPS (TIME APPROX)
CDR HARCROW REP, NAVFAC CRANE INSP.

~1145 ON POSIT #5, SILT SCREEN REPAIRED,
AND HOLDING - DEPTH ~20 FT

1154 - 1ST LIFT, NATE TAKES SAMPLE OF
SEDIMENT, NELSON QC's w/ PDA FOR
POSIT ACCURACY - NEG ANOMALY REC'Y

1205 - 2nd LIFT - scrap steel ~2 lbs

1218 - 3rd LIFT - ~~[illegible]~~ NEG

1221 - 4th LIFT - small steel scrap

1231 - LIGHTNING HOLD
1235, 1236, 1239, 1242, 1256, 1258, 1300, 1305, 1308
1310

1340 - CANX HOLD

1342 - 5th LIFT - small shackle

1345 - 6th LIFT - small scrap

1356 - 7th LIFT - small scrap

1420 - 8th LIFT - NEG

1456 - 9th LIFT - NEG

THURSDAY
02 AUG 12 LO - 76°F
PERS - SEE PTSP SIGN-IN HI - 86°F
RIC TRAVERS ON BOARD

0700 - IVS CHECK OUT FOR FLESHER MAG
PTSP (NELSON)
0800 - MOVE FROM POSIT #5 → #6 (22' D)
NELSON - CHECK GAS W/PDA
0810 - B. THREET RAKES BTM W/ EXCAVATOR
0825 - LIFT #1 W/ PENETRATOR PLATE
CABLE, STEEL (~50 lbs) RO STOCK (~8"x8")
2'x3' LONG PLATE, cable + line.
0900 - LIFT #2 - small steel scrap
0915 - " #3 - ~3' L
0930 - " #4 - small metal debris
0950 - " #5 - " " "
1000 - Bud/EXCAVATOR - BTM RAKE
1010 - LIFT #6 - STEEL PLATE LEFT CLUTCH
1100 MOVE FROM POSIT #6 → #7
1110 ON POSIT #7 - DEPTH ~26'
1120 EXCAVATOR SCRATCH/RAKE BTM (B. THREET)
1121 NATE SAMPLE; NELSON PDA QC OF POSIT
LIFT #1 - SMALL PIECE OF WIRE.
DELAY - CREW WORK IN EXCLUSION ZONE
1251 - EXCAVATOR BTM RAKE (BTM RAKE)
- SUXOS TAKE RIC TRAVERS TO OFF-BASE
MEET PARTNERING GROUP ON AZER.

THURSDAY
02 AUG 12
- OBSERVATIONAL LAPSE -
1328 - FINAL LIFT AT POSIT #7
1420 - POSIT 7 COMPLETE
1435 - MOVE FROM POSIT #7 → #8 (~23' D)
1455 - (B. THREET) EXCAVATOR BTM SCRATCH
1503 - END RAKING
1512 - LIFT #1 - LG SHACKLE/CRANE HOOK/ANCHOR
CHAIN LINK
1530 - LIFT #2 - NATE TAKES SAMPLE
NELSON. QC POSIT W/ PDA.
ROUND STEEL PLATE, HEAVY STOCK
1558 - LIFT #3 - NEG
1620 - LIFT #4 - NEG
1644 - HORST MAG ON BOARD
1700 - SECURE

NO FURTHER ENTRIES

FRIDAY

LO 78°F
HI 93°F

03 AUG 12

PERS - SEE SAFETY LOG

0700 - PTSA / OBSERVE FISHER MAG QC
0821 - POSIT #8 (CONT) FROM YESTERDAY
0826 - LIFT #5 - STEEL DEBRIS/SHACKLES/BOLTS (150 lbs)
0836 - LIFT #6 - NEG
0851 - LIFT #7 - ~30 lbs SCRAP/BOLTS/CLEVIS
0910 - LIFT #8 - NEG (50% AREA COVERAGE)
0915 - LIFT #9 - NUTS/BOLTS ~3-4 lbs
0920 - LIFT #10 - ~15 lbs DEBRIS
0925 - LIFT #11 - ~20 lbs (STEEL WEDGE)
0936 - LIFT #12 - NEG
0950 - LIFT #13 - 150 lbs VARIOUS TYPES SCRAP
1011 - LIFT #14 - NEG
1020 - LIFT #15 ~10 lbs DEBRIS
FINAL ~~[illegible]~~ LIFT
MOVE ↓ TO POSIT #9 (~27'D)
HOPE WILSON, CRON, ON BOARD TO OBSERVE
1045 - RAKE W/ EXCAVATOR (B. THRIFT)
1100 - LIFT #1 - NEG; NATE TAKES SAMPLE
1111 - LIFT #2 - SMALL DEBRIS
1114 - LIFT #3 - NEG
1119 - WASH, DRAIN BLUE SCREENING ROLL-ON
1122 - LIFT #4 - NEG
1126 - LIFT #5 - NEG
1130 - LIFT #6 - 1'-2'L REBAR

FRIDAY

03 AUG 12 (CONT)
1141 - LIFT #7 - NEG
1149 - LIFT #8 - SMALL DEBRIS, MOTORCYCLE CHAIN
1155 - LIFT #9 - NEG
1205 - LIFT #10 - NEG
1210 - " #11 - NEG
1215 - " #12 - NEG
1220 - " #13 - NEG
1225 - " #14 - NEG
1230 - " #15 - NEG
1235 - " #16 - NEG
1240 - MAGNET ON DECK FOR TEST OF ATTRACTION POWER - PASS
1251 - LIFT #17 - NEG
1255 - " #18 - ANGLE IRON ≈10/15 lbs
1304 - " #19 - ANGLE IRON ≈ 10 lbs
1311 - " #20 - NEG; H. WILSON DEPARTS
1320 - QC PDA CHECK AT CORNER TRANSECT OF BARGES - POSITIVE MATCH FOR COORDS.
1340 - LIFT #21 - SMALL METAL FRAGMENTS
1350 - LIFT #22 - NEG - FINAL LIFT
1408 MOVE ↓ TO POSIT #10 (23'-25'D)

1435 MOORED PIERSIDE; USCG VESSEL PASSES AT DANGEROUS SPEED / HI WAKE
CAPT. MIKE NOTIFIES CG CHAIN OF COMMAND

FRIDAY
03AUG12 (CONT)
POSIT 10 (CONT)

1510 → 1534 - LIFT #1 - SMALL DEBRIS / NATE SAMPLE
1546 - LIFT #2 - SMALL DEBRIS
1550 - GEAR WASH DOWN / CEASE OPS.
1600 - VISIT DEMO SITE (EXTED IN WP)
DISCUSS W/ TERRAFORMING CREW ABOUT COOPERATION FOR DEMOLITION OPS ARE REQUIRED; SURVEY AREA AND ID DEMO SPOT WITH PDA/GPS.
1645 - DEPART BASE

* NOTE - AT H. WILSON'S (CH2M) DEPARTURE, BARGE WAS AT 2'-3' DISTANCE FROM PIER BUNNY "C" PUSHED BARGE UNTIL TOUCHING PIER - TO SUBMIT SBO REGARDING SAFETY OF BARGE TO PIER BOARDING / DEPARTURE. DISCUSSED PITFALLS OF GANG WAY USAGE VS. BARGE/PIER ABUTMENT.

