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NSWC INDIAN HEAD
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MINUTES FROM 14 APRIL 2011 RESTORATION ADVISORY BOARD MEETING WITH
TRANSMITTAL LETTER NSWC INDIAN HEAD MD
04/14/2011
NAVAL SUPPORT ACTIVITY SOUTH POTOMAC



DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY SOUTH POTOMAC
6509 SAMPSON ROAD, SUITE 217
DAHLGREN, VIRGINIA 22448-5108

IN REPLY REFER TO

5090
Ser PRSI42NC/85

Mr. Vincent Hungerford
P.O. Box 400
Indian Head, MD 20640

Dear Mr. Hungerford:

We are forwarding the minutes from the Installation Restoration (IR) Program Restoration Advisory Board (RAB) meeting that was held on Thursday, April 14, 2011 at the Indian Head Senior Center, which is located at 100 Cornwallis Square, Indian Head, Maryland.

We would like to thank everyone who attended the RAB meeting and hope to see all of you at the next RAB meeting, which is scheduled for Thursday, October 13, 2011 at the Indian Head Senior Center from 5:00 - 7:00 pm.

Please direct all correspondence that you may have concerning the Installation Restoration Program (IRP) or the Munitions Response Program (MRP) at our Facility to:

Attn: Director, Environmental Division
Department of the Navy
NAVFAC Washington, PWD South Potomac
3972 Ward Road, Suite 101
Indian Head, Maryland 20640-5157

Please contact Mr. Joseph Rail or Mr. Nicholas Carros if you have questions or concerns related to the IRP or the MRP at our Facility. Mr. Rail can be reached at (202) 685-3105 or via email at joseph.rail@navy.mil. Mr. Carros can be reached at (301) 744-2263 or via email at nicholas.carros@navy.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "William Y. Potter".

William Y. Potter
By direction

Enclosure: (1) Minutes from RAB Meeting of 14 April 2011

INSTALLATION RESTORATION PROGRAM



NAVAL SUPPORT FACILITY,
INDIAN HEAD
101 STRAUSS AVENUE
INDIAN HEAD, MARYLAND
20640-5035



RESTORATION ADVISORY BOARD (RAB) MEETING

Date of Meeting: April 14, 2011, 5:00 pm

Restoration Advisory Board (RAB) Member Participants:

Mr. Joseph Rail (N)	Mr. Elmer Biles (C)
Mr. Curtis DeTore (S)	Mr. William Potter (N)
Mr. Butch Dye (S)	Mr. Nicholas Carros (N)
Mr. Nathan Delong (N)	

RAB Members Not in Attendance:

Mr. Jerry Hamrick (L)	Mr. Vincent Hungerford (C)
Mr. Dennis Orenshaw (F)	

Additional Attendees:

Mr. Michael Welding(N)	Mr. Daniel Bragunier (N/C)
Ms. Lydia Berry (N/C)	Mr. Elvis Mikel (N)
Ms. Susan Yates (N/C)	

C = Community
F = Federal Official
K = Contractor
L = Local Official
N = Navy Official
R = Newspaper Reporter
S = State Official

ENCLOSURE (1)

Major Issues Discussed/Accomplished:

1. Arrival/Welcome

Mr. Joseph Rail of the Naval Facilities Engineering Command, Washington (NAVFAC Washington) began the meeting by introducing himself and welcoming everyone to the Indian Head Senior Center. Mr. Rail then presented the meeting agenda, which is included in Attachment A.

2. Site 12 Long-Term Monitoring Update

Mr. Delong began the presentation by discussing the Location and history of the site. He then discussed the previous decision criteria for how analytical requirements for the site were previously added or removed. Mr. Delong concluded the presentation by providing the rationale and method of implementation for the new sampling program.

A copy of Mr. Delong's presentation is provided in Attachment B.

3. Site 19/27 Removal Action Update

Mr. Delong began the presentation by providing a summary of the site backgrounds. The presentation then conveyed the current state of the removal action at site 19 and the planned removal action at site 27. Mr. Delong closed the presentation by providing the anticipated start date of the site 27 removal action and opened the floor to questions.

A copy of Mr. Delong's presentation is provided in Attachment C.

4. UXO 32 (Scrap Yard) Update

Mr. Rail began the presentation by discussing the location and historic background for the site. He then discussed the previous restoration activities at the site. The presentation then showed several pictures conveying the various stages of the remedial action, including examples of the types of munitions found and reasons for the timeline. Mr. Rail then discussed some of the site specific challenges and concluded by presenting the removal numbers for the site as well as the cost.

A copy of Mr. Rail's presentation is included in Attachment D.

5. Site 43 Remedial Investigation Sampling

Mr. Carros began the presentations discussing the location and release history of the site. Mr. Carros's presentation then discussed the previous investigations at the site and their results. He then presented the rationale and work plan for the

upcoming investigation, and closed the presentation by opening the floor to questions.

A copy of Mr. Carros's presentation is provided in Attachment E.

6. Stump Neck Small Arms Range - Phase II Site Investigation

Mr. Rail began the discussing the locations and previous investigation results of the sites. He then discussed the rational and location for groundwater sampling at the sites. Mr. Rail concluded the presentation by describing the upcoming chain of event and decision criteria that will be applies to the results thereof.

