

Preliminary Assessment Review and Potential MEC/ MC Sites Summary, Yorktown Naval Weapons Station and Cheatham Annex

PREPARED FOR: Tom Kowalski/NAVFAC
PREPARED BY: CH2M HILL
DATE: December 13, 2010

Summary

Below are summaries of three sites identified during the review of the Preliminary Assessment (PA) for munitions and explosives of concern (MEC) and munitions constituents (MC) related sites at Naval Weapons Station (WPNSTA) Yorktown and Cheatham Annex (CAX). The purpose of this Technical Memorandum is to provide a summary of the PAs and identify recommended actions to be considered by the Navy for each of the sites identified. Additional sites currently in the Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA) process which have not been identified in the PA are not discussed in this Technical Memorandum but may need to be considered in the Munitions Response Program (MRP).

The Final PA for CAX was completed by Malcolm Pirnie, Inc. in July 2006 and addressed the Marine Pistol and Rifle Range. The Revised Draft Final PA for WPNSTA Yorktown was completed by Malcolm Pirnie, Inc. in December 2005 and addresses four other-than-operational Range sites. These sites included the Demolition Range, Detonator Blasting Pit Area, Detonator Pit Area, and the Moral, Welfare, and Recreation (MWR) Skeet Range (**Attachment 1**). Since the completion of the PA, both the Marine Pistol and Rifle Range at CAX and the MWR Skeet Range at WPNSTA Yorktown have been investigated as part of a Site Inspection (SI) completed by CH2M HILL in March 2008 and are therefore not included in this Technical Memorandum; the results of the SI for these sites indicated no unacceptable risk to human health or the environment and recommended no further investigation or action at the sites.

Demolition Range

The demolition range is approximately 230 acres in size. The limits of the Demolition Range are based upon the area of the former Explosive Ordnance Detachment (EOD) range that does not overlap the current EOD Range (**Attachment 2**). No removal action activities or investigations were identified for the Demolition Range area; however, a removal action was conducted in 1994 on a portion of the former EOD range that does overlap the current EOD range (Site Screening Area [SSA] 2). This removal action cleared out non-explosive arming devices, MK 46 shipping containers, and other debris that covered the ground surface at SSA 2. SSA 2 was recommended for no further Remedial Investigation/

Feasibility Study (RI/FS) efforts during the Site Screening Process. The northern portion of the Demolition Range is located off the installation on CAX property. The Demolition Range is transected by several roads and contains a large amount of wooded area that is accessible for hunting and other recreational activities, thus increasing the potential access and exposure to personnel.

Based upon information provided in the PA, the potential exists for munitions and munitions debris to be present at the Demolition Range area as a result of kick-outs from incomplete detonations during former and current EOD range operations. MC may also be a concern because of the historical site use, which included demolition of explosive and propellant containing munitions. However, demolition activities are still performed at the EOD range. As discussed in the concurrence letter between the Virginia Department of Environmental Quality (VDEQ) and the Navy (**Attachment 3**), closure activities at the range will not be required until the range ceases operations. The range will maintain interim status until operations cease; at which time, it will be addressed by the MRP. The area to be addressed should include both the current EOD range boundaries, and the former EOD range boundaries as shown in **Attachment 2**. No Munitions Response Site Prioritization Protocol (MRSPP) Scoring is currently required at the site, as MRSPP is not required at locations that were used for, or were permitted for, the treatment or disposal of military munitions.

Detonator Blasting Pit Area

The Detonator Blasting Pit is approximately 6.4 acres located in the northeast area of the WPNSTA Yorktown. A visual survey of this site was conducted in September of 2004 by Malcolm Pirnie Inc. and Navy Personnel. However, at the time of the survey “the full extent of the range had not yet been determined.” Based on the visual survey, no buildings or structures from the former Blasting Pit operations remain at the site. The concrete pit areas (number of and exact locations unknown) have been removed and the site has been graded prior to current development activities. Therefore, no MEC is anticipated at the site based upon its historic use and the development of the area.

Although there is no sampling data available for this area, the PA indicates that the detonations took place in sand lined concrete bunkers which would have prevented munitions debris and associated MC from leaving the bunkers. These bunkers have since been removed and the area has been regraded to accommodate construction of the current buildings in the area. Therefore, as detailed in the PA, no MEC or MC is anticipated at the site and no additional actions are recommended.