NO FURTHER ENTRIES
[illegible]

LO - 75°F
HI - 88°F
MORN - CLEAR
PM - T-STORMS

MONDAY
6AUG12

0630 - ON SITE PERS: SEE PTSP SIGN
0700 - PTSP - CONTINUE AT POSIT #10
DISCUSSED: - LIGHTNING DISTANCES, PROTOCOL, INFOSOURCES
IVS - MAG QC
- WIND LIMITS (25 mph)
- BOARDING HAZARDS
- USCG SPEED VIOLATIONS
- NOSSA INSPECTION CONCERNS
BRAVO FLAGS, CERTS. PROOF
0815 - CONTINUE AT POSIT #10 (60% COMP)
0820 - LIFT #3 - METAL CYL. CAP, DEBRIS
* NOTE - CRANE LIFTS LESS IN NUMBER - TRYING EXTENDING AREA COVERAGE PER LIFT.
0840 - LIFT #4 - SMALL METAL SCRAP.
0900 - LIFT #5 - CLEVIS, ANGLE IRON & SCRAP ~10 lbs
0930 - LIFT #6 - 2"x4" 4"x8" STEEL PLATE, PIER BOLTS ~10 lbs

MOVE TO POSIT #11 (25'D)

1114 - EXCAVATOR RACE OF BTM - (THREE)
1115 - CREW (DANA [RIGGER] AND WALLY [DECK]
NOTICE HYDRAULIC DRIP ON RT. HOSE JOINT OF EXCAVATOR BOOM - DANA ARRANGES FOR REPAIR OFF-SITE TO ELIMINATE SPILL RISK.

MONDAY
6 AUG 12 (CONT.)

1130 - LIFT #1 - PIPE (~2½), DOOR KNOB PARTIAL PORTHOLE COVER, PRESSURIZED BOTTLE (LG) COVER FOR VALVE, 8' METAL POLE LENGTH.

1210 - LIFT #2 - 2½" DIA. PIPE 8' L.

1230 - RESUME MAGNET PROPS WITHOUT USE OF EXCAVATOR

1300 - LIFT #3 - 10 lbs STEEL SCRAP AND ALLEN BOLTS

1322 - LIFT #4 - 4' L PIPE, VARIOUS TOOLS ~30 lbs TOTAL

1355 - LIFT #5 - GAS CYLINDER CAP, BAN SAW COVER + SCRAP

1441 - PLATE STEEL SCRAP - LIFT #6

1452 - TRANSPORT BARGE FOR EXCAVATOR TIES UP TO CRANE BARGE.

1510 - STRONG T-STORM APPROACH EXCAVATOR SECURED TO TRANSFER BARGE

1545 - DEPART SITE DUE TO WEATHER

NO FURTHER ENTRIES

TUESDAY
7 AUG 12

LO - 76°F
HI - 87°F
PM POSS T-STORM

0630 - ON SITE

0700 - PTSP; PERSONNEL SEE LOST/MAG TEST OBSERVE IUS MAG FISHER QC

0800 - LIFT #7 - LG. ANGLE IRON SCRAP, HATCH COVER ~200 lbs

0845 - LIFT #8 - PLATE VICE GRIPPER & SCRAP ~50 lbs

0855 → 0920 - PORTABLE PUMP LOSES SUCTION REPAIRED w/ DUCK TAPE TO RESTORE SEAL.

0936 - G. WILLIAMS BALIRON BOARD AS EXTRA DECK TO ASSIST MOVE TO POSIT #12. - (40'D)

1008 - MOVE + ANCHOR (SPUD)

NOTE: NO SHIP TRAFFIC SCHED FOR NEXT 2 DAYS

1010 - QC CHECKS PDA/GPS

1023 - NATE SAMPLES BTM. MUD.

1040 - LIFT #1 - NEG

1053 - LIFT #2 - NEG

1116 - LIFT #3 - NEG

1139 - LIFT #4 - NEG

1230 - LIFT #5 - NEG

1235 - LIFT #6 - NEG

1300 - LIFT #7 - NEG

1330 - LIFT #8 - NEG

1340 - LIFT #9; 2 pcs SCRAP ~2.5"x3" sq

MOVE ↓ TO

1418 POSIT #13 (~40'D) QC PDA CHECK

1431 - LIFT #1 - NEG; NATE SAMPLES

TUES
7 AUG 12 (CONT)

1457 - LIFT #2 - NEG

1502 - LIFT #3 - NEG

NOTE: MAGNET SHOWED EVIDENCE OF SLIDING DOWN SLOPE OR HOLES INITIAL SHALLOW ~25'-30' TO DEEPEST OF 35'-40'.

1533 - LIFT #4 - NEG

1600 - LIFT #5 - NEG

1635 - LIFT #6 - NEG

1700 - DEPART BASE

NO FURTHER ENTRIES
JR Quigl

LO - 76°F
HI - 83°F
PM T-STORMS
+RAIN

WEDNESDAY
8 AUG 12

NOTE - EXCAVATOR OFF-SITE
- MAGNET OVER HEATING NOTICED PRIOR DAY. 60/40% ON-OFF CYCLE TO BE FOLLOWED FOR PREVENTION
- PRE-SAIL CHK LIST SUPERCEDED BY BOAT LOG PER C.G. INST. #13.

0700 - PTSP / OPS DISCUSSION / FISHER QC (EVS)

0715 - ON BOARD BARGE; SET UP MR AREA

0740 - QC & MAGNET

0745 - LIFT #7 - SMALL (2"x2") SQ OF SHEET METAL ON PENETRATOR PLATE
POSIT #13 COMPLETE

0800 - MOVE SCRAP OUT OF SCREENING ROLL-OFF TO RETENTION ROLL-ON CONTAINER. FLUSH OUT SCREENING ROLL-OFF PER WORK PLAN

0830 - COMPLETE ROLL-OFF MAINTENANCE
MOVE TO POSIT #14
POSIT ON SLOPE (25' → 35'D)

0845 - TIED UP AT PIER POSIT #14

0850 - LIFT #1 - SMALL WIRE; NATE SAMPLES W/ PENETRATOR PLATE
SLOPE FM 25' → 35'D

0908 - LIFT #2 (PENETRATOR PLATE)

BAUG12 (CONT.

LIFT #2 - SMALL STEEL SCRAP ATTACHED TO TINES OF PENETRATOR PLATE, NOT PLATE - ~12" PIER BOLT w/ WASHERS - PENETRATOR PLATE - PREVENT MAGNET SLIDE DOWN SLOPE.