A copy of Mr. Rail's presentation is provided in Attachment F.

7. Comments, Questions, and Answers

Numerous comments were made and questions asked during the meeting. These comments, questions, and answers are provided in Attachment G.

8. Conclusion of Formal Presentations

Mr. Rail presented the tentative agenda for the next RAB meeting, which is scheduled for October 13, 2011. A copy of the agenda is included in Attachment H.

Mr. Rail then concluded the formal portion of the meeting and thanked all in attendance.

**NAVAL SUPPORT FACILITY INDIAN HEAD
INSTALLATION RESTORATION (IR) PROGRAM
RESTORATION ADVISORY BOARD (RAB) MEETING AGENDA**

April 14, 2011

- 5:00 - 5:05 pm** **ARRIVAL/WELCOME**
Mr. Joseph Rail
- 5:05 – 5:20 pm** **SITE 12 LTM UPDATE**
Mr. Nate Delong
- 5:20 – 5:40 pm** **SITE 19/27 REMOVAL ACTION UPDATE**
Mr. Nate Delong
- 5:40 – 6:00 pm** **UXO 32 (SCRAP YARD) UPDATE**
Mr. Joseph Rail
- 6:00 – 6:15 pm** **SITE 43 REMEDIAL INVESTIGATION SAMPLING**
Mr. Nicholas Carros
- 6:15 – 6:30 pm** **STUMP NECK SMALL ARMS RANGE- PHASE II SITE
INVESTIGATION**
Mr. Joseph Rail
- 6:30 pm** **ADJOURN**



**NAVAL SUPPORT FACILITY,
INDIAN HEAD**



*Site 12 LTM
Update*

*Nathan Delong
NAVFAC Washington*

April 14, 2011



Site 12 LTM Update



Site 12-Town Gut Landfill





Site 12 LTM Update

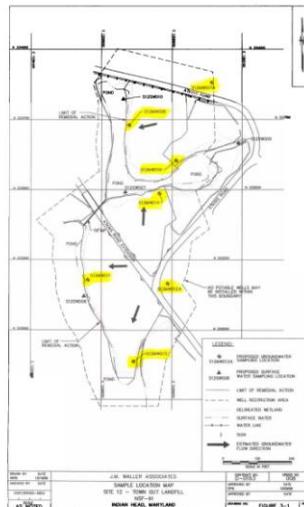


Site 12 Background

- 4.8 Acre site containing 3 areas of waste
- 3 waste areas are divided by 2 ponds and Atkins Road Extension
- Landfill composed of construction rubble and landscaping debris



Site 12 LTM Update





Site 12 LTM Update



- *New Monitoring Program*
 - *Sample for select analytes once every 15 months*
 - *Arsenic*
 - *Cobalt*
 - *Iron*
 - *Lead*
 - *Manganese*
 - *Perform statistical trend analysis during 5 year review*
 - *Reasoning – approximately 8 years of sampling results and statistical analysis show that select metals detected in the landfill have stabilized*
 - *Approved by IHIRT at March 2011 partnering meeting*
- **Potential Savings: \$2.7 million over a 30 year period**



Site 12 LTM Update



Questions?



**NAVAL SUPPORT FACILITY
INDIAN HEAD**



*Site 19 and 27
Removal Action Update*

*Nathan Delong
NAVFAC Washington*

April 14, 2011



Site 19 and 27 Update



OUTLINE

- *Site Background*
 - *Site 19 – Catch Basins at Chip Collection Houses*
 - *Site 27 – Thermal Destructor 1*
- *Removal Action Updates*
- *Path Forward*
- *Questions*



Site 19 and 27 Removal Action Update



- *Site 19 – Catch Basins at Chip Collection Houses*
 - Consists of drainage areas leading from two chip collection houses, Buildings 785 and 1051
 - Releases from catch pad outfalls may have contaminated stream sediments
 - Only Building 785 remains in operation
 - Wastewater is now recycled rather than discharged to swales
 - SSP Report completed in June 2009
 - Contaminants of concern are lead and nitroglycerin in the surface and subsurface soil
 - Recommended IRA for surface and subsurface soil (groundwater will be looked at separately)



Site 19 and 27 Removal Action Update



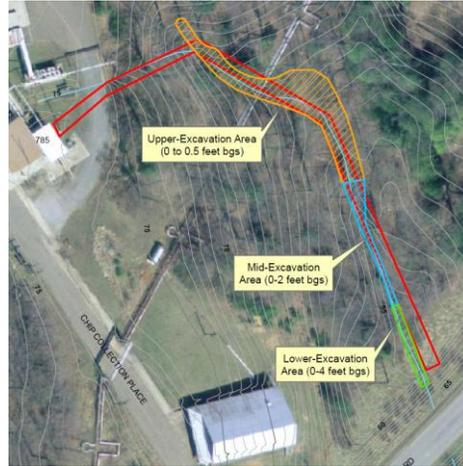
Site 19 – Pre-Excavation



Site 19 and 27 Removal Action Update



- EE/CA completed in September 2010
 - Recommends soil removal and offsite disposal
 - 0-6 inches in orange section
 - 0-2 feet in blue section
 - 0-4 feet in green section
 - Approx. 216 cubic yards to be removed
 - Post excavation sampling not needed
 - Backfill with clean soil
- Action Memorandum completed in September 2010



