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MINUTES FROM RESTORATION ADVISORY BOARD MEETING 19 FEBRUARY 2009 NSWC  
INDIAN HEAD MD  
2/19/2009  
NAVFAC WASHINGTON

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# INSTALLATION RESTORATION PROGRAM



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



## RESTORATION ADVISORY BOARD (RAB) MEETING

**Date of Meeting:** February 19, 2009, 5:00 pm

### Restoration Advisory Board (RAB) Member Participants:

Mr. Curtis DeTore (S)	Mr. Nathan Delong (N)
Mr. Wayne McBain (C)	Mr. Dennis Orenshaw (F)
Mr. Joseph Rail (N)	
Mr. Elmer Biles (C)	

### RAB Members Not in Attendance:

Mr. Jerry Hamrick (L)	Ms. Karen Wigger (L)
Mr. Jeff Bossart (N)	Mr. Vincent Hungerford (C)

### Additional Attendees:

Mr. Butch Dye (S)	Ms. Margaret Kasim (K)
Mr. Jim Humphreys (N)	Ms. Vicki Waranoski (K)
Mr. Kim Turnbull (K)	Ms. Gunarti Coghlan (K)
Ms. Paula Gilbertson (N)	

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

## **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 28 Removal Action Completion**

Mr. Rail began the presentation by going over the site background/history, and by outlining the goals for the site excavation. He discussed several challenges to project completion, including the discovery of single base propellant grains at the site, as well as Material Potentially Presenting an Explosive Hazard (MPPEH), such as propellant cans, rings, and lids. Because these materials were not expected to be found prior to the work beginning, these discoveries caused work at the site to be temporarily stopped on two occasions. In addition, because of the discovery of the grains and the MPPEH, excavated soil at the site needed to be screened prior to being moved off-site for disposal. Mr. Rail concluded the presentation by giving an overall summary of the project, which included pictures of the finished site, the amount of soil removed, and the weight of grains and MPPEH discovered during the excavation.

A copy of Mr. Rail's presentation (including photographs) is provided in Attachment B.

### **3. UXO 32 Scrap Yard Removal Action Update**

Mr. Rail began the presentation by discussing the background of the scrap yard and outlining the remediation goals, which include reducing risks to human health and ecological receptors associated with PCB's and lead. Goals of the site remediation also include the identification and disposal of remaining suspect Materials of Explosive Concern (MEC) and MPPEH. A number of pictures were shown to help show current and former site conditions. Mr. Rail then had a brief discussion on how the suspect MEC and MPPEH will be handled prior to the environmental investigation. The proposed environmental investigation includes the cleaning of the concrete pad and the excavation of contaminated soil. The excavation and soil screening portion of this phase of work is currently expected to take about 6 months.

A copy of Mr. Rail's presentation (including pictures) is provided in Attachment C.

#### 4. Sites 19 and Stump Neck SWMU 14 Updates

Mr. Nathan Delong gave a presentation detailing an update of activities at SSP Sites 19 and SWMU 14 (located on the Stump Neck Annex). Mr. Delong began the presentation with Site 19, briefly going over the site background, contaminants, and previous environmental investigations. The purpose of the soil sampling investigations was to determine the extent of lead and nitroglycerin in the surface and subsurface soils at the site. Surface and subsurface samples were collected along transects at locations along the drainage way that runs through the site. Additional samples were then taken outside of the transects to completely delineate the extent of contamination in surface soil. The path forward for Site 19 will be to finalize the SSP Report and proceed to an Engineering Evaluation/Cost Analysis (EE/CA), followed by a soil removal action.

Mr. Delong then discussed the site background and previous investigations of SWMU 14. The primary contaminant of concern for this site is cobalt in groundwater. Twenty groundwater samples were taken from the site in order to characterize the extent of contamination (two upgradient groundwater samples were also taken). As a result of basically all of the groundwater samples exceeding a relatively new regional screening level for cobalt in groundwater, the path forward for SWMU 14 will be to proceed to the Remedial Investigation (RI) phase.

A copy of Mr. Delong's presentation (including pictures) is included in Attachment D.

#### 5. Site Inspection Sampling Plan for Small Arms/Skeet Range

Mr. Rail discussed the Site Inspection Sampling Plan for the Small Arms/Skeet Range sites located on the Stump Neck Annex. These sites include the Marine Rifle Range (UXO 14), the Old Skeet and Trap Range (UXO 15), the Roach Rd. Rifle Range (UXO 25), the Rum Point Skeet Range (UXO 16), and the Small Arms (Pistol) Range (UXO 17). For each site, Mr. Rail showed maps displaying where past activities took place on the site, pictures of what the site currently looks like, and aerial photographs showing proposed sampling locations. All locations will be sampled for several munitions constituents (MC). A discussion of the Conceptual Site Model (CSM) as well as the sampling approach was also included for each site.

A copy of Mr. Rail's presentation (including pictures) is provided in Attachment E.

6. Comments, Questions, and Answers

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

7. Conclusion of Formal Presentations

Mr. Rail presented the tentative agenda for the next RAB meeting, which is scheduled for June 18, 2009. A copy of the agenda is included in Attachment G.

Mr. Rail then concluded the formal portion of the meeting at 6:05 P.M., and thanked all in attendance. He then invited everyone stay for the Public Meeting being held for Sites 6 and 17 Proposed Plans.