0936 - MAGNET ONLY; 18" L BANDING MATERIAL ON TOP OF MAGNET (LIFT #3)

0956 - LIFT #4 - SOLID STEEL BARSTOCK ~24" L x 3/4" DIA + AC. WIRE 7" L ~10 lbs TOTAL

1010 - LIFT #5; SLAG SCRAP, SPIKE + BANDING WIRE ~5 lbs

1018 - LIFT #6 - PIER BOLT

1035 - LIFT #7 - SPIKE 10" x 1/4" DIA

1051 - LIFT #8 - 12" L x 3/4" DIA PIPE

1106 - LIFT #9 - BOLT + BARSTOCK

1120 - LIFT #10 - SMALL SCRAP STEEL + FLAT PLATE

1130 - POSIT #14 COMPLETE

1136 MOVE TO POSIT #15 (D-35'-40')

1220 ANCHORED AT POSIT #15; QC CHECK W/ POA FOR GPS COORDS.

BAUG12 (CONT)

1235 - LIFT #1 NEG; RETRY OF LIFT, SMALL (1" DIA STEEL FLAKE) NATE SAMPLES.

1250 - LIFT #2 - NEG

1257 - LIFT #3 - NEG

1311 - LIFT #4 - NEG

1319 - LIFT #5 - NEG

1327 - LIFT #6 - NEG

BREAK - MAGNET MAINTENANCE ON DECK - WASH MUD OFF TOP FOR QC WHILE MAGNET HOT - NEG FOR 35-40% DONE ANOMALY STEEL

5' DELAY FOR MAG COOL-DOWN

1346 - LIFT #7 - NEG

1355 - LIFT #8 - NEG

1400 - LIFT #9 - NEG

1411 - LIFT #10 - NEG

1421 - LIFT #11 - NEG

1442 - LIFT #12 - NEG

1455 - LIFT #13 - NEG

1506 - LIFT #14 - NEG (80%)

1515 - LIFT #15 - NEG

1545 - LIFT #16 - NEG

1554 - LIFT #17 - NEG

1607 - LIFT #18 - NEG

1614 - LIFT #19 - NEG - #15 COMPLETE

1700 - DEBART BASE

NO FURTHER ENTRIES

ZR

THURS
9 AUG 12

HI - 90°-92°F
LO - 80°F
AM - PTCLOUDY
PM - CLEAR

0700 - FISHER MAG CHK
PTSP (NERSON)

0710 - MOVING CRANE FM POSIT #15 TO MAKE WAY FOR SHIPS' TRAFFIC MOVE TO POSIT #5.

0745 - NOSSA (DOUG MURRAY) ARR. FOR INSPECTION - SEE QC LOG

0750 - 'CLIPPER LIS' PASSES - MOVE TRAFFIC TO PASS 1 3/4 HR LATER.

0820 - NOSSA REP & BASE ESO ON BOARD BARGE FOR INSPECTION

1000 - MAG TEST - GOING HOT

1002 - LIFT #1 - PASS SM. WIRE → ROPE (NEG)

1010 - MAG ON FOR TOP WASH - NEG ON TOP & BTM. DEMONSTRATION FOR NOSSA INSPECTION

1030 - NOSSA DEBRIEF / 2 UNSATS (SEE QC LOG / DAILY)

1130 - LAUNCH SM. BOAT TO INVESTIGATE DEPTH AT POSITS 1 THRU 4 ~~AT~~ NORTH PIER AREA.

1300 - LAUNCH RETURNS - TIDE/WIND UNFAVORABLE FOR ADEQUATE DEPTH

1 → 3. FLOATS MARKING POSITS IN PLACE

THURS
9 AUG 12

1237 - REPAIRED EXCAVATOR RETURNED TO BARGE, HOISTED ABOARD AND SECURED.

1300 - MANEUVER TO POSIT #4

1301 - MAGNET CHECK; POSIT GPS CHECK

1305 - LIFT #1 - NEG NATE SAMPLES

1307 #2 (1) CAN (BEER/PBR) + BOLT 3/8" DIA X 6"

1322 - LIFT #3 - NEG

1340 - LIFT #4 - CABLE - TIED TO CLEAT

1342 - OPS SUSPENDED DUE TO 30-40 mph WIND

1605 - STAND BY FOR WIND - INCREASING WINDS PREVENTED RESUMPTION OF OPERATIONS

1620 - WINDS ABATED - OPS SUSPENDED DUE TO FATIGUE AND UNCERTAIN AMT OF CABLE.

NO FURTHER ENTRIES

JR Ouellette

FRIDAY
10 AUG 12

HI - 88°F
LO - 82°F

HUMID, HOT
CLEAR

0705 - PTSP / TRANSIT TO BARGE
0720 - LIFT OUT 40' OF 1" DIA
CABLE FROM PREVIOUS DAY
USING CRANE HOOK
0750 - MAG HOT - QC GPS + MAG
STRENGTH -
0755 - LIFT #1 - NATE, SAMPLE
0800 - LIFT #1 - NEG
0805 - LIFT #2 - NEG
BREAKFAST BREAK w/ CREW
0855 - LIFT #3 - 4" x 6" METAL PLATE
70% OF PARTIAL GRID COMPLETE
REPOSITIONING OF BARGE NEEDED TO
ACCESS GRID REMAINDER
0900 - LIFT #4 - NEG
SELF CULTIVATION SNAGGED
0910 - LIFT #5 - WINDS PICKING UP
0920 - LIFT #6 - NEG
0925 - MAGNET GOES HOT
0934 - LIFT #7 - NEG
0938 - MAG COLD
0942 - MAG HOT
0945 - LIFT #8 - SMALL WIRE

FRIDAY
10 AUG 12 (CONT)
0950 - MAG HOT - LIFT #9
0955 - 1 PC CABLE - TIED TO CLEAT
FINAL LIFT FOR #4
1010 - MAG ON DECK FOR WASH
1014 - CABLE LIFTED ON DECK USING HOOK
~70' LONG 1" DIA
POSITS 1, 2, 3 TOO SHALLOW; ALTERNATE
POSITS 1A, 2A, 3A MARKED
DIFFICULT MANEUVRE DUE TO WIND
MOVE TO POSIT 3A (8'-9' D)
1157 - BEGIN LIFTS ON PARTIAL GRID
MAG HOT
1203 - LIFT #1 - NEG; NATE SAMPLES
(NO COORDS IN PDA)
NO QC CHECK ON COORD.; HARD BTM
REQUIRES EXCAVATOR RAKE
1220 - FINISH RAKING
1227 - LIFT #2 - 2" x 3" METAL PC
1240 - LIFT #3 - NEG
1248 - LIFT #4 - NEG
1254 - LIFT #5 - SMALL METAL DEBRIS
1305 - LIFT #6 - NEG
1320 - LIFT #7 - NEG
1330 - LIFT #8 - NEG
1345 - HI WINDS - OPS SUSPENDED
1600 - WINDS DID NOT ABATE
1615 - RETURN TO PIER (NFC) / EOD

MONDAY
13 AUG 12

LO - 75°F
HI - 88°-90°F
SUNNY/POSS PM RAIN

0700 - DISP/TRAVEL ON BUNNY "C" TO BARGE - SWING BARGE IN ORDER TO COMPLETE GRID
0758 - MAG TEST 26,000 g
0803 - LIFT #1
0807 - " " - 3'L STEEL ROD ~50lbs
0817 - LIFT #2 - STD WELDING ROD
0825 - LIFT #3
0833 - " " - NEG/RETRY - STEEL ROD ~2'L
0845 LIFT #4 - 1 PC METAL ~2 lbs
0904 LIFT #5 - NEG
0917 LIFT #6 - NEG; 3A COMPLETE