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Site 19 and 27 Removal Action Update



Site 19 – Removal Action

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Site 19 and 27 Removal Action Update



- *Site 19 – Path Forward*

- *Soil*

- *Soil excavation completed April 1, 2011*
- *Top soil will be applied after a dry weather period*
- *E&S controls to be removed when area is stabilized*

- *Groundwater*

- *NFA*



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Site 19 and 27 Removal Action Update



- *Site 27 – Thermal Destructor 1*

- Site is located north of Hershey Road and 400' from the Mattawoman Creek
- Former destructor was located on concrete pad (Building 1584)
- The incinerator operated from 1976-1979 and burned hydrazine-containing fuel and UDMH-contaminated wastewater
- Potential spills from operations may have contaminated soils surrounding concrete pad
- SSP Report was completed in June 2009
 - Contaminant of concern is Arsenic and Chromium
 - Recommended IRA for surface soil

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Site 19 and 27 Removal Action Update



Site 27 – Pre-Excavation



Site 19 and 27 Removal Action Update



• EE/CA completed in September 2010

- Recommends surface soil removal (0-6 inches) and offsite disposal
- Approx. 299 cubic yards to be removed
- Post excavation sampling not needed
- Backfill with clean soil

• Action Memorandum completed in September 2010





Site 19 and 27 Removal Action Update



- *Path Forward*
 - Site 27
 - Soil
 - Removal Action scheduled to begin in September 2011
 - Due to bald eagle nesting adjacent to site
 - Groundwater
 - NFA



Site 19 and 27 Removal Action Update



Questions?



MISSION

NAVFAC Environmental Restoration delivers sustainable, innovative, cost effective remediation solutions with stakeholder engagement, to protect human health and the environment, maintain regulatory compliance, and maximize reuse of DON assets to support the warfighter.

VISION

NAVFAC Environmental Restoration is the recognized Federal leader for responsive, best value, and sustainable remediation solutions.

UXO 32-Scrap Yard Removal Action Naval Support Facility Indian Head, MD

Joseph Rail - NAVFAC Washington

4/14/2011

UXO 32-Scrap Yard Removal Action





Scrap Yard History

- Used as scrap metal storage yard by the installation from 1960s-1980s
- PCBs from transformers leaked and contaminated soil
- Waste, lead-acid batteries also suspected of leaking and contaminating soil
- Originally designated as Site 41 in the IR Program



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Transformers and Batteries



U.S. Navy



U.S. Navy



Scrap Yard Investigations and Studies

- **Supplemental Preliminary Assessment (designated Site 41) – 1992**
- **Remedial Investigation – 1999 (PCBs, PAHs, metals in soil)**
- **Feasibility Study – 2001**
- **Proposed Plan & Public Meeting – 2001**
- **Final Design, EE/CA, Action Memo – 2002**



RA planned to address Human Health Risk

Unacceptable risk from soil to:

- **Current/future full-time employees**
- **Future construction workers**
- **Hypothetical future residents**



Site Chronology

- 2002- first phase of RA started and halted due to an accident with a cutting torch
- 2005- Site moved to MRP and re-designated as UXO 32
- 2006- MRP funding moved up to address site, Development of CNO Waiver, and ESS
- 2007- Second phase RA completed using water jet cutter
- 2008-2010- Development of second ESS & MOA
- 2010- Complete last phase of RA



2007 RA using water jet



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2008 Site Conditions



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CNO Waiver Requirement

- **Large ESQD arc generated by Theoretical Net Explosive Weight of suspect MEC**
- **Impacted several critical Installation facilities**
- **Evacuation would severely impact mission**
- **Also impacted non-Navy property across creek**



ESS Overview

- Identification, certification, demilitarization, and disposal of MEC and MPPEH
- Use of Contained Detonation Chamber (CDC) for items with less than 13 lbs TNT equivalent
- Site to be managed in 50'x50' grids
- Smaller MEC items to be hand dug
- 8" Projectile and 220# Frag Bomb to be removed prior to mobilization
- ESQD arc of 492' based on BLU36 submunitions



**220 LB Frag Bomb
8" Projectile
BLU 36 Submunition**



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U.S. Navy



U.S. Navy

MOA completed to clarify requirements for:

- NAVFACWASH
- NSWC-IHDIV
- NSASP
- EOD MU2 Dahlgren Detachment

May 2010 Site Conditions



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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



NOSSA Audit

- **Audit completed by NOSSA on June 22, 2010**
- **Project determined to be compliant with explosive and environmental criteria**
- **Minor deficiencies found such as a loose grounding wire on magazine, missing fire signal signs, and warning signs missing from road barricades**
- **A change in demilitarizing 5X material was addressed in an ESS Correction**

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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



CADs/PADs



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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



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Stockpile and Load out



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UXO 32-Scrap Yard Removal Action



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UXO 32-Scrap Yard Removal Action