Detonator Pit

The Detonator Pit is approximately 0.3 acres located immediately south of the Detonator Blasting Pit Area on WPNSTA Yorktown. A visual survey of this site was conducted in September of 2004 by Malcolm Pirnie Inc. and Navy Personnel. At the time of the survey “the full extent of the range had not yet been determined.” During remedial investigation activities at the adjacent Holms Road Landfill (Site 17) in 1993 and 1998, two soil samples were collected from within the boundaries of the Detonator Pit. As detailed in the PA, these samples provide evidence that no MC is located at the site. Additionally, the PA states that the Detonator Pit area would have been heavily traveled during the remedial investigations

in the 1990s and there have been no EOD responses recorded at this site. Also, the Detonator Pit was most likely a concrete bunker that would have obstructed kick-outs during detonation.

The PA indicates that no evidence of MC was found and that there are no known or suspected areas of the Detonator Pit that contain MEC. Therefore, no additional activities are recommended at the site.

Summary of Recommended Actions

- Demolition Range
 - Upon closure of the range, the site will need to be assessed and addressed by the MRP.
 - No MRP activities will be performed at the range until it has been closed.
- Blasting Pit Area
 - Based upon the findings discussed in the PA, no MEC or MC is anticipated at the site. Therefore, no additional activities are recommended.
- Detonator Pit
 - Based upon the findings discussed in the PA, no MEC or MC is anticipated at the site. Therefore, no additional activities are recommended.

Based upon a review of the PA document, there were no sites identified which should be currently considered part of the MRP. The Demolition Range will need to be reevaluated, once closed, for inclusion in the MRP.

Attachment 1
Demolition Range, Detonator Blasting Pit,
Detonator Pit and MWR Skeet Range
Area Location Map

Preliminary Assessment
Naval Weapons Station Yorktown, Virginia



MALCOLM
PIRNIE

Map 2.1-1
Area Location Map

Legend

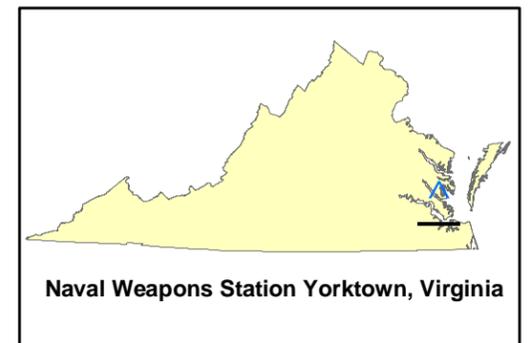
- Installation Boundary
- Site Boundary



Coordinate System: State Plane VA South
Datum: NAD 83
Units: feet

Contract: N62472-02-D-1300
Edition: Revised Draft Final Preliminary Assessment
Date: December 2005

Source: USGS. 1984. 7.5 Minute Topographic Series Map.



Naval Weapons Station Yorktown, Virginia



**Attachment 2
Range/Site Details
Demolition Range Map**

Preliminary Assessment
Naval Weapons Station Yorktown, Virginia

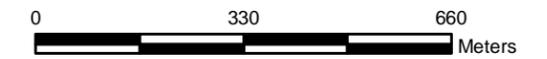


MALCOLM
PIRNIE

Map 5.2-2
Range/Site Details
Demolition Range

Legend

-  Installation Boundary
-  Demolition Range
-  SSA2 Boundary
-  Former SSA2 2500-ft ESQD arc
-  Operational 2500-ft ESQD arc
-  Wetlands
-  Waterbodies



Coordinate System: UTM Zone 18
Datum: NAD 83
Units: meters

Contract: N62472-02-D-1300
Edition: Preliminary Assessment
Date: December 2005

Source: USGS. 1999. DOQQ CIR Series Map.