MOVE TO POSIT 2A (~8'D + 10'D)
TEST MAG - 26,000 g (SEE BELOW)
0950 - SWXOS(CH_2), UXOQCS, OCR FTL QA
SCRAP IN #2 ROLL-OFF
1030 - MAG TEST - 26,000 g
1040 - LIFT #1 - NEG (NATE ON TUG - SAMPLE DELAY)
1050 - EXCAVATOR BTM RAKE (B. TARBIT
1105 - HALT RAKE
1106 - LIFT #2 1115 - NEG
1126 - LIFT #3 1132 - NEG
1138 - LIFT #4 1145 - NEG

MONDAY
13 AUG 12 (CONT)
1155 - LIFT #5 1200 - NEG
1210 - LIFT #6 1220 - NEG/NATE TAKE SAMPLE
1231 - LIFT #7 1234 - NEG
1240 - LIFT #8 1244 - NEG
1330 - LIFT #9 1336 - 1" SQ PC METAL
1340 - LIFT #10 1347 - NEG
1355 - LIFT #11 1400 - NEG
1405 - LIFT #12 1410 - 2" SQ PC METAL
1415 - LIFT #13 1420 - NEG
1430 - POSIT 2A COMPLETE
WASH OUT SETTING ROLL-OFF

1447 MOVE TO 1A

1500 BARGE DIFFICULT TO MANEUVRE DUE TO WIND + SHALLOW WATER
1530 - RETURN TO RIVERSIDE - TO COMPLETE POSIT 1A NEXT MORNING
1630 - DEPART BASE

NO FURTHER ENTRY

TUESDAY
14AUG12

LOW - 75°F
HI - 85°F
CLEAR, CALM

0700 DEPART PIER
0715 - ARRIVE BARGE; SET UP EXCAVATION AREA/OBSERVATION POSTS
0720 - REPOSITION BARGE TO ANOMALY POSIT 1A; QC CHECK FOR COORD W/ GARMIN GPS MAP 62ST ~10' DEPTH; 185 0332636/4072450 SMALL HYDRAULIC LEAK AT HOSE CONNECTION - CORRECTED BY TIGHTENING CONNECTION.
0807 - MAG TEST - 23,000 g.
0824 - LIFT #1 - NEG - NATE TAKES SAMPLE
0835 - LIFT #2 - NEG
0840 - EXCAVATOR RAKES BIM (B. THRIFT)
0851 - LIFT #3 - NEG; ~65% COMPLETE
0901 - LIFT #4 - NEG
0931 - LIFT #5 - NEG
1013 - LIFT #6 - NEG
1032 - LIFT #7 - NEG
1037 - EXCAVATOR RAKE (B. THRIFT)
1046 - LIFT #8; NEG - 100% COMPLETE
MIKE SMITH (CRANE OPERATOR) RAKES ONE MORE TIME TO

TUESDAY
14AUG12 (CONT)
FREE POSS. LG. ANOMALY (FELT SLIGHT PULL ON MAGNET FROM LAST LIFT)
1100 - RAKED TO MAX DEPTH POSS FOR EXCAVATOR
1110 - NEG. RESULTS.
1200 - RETURN TO PIER FOLLOWING FINAL WASH DOWN/CLEAN UP OF BARGE AND ROLL-OFFS - WXOGES ARR. FOR SCRAP DISPOSITION
1300 - 1500 - REST OF TEAM DISPOSES OF SAND STOCKPILED IN CASE OF DEMO, PLACED ON PALETTES, TARPED BY HARBOR MASTER FOR FLOODING PREVENTION ON PIER / 55 GAL DRUMS RETURNED BY NELSON; SAND PRE-POSITIONING AREA RETURNED TO ORIGINAL CONDITION. OP COMPLETE

NO FURTHER ENTRIES
JRDyl 1600

Appendix C
Data Validation Summary Reports

MEMORANDUM CH2MHILL

Data Validation Summary

St. Juliens Creek WE10 UXO-01

TO: Megan Morrison/WDC

Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: October 11, 2012

Introduction

The following data validation report discusses the data validation process and findings for Empirical Laboratories for SDG 1208046.

Samples were analyzed using the following analytical methods:

- 6850 Perchlorate
- 353.2 Nitrocellulose
- SW8330 Nitroguanidine
- SW8330A Explosives

The samples included in this SDG are listed in the table below.

Sample Name	Matrix
SJUXO1-SD005-0003	Soil
SJUXO1-SD006-0003	Soil
SJUXO1-SD007-0004	Soil
SJUXO1-SD008-0004	Soil
SJUXO1-SD009-0005	Soil
SJUXO1-SD010-0004	Soil
SJUXO1-SD011-0004	Soil
SJUXO1-EB-080112	Water
SJUXO1-EB-080212	Water
SJUXO1-EB-080312	Water
SJUXO1-EB-080612	Water

Sample Name	Matrix
SJUXO1-SD010P-0004	Soil

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: Sampling and Analysis Plan Anomaly Acquisition and Investigation Area UXO 1, St. Juliens Creek Annex, Chesapeake, Virginia (June 2012) Contract No. N62470-08-D-1000 CTO-WE10, and Region III Modifications for Organic Data Review (EPA 1994), as applicable:

- Data Completeness
- Technical Holding Times
- Instrument Tuning criteria
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Laboratory Control Samples
- Matrix Spike Recoveries
- Column Confirmation
- Surrogate Recoveries
- Field Duplicates
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 8/1/12 through 8/6/12. Samples were received at the laboratory on 8/7/12. All sample preparation analysis was performed within holding time requirements.

Blanks

Several compounds were detected in the equipment blanks and method blank as listed below. Affected data are summarized in **Attachment 1**.

Blank ID	Compound	Conc.	Units
SJUXO1-EB-080112	1,3,5-Trinitrobenzene	0.343	UG_L
SJUXO1-EB-080112	2-Nitrotoluene	1.29	UG_L
SJUXO1-EB-080112	4-Amino-2,6-dinitrotoluene	0.235	UG_L
SJUXO1-EB-080112	RDX	0.876	UG_L
SJUXO1-EB-080212	1,3-Dinitrobenzene	0.102	UG_L
SJUXO1-EB-080212	2-Nitrotoluene	0.0791	UG_L
SJUXO1-EB-080212	3-Nitrotoluene	0.0825	UG_L
SJUXO1-EB-080212	RDX	0.402	UG_L
SJUXO1-EB-080312	1,3,5-Trinitrobenzene	0.335	UG_L
SJUXO1-EB-080312	2,4-Dinitrotoluene	0.482	UG_L
SJUXO1-EB-080312	2-Amino-4,6-dinitrotoluene	0.290	UG_L
SJUXO1-EB-080312	2-Nitrotoluene	1.22	UG_L
SJUXO1-EB-080312	3-Nitrotoluene	1.24	UG_L
SJUXO1-EB-080312	Nitroglycerin	0.301	UG_L
SJUXO1-EB-080312	RDX	0.865	UG_L
SJUXO1-EB-080312	Tetryl	0.101	UG_L
SJUXO1-EB-080312	1,3-Dinitrobenzene	0.121	UG_L
SJUXO1-EB-080312	2,6-Dinitrotoluene	0.107	UG_L
SJUXO1-EB-080612	2,4-Dinitrotoluene	0.453	UG_L
SJUXO1-EB-080612	4-Amino-2,6-dinitrotoluene	0.429	UG_L
SJUXO1-EB-080612	Nitroglycerin	0.208	UG_L
SJUXO1-EB-080612	RDX	0.831	UG_L
SJUXO1-EB-080612	Tetryl	0.106	UG_L
SJUXO1-EB-080612	2,6-Dinitrotoluene	0.108	UG_L
SJUXO1-EB-080612	2-Nitrotoluene	0.477	UG_L
2H06015-BLK1	RDX	0.228	UG_L

Column Confirmation

Column confirmation criteria was not met for several compounds in the samples listed below. Affected data are summarized in **Attachment 1**.