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Project Challenges

- Lengthy review/approval process for ESS
- MOA required numerous signatures and additional scopes of work/cost estimates
- Communication and cooperation with the installation (permits, E&S controls, base access)
- Time-of-year work restrictions because of Bald Eagle nesting season
- High visibility site



Project Successes

- 2,436 items de-milled
- 87 items treated in CDC
- 32 tons of 5X scrap sent to recycler
- 4,800 tons (258 truckloads) soil/debris removed from site
- 5,190 JAU 22/B cartridges packaged and treated
- 168 tons of non-munitions scrap removed and recycled

Project Cost/Length

- Approximately \$2.4 mil
- 6 months to complete last phase RA

UXO 32-Scrap Yard Removal Action



U.S. Navy

Before



U.S. Navy

After

UXO 32-Scrap Yard Removal Action



Questions???



NAVAL SUPPORT FACILITY,
INDIAN HEAD



Site 43 - Remedial Investigation Sampling

Nicholas Carros
Naval Support Activity South Potomac

April 14, 2011

1



Site 43
Remedial Investigation Sampling



- *Site 43 includes two areas separated by 700 ft along Gallery Rd*
 1. *Area near northern corner of Building 1040*
 2. *Utility pole across Gallery Rd from Building 1041*



2



Site 43
Remedial Investigation Sampling



- *Parts cleaning operations occurred from 1960 to 1989.*
- *Historical disposal of acetone used for propellant removal in drainage ditch over ~2 yrs.*



3



Site 43
Remedial Investigation Sampling



- *Parts cleaning operations occurred from the late 1950s to 1989.*
- *Historical disposal of acetone and toluene used for propellant removal at base of pole over ~2 yrs*



4



Site 43 Remedial Investigation Sampling



- *Previous Investigations*

- 1991 PA
- 1993 SI
- 2005 SSP
- 2007 SSP Phase I
- 2009 SSP Phase IA

- *Previous Investigations Results & Conclusions*

- No ecological COPCs retained
- Groundwater: Potential unacceptable human health risk from exposure to bromoform, trichloroethene, antimony, cobalt, iron, and manganese in groundwater (Building 1040); cobalt at Building 1041.
- Soil: No human health COPCs retained for soil. However, TCE exceeded soil SSL at Building 1040.



Site 43 Remedial Investigation Sampling



- *Problem Definition*

- *Characterization at Bldg 1040*
 - *Horizontal & Vertical extent of explosives-, solvent, and/or metals at Bldg 1040*
 - *Continuing VOC source at Bldg 1040?*
 - *Soil gas.*
 - *Groundwater flow direction*
 - *Geology and Geotechnical information*
 - *Baseline HHRA at Bldg 1040, including vapor intrusion*
- *Characterization at Bldg 1041*
 - *Resample well to confirm cobalt and TCE.*
- *Other data collection to support the FS*



Site 43 Remedial Investigation Sampling



- *Work Plan*
 - *Soil borings for lithology (drilling and DPT). Geotech samples.*
 - *Organic vapor field screening and soil sample collection.*
 - *Install four new permanent monitoring wells at boundary locations.*
 - *Groundwater samples from new and existing wells, and DPT. Check for NAPL using the Oil Red O dye field test.*
 - *Measure hydraulic conductivity of aquifer (slug tests) and gauge for groundwater flow.*
 - *Collect soil gas samples at Buildings 1040 & 720 slab perimeters*



Site 43 Remedial Investigation Sampling



Questions?



MISSION
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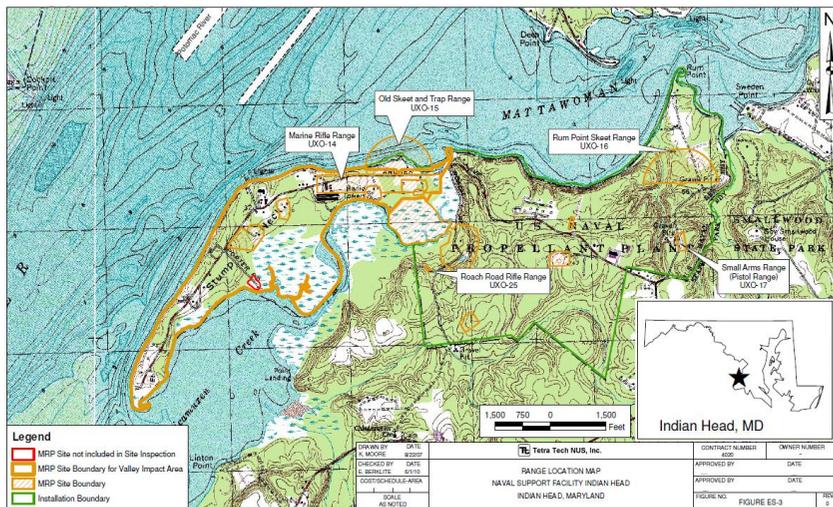
Five Small Arms Ranges

Phase 2 Site Inspection Groundwater INVESTIGATION Naval Support Facility Indian Head, MD

Joseph Rail - NAVFAC Washington

4/14/2011

Five Small Arms Ranges- Phase II SI





Site Inspection (SI)