Naval Weapons Station Yorktown



Attachment 3
Concurrence Letter between the
Virginia Department of Environmental Quality
and the Navy



OFFICIAL FILE COPY

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
TDD (804) 698-4021
www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

July 27, 2009

Mr. Thomas Kowalski
NAVFAC MIDLANT, Building N-26, Room 3208
Hampton Roads Restoration Product Line, Code OPHREV4
9742 Maryland Avenue
Norfolk, VA 23511-3095

RE: Request Concurrence to Delay Closure of Open Burn/Open Detonation Range and Suspend Subpart X, Open Burn/Open Detonation Non-Administrative Requirements Naval Weapons Station Yorktown Yorktown, Virginia

Dear Mr. Kowalski:

The Virginia Department of Environmental Quality (DEQ) has received the above-referenced request associated with the Open Burn/Open Detonation (OB/OD) Range located at Naval Weapons Station Yorktown, Yorktown, Virginia. The September 9, 2008 request, prepared by Cheryl F. Barnett, Environmental Program Manager By Direction of the Commander, was received by the DEQ on September 11, 2008.

Thank you for providing the DEQ's Office of Remediation Programs the opportunity to review the above-referenced request. Subsequent to review of the request, this office concurs that:

- 1) Subpart X, OB/OD Interim Status is maintained until final closure of the OB/OD has been completed;
- 2) Operating requirements for Interim Status, including groundwater monitoring, inspections, and security, are not applicable; and
- 3) Closure activities will not be required until the OB/OD Range ceases operation.

This office has no additional comments.

Please contact me at (804) 698-4125 or wade.smith@deq.virginia.gov with any additional questions.

Sincerely,

Wade M. Smith
Remediation Project Manager
Office of Remediation Programs

cc: Crystal St. Clair-Canai



DEPARTMENT OF THE NAVY
COMMANDER
NAVY REGION, MID-ATLANTIC
1510 GILBERT ST.
NORFOLK, VA 23511-2737

RECEIVED

SEP 11 2008

DEQ
OFFICE OF REMEDIATION PROGRAMS
5090
OPHREV5/07/0396

6122
✓

Mr. Wade Smith
Virginia Department of Environmental Quality
Office of Remediation Programs
629 East Main Street
P.O. Box 1105
Richmond, Virginia 23218

SEP 9 2008

Dear Mr. Smith:

SUBJECT: REQUEST CONCURRENCE TO DELAY CLOSURE OF OPEN BURN/OPEN
DETONATION RANGE AND SUSPEND SUBPART X, OPEN BURN/OPEN
DETONATION NON-ADMINISTRATIVE REQUIREMENTS, NAVAL WEAPONS
STATION YORKTOWN, EPA ID# VA8170024170

In September 2003, regulatory oversight of the Open Burn/Open Detonation (OB/OD) Range was transferred from Virginia Department of Environmental Quality (VDEQ) Office of Waste Permitting (OWP), Resource Conservation and Recovery Act (RCRA), to the Office of Remediation Programs (ORP) under the Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA). VDEQ and the Navy agreed that the requirements of any CERCLA remedial action would meet the RCRA closure performance standards of 40 CFR 265.111(a) and (b) as well as the RCRA corrective action (remediation) requirements of 40 CFR 264.101 (a). Operationally, the range would still perform Research and Development, Training, and Emergency Response. In order to move forward with closure activities, partial closure of the OB/OD Range was requested. However, it was not well defined how to accomplish partial closure of an active range and how to comply with the non-administrative requirements of Subpart X, OB/OD Interim Status.

On May 27, 2008, a meeting was held between the VDEQ and the Navy. In attendance from the VDEQ were Leslie Romanchik, Hassan Vahkili, Wade Smith, and Durwood Willis. Lisa Silvia participated via telecom from the VDEQ-Tidewater Regional Office. Crystal St. Clair-Canaii, Linda Cole, and Tim Reisch attended on behalf of the Navy. Ms. Romanchik stated that Subpart X, OB/OD Interim Status is maintained until final closure of the OB/OD has been completed; however, the operating requirements for interim status, to include groundwater monitoring, inspections, security, etc., were not applicable. Additionally, closure activities would not be required until the OB/OD Range ceased operation at which time closure would be addressed under the Navy's Munitions Response Program or equivalent.

5090
OPHREV5/07/0396

We appreciate your assistance in resolving this issue. The Navy requests written concurrence with the contents of this letter. Should you have any questions or comments, please contact Ms. Crystal St. Clair-Canaii at (757) 445-6775.

Sincerely,



CHERRYL F. BARNETT
Environmental Program Manager
By Direction of the Commander

cc: Ms. Lisa Silvia, DEQ-TRO