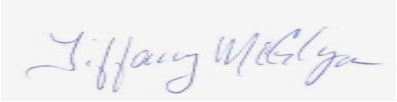
Sample ID
SJUXO1-SD008-0004
SJUXO1-SD009-0005
SJUXO1-SD010-0004
SJUXO1-EB-080112
SJUXO1-EB-080212
SJUXO1-EB-080312
SJUXO1-EB-080612

Conclusion

These data can be used in the project decision-making process as qualified by the data quality evaluation process.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation

Value	Description
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

St. Juliens WE10-UXO-01
Attachment 1 Change Qual. Table
SDG 1208046

Sample ID	Compound	Q Flag	Qual Code
SJUXO1-SD008-0004	2,4,6-Trinitrotoluene	J	2C
SJUXO1-SD008-0004	2,4-Dinitrotoluene	B	EBL
SJUXO1-SD008-0004	3-Nitrotoluene	B	EBL
SJUXO1-SD008-0004	1,3-Dinitrobenzene	B	EBL
SJUXO1-SD008-0004	2-Amino-4,6-dinitrotoluene	B	EBL
SJUXO1-SD009-0005	1,3-Dinitrobenzene	B	EBL
SJUXO1-SD009-0005	2,4,6-Trinitrotoluene	J	2C
SJUXO1-SD009-0005	2,4-Dinitrotoluene	B	EBL
SJUXO1-SD009-0005	2,6-Dinitrotoluene	B	EBL
SJUXO1-SD009-0005	2-Amino-4,6-dinitrotoluene	B	EBL
SJUXO1-SD009-0005	3-Nitrotoluene	B	EBL
SJUXO1-SD010-0004	1,3-Dinitrobenzene	B	EBL
SJUXO1-SD010-0004	2,4,6-Trinitrotoluene	J	2C
SJUXO1-SD010-0004	2,4-Dinitrotoluene	B	EBL
SJUXO1-EB-080112	1,3,5-Trinitrobenzene	J	2C
SJUXO1-EB-080112	2-Nitrotoluene	J	2C
SJUXO1-EB-080112	4-Amino-2,6-dinitrotoluene	J	2C
SJUXO1-EB-080112	RDX	B	MBL
SJUXO1-EB-080212	1,3-Dinitrobenzene	J	2C
SJUXO1-EB-080212	3-Nitrotoluene	J	2C
SJUXO1-EB-080212	RDX	B	MBL
SJUXO1-EB-080312	2,4-Dinitrotoluene	J	2C
SJUXO1-EB-080312	2-Amino-4,6-dinitrotoluene	J	2C
SJUXO1-EB-080312	2-Nitrotoluene	J	2C
SJUXO1-EB-080312	Nitroglycerin	J	2C
SJUXO1-EB-080312	RDX	B	MBL
SJUXO1-EB-080312	Tetryl	J	2C
SJUXO1-EB-080312	1,3,5-Trinitrobenzene	J	2C
SJUXO1-EB-080312	1,3-Dinitrobenzene	J	2C
SJUXO1-EB-080312	2,6-Dinitrotoluene	J	2C
SJUXO1-EB-080612	2,4-Dinitrotoluene	J	2C
SJUXO1-EB-080612	Nitroglycerin	J	2C
SJUXO1-EB-080612	RDX	B	MBL
SJUXO1-EB-080612	Tetryl	J	2C
SJUXO1-EB-080612	2,6-Dinitrotoluene	J	2C
SJUXO1-EB-080612	2-Nitrotoluene	J	2C
SJUXO1-SD010P-0004	1,3-Dinitrobenzene	B	EBL

MEMORANDUM CH2MHILL

Data Validation Summary

St. Juliens Creek WE10 UXO-01

TO: Megan Morrison/WDC

Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: October 11, 2012

Introduction

The following data validation report discusses the data validation process and findings for Empirical Laboratories for SDG 1208107.

Samples were analyzed using the following analytical methods:

- 6850 Perchlorate
- 353.2 Nitrocellulose
- SW8330 Nitroguanidine
- SW8330A Explosives

The samples included in this SDG are listed in the table below.

Sample Name	Matrix
SJUXO1-SD012-0004	Soil
SJUXO1-SD013-0004	Soil
SJUXO1-SD014-0003	Soil
SJUXO1-SD015-0004	Soil
SJUXO1-SD004-0004	Soil
SJUXO1-SD003A-0004	Soil
SJUXO1-SD003AP-0004	Soil
SJUXO1-SD002A-0004	Soil
SJUXO1-SD001A-0004	Soil
SJUXO1-EB-080812	Water
SJUXO1-EB-081012	Water

Sample Name	Matrix
SJUXO1-EB-081412	Water

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: Sampling and Analysis Plan Anomaly Acquisition and Investigation Area UXO 1, St. Juliens Creek Annex, Chesapeake, Virginia (June 2012) Contract No. N62470-08-D-1000 CTO-WE10, and Region III Modifications for Organic Data Review (EPA 1994), as applicable:

- Data Completeness
- Technical Holding Times
- Instrument Tuning criteria
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Laboratory Control Samples
- Matrix Spike Recoveries
- Column Confirmation
- Surrogate Recoveries
- Field Duplicates
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 8/7/12 through 8/14/12. Samples were received at the laboratory on 8/15/12. All sample preparation analysis was performed within holding time requirements with the exception of SJUXO1-EB-080812 for explosives. Affected data are summarized in **Attachment 1**.

Matrix Spike/Spike Duplicate

Nitroguanidine was below the lower limits in the MS/MSD for spiked sample SJUXO1-EB-080812. Affected data are summarized in **Attachment 1**.

Column Confirmation

Column confirmation criteria was not met for several compounds in the samples listed below. Affected data are summarized in **Attachment 1**.