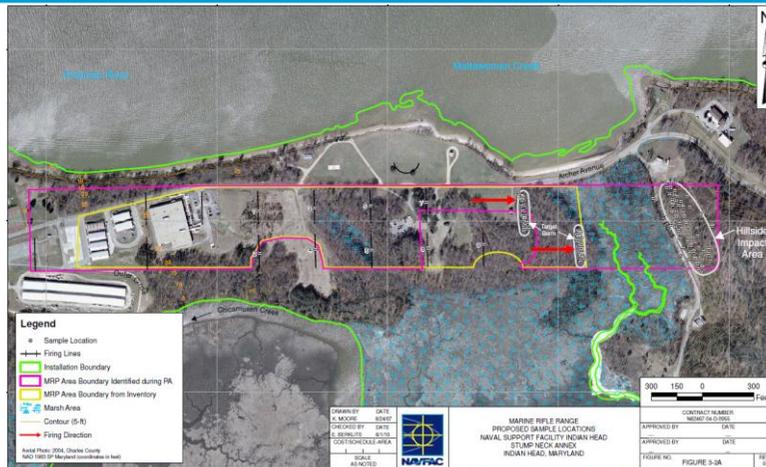
- **SI fieldwork conducted May-June 2009**
- **Investigation scope: collection and analysis of 451 soil and sediment samples**
- **All samples analyzed onsite for lead by X-ray fluorescence (XRF)**
- **Select samples shipped to off-site laboratory for analytical testing of: metals, PAHs, explosives, soil properties (CEC, pH, TOC, TS)**
- **Risk screening evaluation conducted by comparing results to Project Action Limits (PALs)**
- **SI Report approved/finalized September 2010**



Scope of Phase 1 Site Inspection

- **Site Descriptions**
- **Sampling/Analysis**

Marine Rifle Range (UXO 14)



- Used for rifle (.30-cal) training from 1911 to 1918
- Multiple firing lines, two target berms, hillside impact area

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Marine Rifle Range (UXO 14)

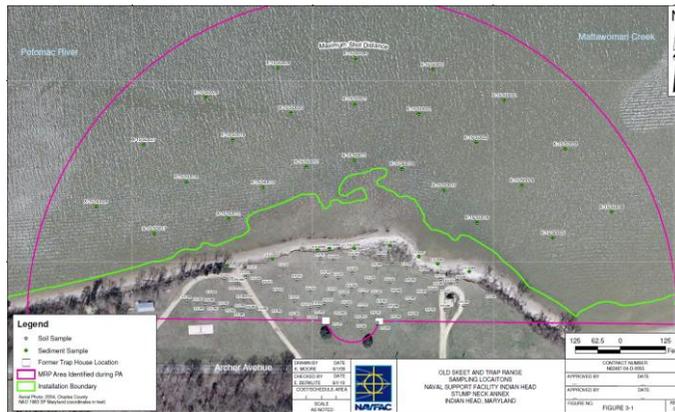


- Sampling: 148 soil samples
 - 9 composite (10 aliquot) surface soil from firing lines
 - 35 initial surface soil from Berm #1
 - 35 initial surface soil from Berm #2
 - 54 initial surface soil from Hillside
 - 14 step-out soil (10 surface, 4 subsurface)
 - 1 duplicate
- Analysis (off-site):

MEDIUM	METALS	PAHs	EXPLOSIVES (NG)
SOIL	32	9	9

6

Old Skeet and Trap Range (UXO 15)



- Used for small arms recreation from ~1967 to 1991
- Flat, fan-shaped area with accumulations of lead shot and clay target fragments on ground surface

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Old Skeet and Trap Range (UXO 15)

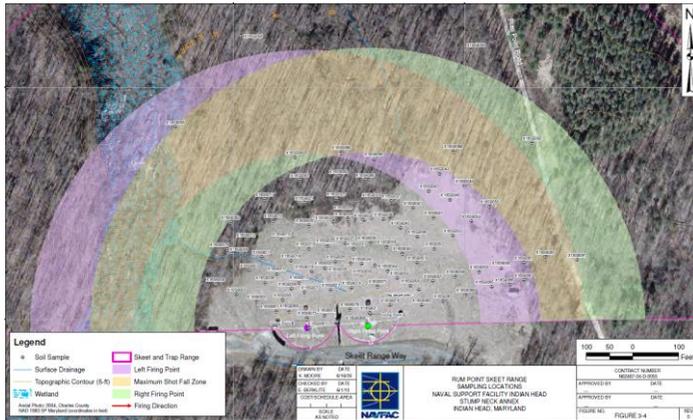


- Sampling: 83 soil and 34 sediment samples
 - 4 composite (10 aliquot) surface soil from firing lines
 - 56 initial surface soil
 - 23 step-out (17 surface, 6 subsurface)
 - 1 duplicate soil
 - 9 shoreline sediment
 - 25 underwater sediment
- Analysis (off-site):

MEDIUM	METALS	PAHs	EXPLOSIVES (NG)
SOIL	18	2	2
SEDIMENT	5	3	0

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Rum Point Skeet Range (UXO 16)