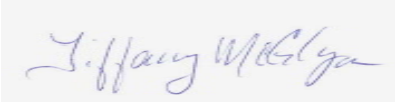
Sample ID
SJUXO1-EB-080812
SJUXO1-EB-081012
SJUXO1-EB-081412

Conclusion

These data can be used in the project decision-making process as qualified by the data quality evaluation process.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation

Value	Description
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

St. Juliens WE10-UXO-01
Attachment 1 Change Qual. Table
SDG 1208107

Sample ID	Compound	Q Flag	Qual Code
SJUXO1-EB-080812	1,3,5-Trinitrobenzene	UJ	HT
SJUXO1-EB-080812	1-Chloro-3-nitrobenzene	J	2C
SJUXO1-EB-080812	2,4,6-Trinitrotoluene	UJ	HT
SJUXO1-EB-080812	2,6-Dinitrotoluene	J	HT
SJUXO1-EB-080812	2-Amino-4,6-dinitrotoluene	J	HT
SJUXO1-EB-080812	2-Nitrotoluene	J	HT
SJUXO1-EB-080812	4-Amino-2,6-dinitrotoluene	UJ	HT
SJUXO1-EB-080812	4-Nitrotoluene	J	2C
SJUXO1-EB-080812	HMX	J	HT
SJUXO1-EB-080812	Nitrobenzene	J	2C
SJUXO1-EB-080812	Nitroglycerin	J	2C
SJUXO1-EB-080812	PETN	J	HT
SJUXO1-EB-080812	RDX	J	2C
SJUXO1-EB-080812	Tetryl	UJ	HT
SJUXO1-EB-080812	1,3-Dinitrobenzene	J	2C
SJUXO1-EB-080812	2,4-Dinitrotoluene	UJ	HT
SJUXO1-EB-080812	3-Nitrotoluene	UJ	HT
SJUXO1-EB-080812	Nitroguanidine	UL	MSL
SJUXO1-EB-081012	2,6-Dinitrotoluene	J	2C
SJUXO1-EB-081012	4-Nitrotoluene	J	2C
SJUXO1-EB-081012	Nitrobenzene	J	2C
SJUXO1-EB-081012	RDX	J	2C
SJUXO1-EB-081012	1,3-Dinitrobenzene	J	2C
SJUXO1-EB-081412	2-Nitrotoluene	J	2C
SJUXO1-EB-081412	Nitrobenzene	J	2C
SJUXO1-EB-081412	Nitroglycerin	J	2C
SJUXO1-EB-081412	RDX	J	2C

Appendix D
Data Usability Assessment

ATTACHMENT D

Data Usability Assessment

Sediment samples were collected by CH2M HILL staff following the standard operating procedures outlined in the project-specific uniform federal policy – sampling and analysis plan (UFP-SAP) (CH2M HILL, 2012). The samples were submitted to independent off-site laboratories for the analysis of explosives by United States Environmental Protection Agency (USEPA) SW-846 8330A, perchlorate by SW-846 6850, and nitrocellulose by EPA method 353.2 at Empirical Laboratories, LLC.

In accordance with the *Final Sampling and Analysis Plan Anomaly Acquisition and Investigation Area UXO 1, St. Juliens Creek Annex, Chesapeake, Virginia* (CH2M HILL, 2012), a data usability assessment was performed for the data collected on August 1 through August 14, 2012. As described in the UFP-SAP worksheets #34-36, this data has gone through several levels of data verification and validation. This includes internal laboratory quality control (QC) checks, CH2M HILL verification procedures, internal CH2M HILL Level III validation on all analytical results, and internal CH2M HILL Level IV validation (re-calculation of results) on 10% of the analytical results.

This data usability assessment evaluates the overall measurement performance results and their potential effects on data availability for decision-making. "Availability" in this context refers to whether results can be used by the project team based on their analytical soundness. If a result is analytically sound, it is available to use for evaluating the potential releases, nature and extent of contamination, and estimating potentially associated human health and ecological risks.

1.1 Quality Assurance/Quality Control Samples

Quality Assurance (QA)/Quality Control (QC) samples were collected in the field and sent to the laboratory to document the quality of field sampling. Two field duplicates were collected to assess precision between parent and duplicate samples.

Laboratory QA/QC samples were prepared and analyzed to measure the precision and accuracy of their analytical results and aid in the usability assessment process. The laboratory QA/QC samples consisted of method blanks, laboratory control samples, surrogates, internal standards, and laboratory duplicates.

1.2 Data Validation Process

During the data validation process, QA/QC criteria established in the UFP-SAP or in the analytical method were used to evaluate the data quality in a process similar to that outlined in *Contract Laboratory Program Region III Modifications to National Functional Guidelines for Organic Data Review, Multi Media Multi Concentration* (USEPA, 1994).

The data validation included a recalculation of 10% of the analytical results and consisted of review of the following:

- Holding times
- Completeness
- Method blank contamination
- Initial and continuing calibration accuracy and precision

- Laboratory control sample accuracy and precision
- Internal standard response and retention time accuracy
- Surrogate spike recovery accuracy
- Field and laboratory duplicate precision

In cases where acceptance criteria for these aspects of data quality were not met, the validator applied a data qualifier to the data. The qualifiers that may be used are defined in Section 1.2.1.

1.2.1 Primary Validation Qualifiers

Validation qualifiers were assigned to the data subsequent to the laboratory analysis; the list of qualifiers available to the validator is defined in Table 1, the frequency with which qualifiers were applied is presented in Table 2; not all available qualifiers were applied to this dataset.

Table 1 - Primary Validation Qualifiers

Qualifier	Description
[none]	The analyte is present at the concentration reported.
U	Analyte not detected at a concentration greater than the detection limit (DL).
J	Analyte is present; concentration is estimated because it is below the quantitation limit or because of an associated QC exceedance and may be inaccurate or imprecise.
K	Analyte is present; concentration is estimated and may be biased high.
B	Analyte is present; concentration is not significantly greater than that found in an associated field or laboratory blank and the result is usable as a non-detect.
L	Analyte is present; concentration is estimated and may be biased low.
UL	Analyte is not present; quantitation limit is biased low.
UJ	Analyte is not present; quantitation limit may be inaccurate or imprecise.
R	Presence of analyte unknown; result is rejected because the data is unreliable and not available for decision-making.

1.3 Data Usability Assessment Findings

The full 8330-explosives list, including PETN, nitroglycerin, and nitroguanidine, were analyzed using SW-846 8330A. Additionally, perchlorate was analyzed using SW-846 6850 and nitrocellulose was analyzed using EPA Method 353.2 modified. Excluding lab and field QA/QC samples, 323 data results were generated; Table 2 shows the distribution of qualified results. The following is a review of QC issues that warranted data qualification. All data were considered usable.

Table 2 Validation Qualifiers Applied to UXO 1 Data

Validator Qualifier	QC Narrative	Count	Percent
U	NULL	308	95.36%
B	EBL	12	3.72%
J	2C	3	0.93%
		323	100.00%

100.00% not R-flagged and available for use

Data that have a U-qualifier or J-qualifier are usable as reported by the laboratory. Data that have a B-qualifier are usable as a non-detected result. The 308 U-qualified results were not detected by the laboratory. All B-qualifiers (12 results) were given a secondary qualifier of "EBL," indicating that the analytes were not detected substantially above the level in the equipment blank. The three J-qualified results were detected by the laboratory but the values are estimated. All J-qualified results were also given a secondary qualifier of "2C," meaning that there was poor reproducibility between dual columns.

The quality of the data reported for the sediment sampling at St. Juliens Creek UXO 1 is of excellent quality. The entire dataset is available for use as reported, except for B-qualified results, which are usable as non-detects.