- Used for shotgun recreation from 1991 to 2001
- Flat fan-shaped area with accumulations of lead shot and clay target fragments on ground surface

9

Rum Point Skeet Range (UXO 16)



- Sampling: 96 soil samples
 - 2 composite (10 aliquot) surface soil from firing lines
 - 77 initial surface soil
 - 15 step-out surface soil
 - 2 duplicates
- Analysis (off-site):

MEDIUM	METALS	PAHs	EXPLOSIVES (NG)
SOIL	25	21	2

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Small Arms (Pistol) Range (UXO 17)



- Used for small arms (.22-, .45-, .50-cal; 9-mm) training from mid-1980s to 1991
- Three firing lines, target/hillside impact area

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Small Arms (Pistol) Range (UXO 17)

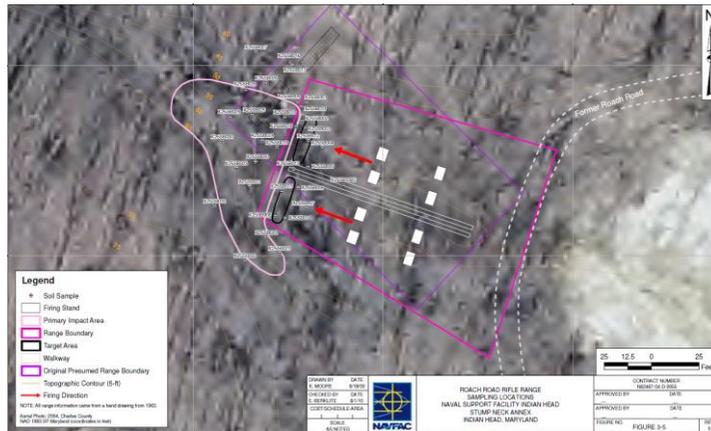


- Sampling: 53 soil samples
 - 3 composite (10 aliquot) surface soil from firing lines
 - 17 initial surface soil
 - 6 step-out soil (3 surface, 3 subsurface)
 - 27 direct-push technology (DPT) samples
 - 1 duplicate
- Analysis (off-site):

MEDIUM	METALS	EXPLOSIVES (NG)
SOIL	25	3

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Roach Road Rifle Range (UXO 25)



- Used for small arms (rifle and pistol) training from 1967 to 1986
- Two firing lines, target/hillside impact area

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Roach Road Rifle Range (UXO 25)



- Sampling: 36 soil samples
 - 1 composite (10 aliquot) surface soil from firing lines
 - 33 initial surface soil
 - 0 step-out soil
 - 2 duplicates
- Analysis (off-site):

MEDIUM	METALS	EXPLOSIVES (NG)
SOIL	23	1

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General Human Health Risk Screening Results

- Metals (primarily Pb, also Sb, As, Cu, Sn, Zn), NG, and PAHs are present in surface media at concentrations that may pose unacceptable human health and/or ecological risk
- Removal of shallow soils in areas with elevated metals and PAHs is recommended
- NG in soil is reactive and expected to degrade over time – no remediation of soil necessary



Site-Specific findings
Human Health PAL Exceedances

SITE	DIRECT SOIL CONTACT	SOIL-TO-GROUNDWATER*
MRR	Sb, Cu, Pb, Sn, Zn	Sb, Cu, Pb, NG
OSTR	As, Sb, Pb, Zn, PAHs	Sb, Pb, NG, PAHs
RPSR	Sb, Pb, PAHs	Sb, Pb, PAHs
SAPR	Sb, As, Cu, Pb, NG	Sb, Pb, NG
RRRR	Sb, Cu, Pb, Zn	Sb, Cu, Pb

*Risk screening for groundwater exposure was based on “soil-to-groundwater” pathway criteria, as applied to measured soil concentrations. No groundwater data were obtained during 2009 SI.



- Phase 2 Site Inspection

Data Quality Objective (DQO)
Planning process



Problem Statement

Analysis of soil and sediment samples collected during the Phase I SI indicate exceedances of soil-to-groundwater pathway PALs at each site, suggesting that contaminant migration from surface soil/sediment to shallow groundwater may be of concern. To evaluate whether this migration has occurred and, if so, whether surface contaminants now present in the groundwater pose an unacceptable risk, groundwater data should be obtained from locations most likely to be impacted by contamination in the overlying soil/sediment so the Project Team can take action to mitigate risks, as necessary.



Receptors

There are no human receptors currently exposed to groundwater under the existing land use.

There are no ecological receptors, current or future, that would be exposed to groundwater.

Hypothetical human receptors with potential future exposure to groundwater include:

- **Residents** – ingestion and dermal contact
- **Construction Workers** – incidental ingestion and dermal contact



Information Inputs

Chemical Data: Concentration of soil contaminants exceeding both soil-to-groundwater PALs and background that are present in groundwater (metals, PAHs)

Physical Data: Sampling locations; groundwater quality parameters (pH, ORP, DO, temp, spec. conductivity, turbidity)

Screening Levels: Project Action Limits (PALs) based on RSLs or MCLs, as appropriate



Study Boundaries

Groundwater of interest is the surficial aquifer.

- **Although not currently used as a drinking water, this is the groundwater most likely to have been impacted by releases from soil contaminants deposited during range operations.**
- **Data must be collected from locations of highest soil concentrations to represent worst-case site conditions so a potential environmental problem is not overlooked.**

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Decision Rules

If measured concentrations of all groundwater contaminants within the most potentially contaminated area are less than or equal to PALS, then recommend no further action (NFA) for groundwater, and plan for Interim Removal Action for soils under EE/CA and AM.

Otherwise, plan a remedial investigation to evaluate groundwater flow direction and rate, delineate vertical and horizontal extent of contamination, and evaluate risks to potential receptors.

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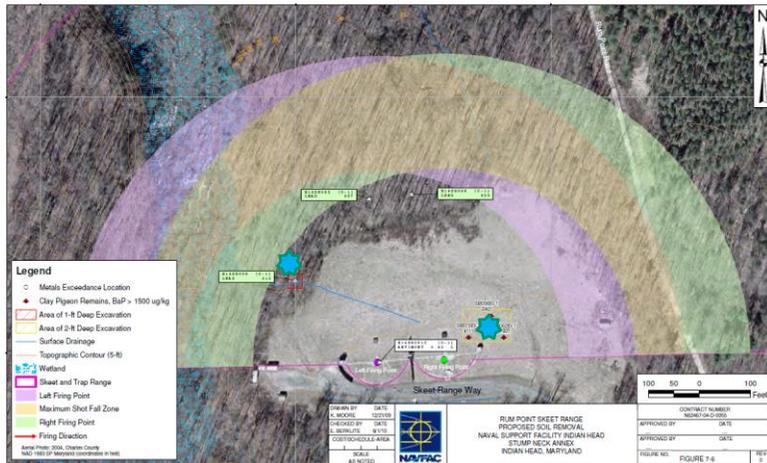
Conceptual Sampling Design

- **Install a temporary monitoring well in each source area near location of highest contaminant concentration in the soil**
- **Conduct one sampling event for site-specific contaminants that exceeded PALs in Phase 1 for soil-to-groundwater pathway**



SITE-SPECIFIC SAMPLING DESIGN

Rum Point Skeet Range (UXO 16)



- 2 wells – 1 each at firing point and NW target area
- Sample firing point for PAHs; target for antimony, lead

27

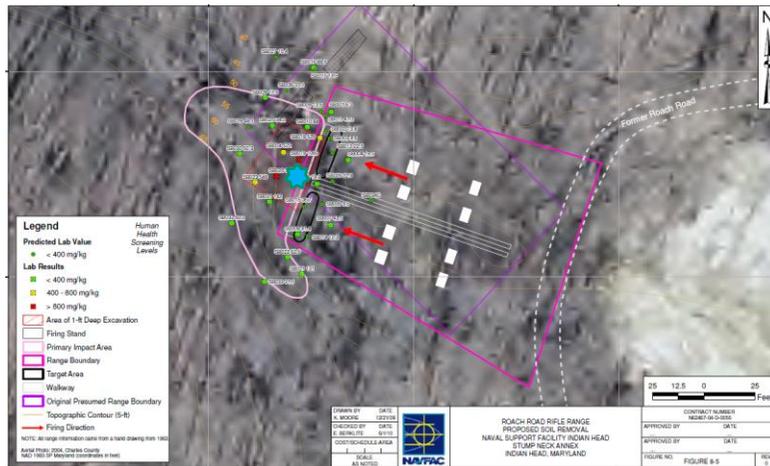
Small Arms (Pistol) Range (UXO 17)



- 1 well – at hillside target area
- Sample for NG, antimony, lead

28

Roach Road Rifle Range (UXO 25)



- 1 well – at hillside target area
- Sample for antimony, copper, lead

29

Five Small Arms Ranges- Phase II SI



Phase 2 Site Inspection NEXT STEPS

- UFP-SAP submittal and review
- Fieldwork implementation and data evaluation
- If risk due to groundwater appears to be unacceptable, expand GW investigation at that site (RI/FS)
- If risk due to groundwater is within acceptable limits, recommend NFA for GW; plan for Interim Removal Action for soils under EE/CA and AM

30



Questions???

INSTALLATION RESTORATION PROGRAM



NAVAL SUPPORT FACILITY,
INDIAN HEAD
101 STRAUSS AVENUE
INDIAN HEAD, MARYLAND
20640-5035



RESTORATION ADVISORY BOARD (RAB) MEETING COMMENTS, QUESTIONS AND ANSWERS April 14, 2011

Arrival/Welcome

No questions were asked nor comments made during this topic.

Site 12 LTM Update

Question: Who determines what to sample for and where to sample (i.e. which analytes and well locations)?

Answer: The analytes and sample locations were determined by the Indian Head Installation Restoration Team (IHIRT). These decisions were made based on historical records and sampling data obtained during the initial Site Inspection and Remedial Investigation.

Question: Have the analytes listed in RCRA Tables been sampled for?

Answer: Yes. The most recent round of sampling that included the MDE RCRA Tables was performed in October 2010.

Question: Have the monitoring wells changed over time?