1.4 References

CH2M HILL. 2012. *Final Sampling and Analysis Plan Anomaly Acquisition and Investigation Area UXO 1, St. Juliens Creek Annex, Chesapeake, Virginia.* June.

USEPA. 1994. *USEPA Contract Laboratory Program Region III Modification to National Functional Guidelines for Organic Data Review, Multi Media Multi Concentration.* September.

Appendix E
Munitions Response Site Prioritization Protocol

Table 1

EHE Module: Munitions Type Data Element Table

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

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

Classification	Description	Score
Sensitive	◆ UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). ◆ Hand grenades containing energetic filler. ◆ Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.	30
High explosive (used or damaged)	◆ UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." ◆ DMM containing a high-explosive filler that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	25
Pyrotechnic (used or damaged)	◆ UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). ◆ DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	20
High explosive (unused)	◆ DMM containing a high-explosive filler that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	15
Propellant	◆ UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: ▪ Damaged by burning or detonation ▪ Deteriorated to the point of instability.	15
Bulk secondary high explosives, pyrotechnics, or propellant	◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.	10
Pyrotechnic (not used or damaged)	◆ DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	10
Practice	◆ UXO that are practice munitions that are not associated with a sensitive fuze. ◆ DMM that are practice munitions that are not associated with a sensitive fuze and that have not: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	5
Riot control	◆ UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	◆ Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.)	2
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	~~0~~
MUNITIONS TYPE	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	0

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

During the 2012 Expanded Site Inspection, 15 anomaly source locations (20' by 20' in area) were investigated within the South Branch of the Elizabeth River. No evidence of UXO or DMM was found during this investigation.

Table 2

EHE Module: Source of Hazard Data Element Table

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

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

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

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

Area UXO 1 was historically used for loaded and unloaded on munitions.

Table 3

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with **all** the locations where munitions are known or suspected to be present at the MRS.

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

Classification	Description	Score
Confirmed surface	◆ Physical evidence indicates that there are UXO or DMM on the surface of the MRS. ◆ Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS.	25
Confirmed subsurface, active	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.	20
Confirmed subsurface, stable	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.	15
Suspected (physical evidence)	◆ There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	◆ There is historical evidence indicating that UXO or DMM may be present at the MRS.	~~5~~
Subsurface, physical constraint	◆ There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	◆ The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	~~0~~
LOCATION OF MUNITIONS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).	5

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

Historical Area UXO 1 I activities may have resulted in ordnance had been dropped into the sediment adjacent to the former wharf area during loading and unloading operations. Following completion of the 2012 Expanded Site Inspection of the MRS there was no physical evidence suggesting that UXO or DMM are present.

Table 4

EHE Module: Ease of Access Data Element Table

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

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

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

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

As the MRS is located within the Southern Branch of the Elizabeth River there is no barrier to public access to the MRS.

Table 5

EHE Module: Status of Property Data Element Table

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

Classification	Description	Score
Non-DoD control	◆ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. ◆ The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day.	~~5~~
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	**DIRECTIONS:** Record **<u>the single highest score</u>** from above in the box to the right (maximum score = 5).	5

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

As the MRS is located within the Southern Branch of the Elizabeth River.

Table 6

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the **highest** population density within a two-mile radius of the perimeter of the MRS.

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

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

Highest census tract within 2-miles is #2118 (Portsmouth) at 5,907 persons per square mile.

Table 7

EHE Module: Population Near Hazard Data Element Table

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

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

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

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

Based on the population density of the surrounding area and current aerial photographs, there are more than 26 inhabited structures within 2 miles of the MRS.

Table 8

EHE Module: Types of Activities/Structures Data Element Table

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

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

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

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

Per Site Management Plan, most surrounding areas are developed and include residences, schools, recreational areas, and shipping facilities for several large industries (Final PA, 2009).

Table 9

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

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

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

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

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

The northern wharf investigation area includes a wetland designated on the National Wetland Inventory. No cultural resource determination has been made for Area UXO 1.

Table 10
Determining the EHE Module Rating

DIRECTIONS:

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

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

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	0	2
Source of Hazard	Table 2	2	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	5	20
Ease of Access	Table 4	10	
Status of Property	Table 5	5	
Receptor Factor Data Elements			
Population Density	Table 6	5	18
Population Near Hazard	Table 7	5	
Types of Activities/Structures	Table 8	5	
Ecological and/or Cultural Resources	Table 9	3	
EHE MODULE TOTAL			40

EHE Module Total	EHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	~~No Known or Suspected Explosive Hazard~~
EHE MODULE RATING	No Known or Suspected

Table 11

CHE Module: CWM Configuration Data Element Table

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

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

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	The CWM known or suspected of being present at the MRS are: ◆ CWM that are UXO (i.e., CWM/UXO) ◆ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	30
CWM mixed with UXO	◆ The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: ◆ Nonexplosively configured CWM/DMM either damaged or undamaged ◆ Bulk CWM (e.g., ton container).	15
CAIS K941 and CAIS K942	◆ The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	◆ CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	~~0~~
CWM CONFIGURATION	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	0

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

No evidence of CWM. Evidence of CAIS on the surface or subsurface does not exist at Area UXO 1, and no training using CAIS was documented at SJCA. Documentation does exist that these sets were stored in Building 163 at SJCA, and may have been transferred to/from ship at the wharfs. However, storage and transfer of CAIS does not qualify as a source of CWM hazard.

Table 12

CHE Module: Sources of CWM Data Element Table

DIRECTIONS: Below are 11 sources of CWM hazards and their descriptions. Review these classifications and circle the scores that correspond with **all** the sources of CWM hazards known or suspected to be present at the MRS.

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

Classification	Description	Score
Live-fire involving CWM	◆ The MRS is a former military range that supported live-fire of explosively configured CWM and the CWM/UXO are known or suspected of being present on the surface or in the subsurface. ◆ The MRS is a former military range that supported live-fire with conventional munitions, and CWM/DMM are on the surface or in the subsurface commingled with conventional munitions that are UXO.	10
Damaged CWM/DMM surface or subsurface	◆ There are damaged CWM/DMM on the surface or in the subsurface at the MRS.	10
Undamaged CWM/DMM surface	◆ There are undamaged CWM/DMM on the surface at the MRS.	10
CAIS/DMM surface	◆ There are CAIS/DMM on the surface.	10
Undamaged CWM/DMM, subsurface	◆ There are undamaged CWM/DMM in the subsurface at the MRS.	5
CAIS/DMM subsurface	◆ There are CAIS/DMM in the subsurface at the MRS.	5
Former CA or CWM Production Facilities	◆ The MRS is a facility that formerly engaged in production of CA or CWM, and CWM/DMM is suspected of being present on the surface or in the subsurface.	3
Former Research, Development, Testing, and Evaluation (RDT&E) facility using CWM	◆ The MRS is at a facility that formerly was involved in non-live-fire RDT&E activities (including static testing) involving CWM, and there are CWM/DMM suspected of being present on the surface or in the subsurface.	3
Former Training Facility using CWM or CAIS	◆ The MRS is a location that formerly was involved in training activities involving CWM and/or CAIS (e.g., training in recognition of CWM, decontamination training) and CWM/DMM or CAIS/DMM are suspected of being present on the surface or in the subsurface.	2
Former Storage or Transfer points of CWM	◆ The MRS is a former storage facility or transfer point (e.g., intermodal transfer) for CWM.	1
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	~~0~~
SOURCES OF CWM	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	0

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

No evidence of CWM. CAIS as a Source of CWM is only evaluated for presence in the surface or subsurface or for use at former training facilities. Evidence of CAIS on the surface or subsurface does not exist at Area UXO 1, and no training using CAIS was documented at SJCA.