Answer: No. The wells have not changed since their installation. All groundwater samples taken as a part of this Long-Term Monitoring have been extracted from the wells currently onsite.

Site 19/27 Removal Action Update

Question: Was chromium found at Site 19?

Answer: No. Chromium is not a contaminant of concern at Site 19. Lead and nitroglycerin were the contaminants of concern.

Question: Was this a fixed-price contract?

Answer: No. The removal actions at Site 19 and 27 were performed using a cost-plus contract.

Question: How much soil was removed and where was it sent? What was the name of the landfill and was it local or out-of-state?

Answer: Refer to the Removal Action Summary table at the end of this attachment.

Question: Is the chromium at Site 27 naturally-occurring?

Answer: Yes, however the levels of chromium present in the surface soil exceeded ecological risk levels, which is why it was kept as a contaminant of concern.

UXO 32 (Scrap Yard) Update

Question: When were the shapes disposed of at the Scrap Yard?

Answer: Exact dates are not known, however, materials were disposed at this site from the 1960s through the 1980s when it was used as a scrap metal disposal yard.

Question: Has this been one of the more difficult sites to clean up?

Answer: Yes, given that numerous munitions items that potentially posed an explosive hazard were present, the site was difficult to address. An Explosive Safety Submission was required to outline remedial activities and ensure worker safety. The removal of suspect items and soil excavation and screening proved to be labor-intensive and time-consuming.

Question: Where did soil on the concrete pad come from?

Answer: Historical records of the origin of soils may not exist. It is suspected that soil was intermingled with

scrap and munitions debris and over time, was disposed of at the Scrap Yard. This soil/debris could have originated from various activities at the installation such as training exercises, construction projects, and utility projects.

Question: Has anything self-detonated at the Scrap Yard?

Answer: No, there have been no self-detonated incidences at this site.

Site 43 Remedial Investigation Sampling

Question: What plant or area is this site located at?

Answer: IR site 43 is co-located with the Cast Plant.

Stump Neck Small Arms Range- Phase II Site Investigation

Question: Have any artifacts been found at these ranges?

Answer: No artifacts have been found to date at any of the small arms ranges. Given that only limited soil sampling has been completed, ground disturbance has been minimal.

Question: What is the hazard associated with these sites?

Answer: Typical hazards associated with small arms and skeet ranges include PAHs found in clay birds, explosives, and metals from shotgun shells and bullets. The most common metals are lead, strontium, arsenic, copper, tin, and zinc.

General Questions

Question: Can you provide a status of the base IR Program?

Answer: A status of current and upcoming work at the installation was provided at the RAB meeting. This included the Site 1-Thorium Spill soil removal, Site

11-Caffee Road Landfill remedial action, Site 14-Lab Area soil removal, Site 11/17 munitions interim removal action along shoreline, Site 17-Disposed Metal Parts Along Shoreline soil mixing, Site 21-Bronson Road Landfill remedial action, Site 27-Thermal Destructor 1 soil removal, Site 37-Causeway test trenching, Site 38-Rum Point Landfill test pitting, Site 57-Building 292 TCE Contamination remedial action, Site 66-Turkey Run Disposal Area remedial investigation, and SWMU 14-Photographic Lab Septic Tank System groundwater sampling.

Question: How much soil has been removed from the installation and sent off site in the recent past?

Answer: A removal action summary for the last approximate 10 years by site is shown in the table on the following page.

Removal Action Summary-NSF, IH					
Site Number/Name	Year Completed	Material Disposed of	Quantity	Disposal Facility	Location
Site 6-Hypo Spill, Radiographic Facility	2008	soil	323 CY	Westport Reclamation	Lothian, MD
Site 12-Town Gut Landfill	2003	metal scrap	9.69 tons	Prince George Scrap	College Park, MD
		tires	1.92 tons	BFI Landfill	Baltimore, MD
Site 17-Disposed Metal Parts Along Shoreline	2005	soil	420 CY	Charles County Landfill	Waldorf, MD
Site 19-Catch Basins at Chip Collection Houses	2011	soil	426 tons	Westport Reclamation	Lothian, MD
Site 28-Original Burning Ground	2009	soil	3,200 CY	Soil Safe, Inc.	Brandywine, MD
		misc. construction debris	300 CY	King George County Landfill	King George, VA
		5X munitions debris	34 tons	Montgomery Scrap	Rockville, MD
		single base propellant grains	14,185 each	Strauss Ave. Thermal Treatment Point	NSF-IH
Site 42-Olsen Road Landfill	2005	soil	5,498 tons	Charles County Landfill	Waldorf, MD
Site 57-Building 292 TCE Contamination	2006	soil	1,100 tons	Wayne Disposal, Inc.	Belleville, MI
UXO 32-Scrap Yard	2011	soil	4,800 tons	Westport Reclamation	Lothian, MD
		metal scrap	168 tons	Cambridge Iron & Metal	Baltimore, MD
		wastewater	18,000 gal	Reco Biotechnology	Richmond, VA
		5X munitions debris	32 tons	Montgomery Scrap	Rockville, MD
		CADs/PADs	5,190 each	Strauss Ave. Thermal Treatment Point	NSF-IH