Table 13

CHE Module: Location of CWM Data Element Table

DIRECTIONS: Below are seven classifications of CWM locations and their descriptions. Review these locations and circle the scores that correspond with **all** the locations where CWM are known or suspected of being found at the MRS.

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

Classification	Description	Score
Confirmed surface	◆ Physical evidence indicates that there are CWM on the surface of the MRS. ◆ Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report, that an incident or accident that involved CWM, regardless of configuration, occurred) indicates there are CWM on the surface of the MRS.	25
Confirmed subsurface, active	◆ Physical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are likely to cause CWM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM. ◆ Historical evidence indicates that CWM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause CWM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM.	20
Confirmed subsurface, stable	◆ Physical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause CWM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause CWM to be exposed. ◆ Historical evidence indicates that CWM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause CWM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause CWM to be exposed.	15
Suspected (physical evidence)	◆ There is physical evidence, other than the documented presence of CWM, indicating that CWM may be present at the MRS.	10
Suspected (historical evidence)	◆ There is historical evidence indicating that CWM may be present at the MRS.	5
Subsurface, physical constraint	◆ There is physical or historical evidence indicating that CWM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the CWM.	2
Evidence of no CWM	◆ Following investigation of the MRS, there is physical evidence that there is no CWM present or there is historical evidence indicating that no CWM are present.	~~0~~
LOCATION OF CWM	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).	0

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

No evidence of CWM.

Table 14

CHE Module: Ease of Access Data Element Table

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

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

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

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

As the MRS is located within the Southern Branch of the Elizabeth River there is no barrier to public access to the MRS.

Table 15

CHE Module: Status of Property Data Element Table

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

Classification	Description	Score
Non-DoD control	◆ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal or local governments; and land or water bodies managed by other federal agencies. ◆ The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day.	~~5~~
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD controls access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	**DIRECTIONS:** Record **<u>the single highest score</u>** from above in the box to the right (maximum score = 5).	5

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

The wharf area and investigation area extends out into a public waterway.

Table 16

CHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the **highest** population density within a two-mile radius of the perimeter of the MRS.

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

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

Highest census tract within 2-miles is #2118 (Portsmouth) at 5,907 persons per square mile.

Table 17

CHE Module: Population Near Hazard Data Element Table

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

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

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

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

Based on the population density of the surrounding area and current aerial photographs, there are more than 26 inhabited structures within 2 miles of the MRS.

Table 18

CHE Module: Types of Activities/Structures Data Element Table

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

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

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

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

Per Site Management Plan, most surrounding areas are developed and include residences, schools, recreational areas, and shipping facilities for several large industries (Final PA, 2009).

Table 19

CHE Module: Ecological and/or Cultural Resources Data Element Table

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

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

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

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

The northern wharf investigation area includes a wetland designated on the National Wetland Inventory. No cultural resource determination has been made for Area UXO 1.

Table 20
Determining the CHE Module Rating

DIRECTIONS:

1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **CHE Module Total** box below.
4. Circle the appropriate range for the **CHE Module Total** below.
5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

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

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12	0	
Accessibility Factor Data Elements			
Location of CWM	Table 13	0	15
Ease of Access	Table 14	10	
Status of Property	Table 15	5	
Receptor Factor Data Elements			
Population Density	Table 16	5	18
Population Near Hazard	Table 17	5	
Types of Activities/Structures	Table 18	5	
Ecological and/or Cultural Resources	Table 19	3	
CHE MODULE TOTAL			33

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	~~No Known or Suspected CWM Hazard~~
CHE MODULE RATING	No Known or Suspected

Table 21

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.

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

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Groundwater MC Hazard ☐

Table 22

HHE Module: Surface Water – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

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

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

Receptor Factor

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

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

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

Table 23

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
2,4,6-Trinitrotoluene	0.266	31	0.0086
CHF Scale	**CHF Value**	**Sum The Ratios**	0.0086
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right maximum value = H).		L

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

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

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

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

No Known or Suspected Sediment (Human Endpoint) MC Hazard ❑

Table 24

HHE Module: Surface Water – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

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

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
CHF Scale	**CHF Value**	**Sum the Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

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

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

Receptor Factor

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

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

No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard ☐

Table 25

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

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

.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
2,4,6-Trinitrotoluene	0.266	None available	
CHF Scale	**CHF Value**	**Sum the Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		L

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

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

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

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

No Known or Suspected Sediment (Ecological Endpoint) MC Hazard ❑

Table 26

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

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

.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio
CHF Scale	**CHF Value**	**Sum the Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

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

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

Receptor Factor

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

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

No Known or Suspected Surface Soil MC Hazard ☐

Table 27

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the **media** in which these contaminants are present. Then record all **contaminants**, their **maximum concentrations** and their **comparison values** (from Appendix B of the Primer) in the table below. Calculate and record the **ratio** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio

Table 28

Determining the HHE Module Rating

DIRECTIONS:

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

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

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

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

HHE MODULE RATING	G

HHE Ratings (for reference only)

Combination	Rating
HHH	A
HHM	B
HHL	C
HMM	C
HML	D
MMM	D
HLL	E
MML	E
MLL	F
LLL	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	~~No Known or Suspected MC Hazard~~

Table 29
MRS Priority

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

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

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

Table A
MRS Background Information

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

Munitions Response Site Name: Area UXO 1

Component: U.S. Navy

Installation/Property Name: St. Juliens Creek Annex

Location (City, County, State): Chesapeake, Virginia

Site Name/Project Name (Project No.): See Munitions Response Site Name

Date Information Entered/Updated: November 29, 2012

Point of Contact (Name/Phone): Krista Parra/757.341.0484

Project Phase (check only one):

☐ PA	■ SI	☐ RI	☐ FS	☐ RD
☐ RA-C	☐ RIP	☐ RA-O	☐ RC	☐ LTM

Media Evaluated (check all that apply):

☐ Groundwater	■ Sediment (human receptor)
☐ Surface soil	☐ Surface Water (ecological receptor)
■ Sediment (ecological receptor)	☐ Surface Water (human receptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type: A detailed description of SJCA and Area UXO 1 is provided in the PA. Area UXO 1 was used to load/unload munitions from Navy ships from approximately 1898 to 1975.

Description of Pathways for Human and Ecological Receptors: A HHRS and ERS were conducted as a part of the Expanded Site Inspection Report and there are no unacceptable human health or ecological risks from sediment exposure.

Description of Receptors (Human and Ecological): Potential human receptors may include construction workers, divers, and swimmers. Potential ecological receptor include benthic dwelling and aquatic organisms.