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

February 19, 2009

- 5:00 - 5:10**            **ARRIVAL/WELCOME**  
Mr. Joseph Rail  
Naval Facilities Engineering Command, Washington (NAVFACWASH)  
Remedial Project Manager
- 5:10 - 5:30**            **SITE 28 REMOVAL ACTION COMPLETION**  
Mr. Joseph Rail
- 5:30 - 5:40**            **UXO 32 (SCRAP YARD) UPDATE**  
Mr. Joseph Rail
- 5:40 - 5:50**            **SSP SITE UPDATES (SITES 19 & SWMU 14)**  
Mr. Nate Delong
- 5:50 - 6:00**            **STUMP NECK SMALL ARMS/SKEET RANGE SAMPLING**  
Mr. Joseph Rail
- 6:00 - 7:00**            **SITE 6 & SITE 17 PUBLIC MEETING**
- 7:00**                    **ADJOURN**



## NAVAL SUPPORT FACILITY, INDIAN HEAD



### Site 28 Removal Action Completion

Joseph Rail  
NAVFAC Washington

February, 2009

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### *Site 28 Status Update*



- *Site Background*
  - *Approximately 1.8 acre site located on the Northeast corner of NSF-IH*
  - *Bordered by Slavin's Dock and Mattawoman Creek*
  - *Location of the former zinc recovery furnace and former burning cage*
- *Goals for Site 28*
  - *Reduce risks to human health and ecological receptors associated with the chemicals of concern (COCs)*
    - *COCs: Antimony, Cadmium, Copper, Lead, Mercury, Nickel, Silver, and Zinc*
  - *Restore site to improved graded conditions including site restoration and vegetation*



## *Preconstruction Site Conditions*



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## *Preconstruction Site Conditions (cont.)*



4



## *Initial Site Activities*



- *Site 28 Activities began in October 2007*
- *Began installation of Erosion & Sediment Controls*
  - *Super Silt Fence*
  - *Gabion Baskets*
  - *Temporary Dike Swale*
  - *Check Dam*



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## *Clearing and Grubbing*



6



## Initial Excavation



- *Began removal of the top 6 inches of soil for transportation and storage at Caffee Road Landfill*
- *UXO technicians were to observe all excavation operations and remove propellant if identified*



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## Identification of Propellant Grains



- *November 2007 site activities were stopped and the crew demobilized due to the identification of 3 single base propellant grains*
- *An Explosive Safety Submission (ESS) and Memorandum of Agreement (MOA) were prepared and approved to address propellant grains identified at the site*
- *Crew remobilized and resumed activities in February 2008*



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## NOSSA Audit



- *NOSSA conducted an audit of activities at Site 28 to ensure compliance with explosive safety requirements*
- *During NOSSA audit it was determined that MPPEH was present at the site (propellant cans, lids, and rings)*
- *Also propellant grains were still present beneath the initial 6-inch removal*
- *Operations were stopped and the crew demobilized again to prepare and submit an amended ESS and revised MOA to address MPPEH and propellant grains remaining at the site*
- *The amended ESS was approved by NOSSA and the crew remobilized in April 2008*

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## MPPEH



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## *Excavation*



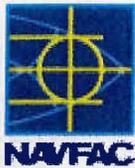
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## *Screening Operation*



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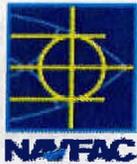
## Transportation and Disposal



- *Screened & certified soils transported off base for disposal*
- *13 Shipments were made*
  - *Total disposal was 5,734 tons*



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## Weather Damage



- *Severe rainfall caused damage to the site on several occasions*
  - *Required the installation of many new E&S and drainage features to control rainfall on Site 28 and drainage from surrounding sites/areas*
  - *Project activities were delayed while weather related repairs were made*



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## *Weather Damage Repairs*



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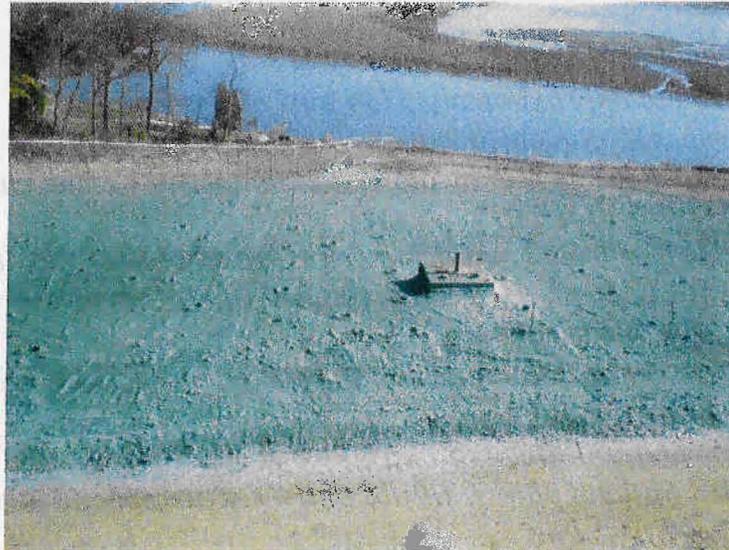
## *Backfill and Topsoil Placement*



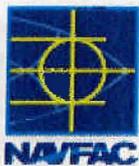
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## *Hydroseeding*



17



## *Trees and Plants*



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## Project Summary



- Excavated approximately 4400 cy of soil
- Disposed of approximately 5734 tons of screened soil
- Performed E&S control repairs including installation of HDPE pipe from 36-inch discharge into Swale 4, additional Silt Fence, check dam to Swale 4, and sediment removal
  - LBM performed maintenance on the ditch near the dirt road
    - Coordinated work schedules while LBM worked within screening exclusion zones
- Completed restoration and installation of South Side of Site 28 including Swale 4 modifications
- Completed backfilling and regrading of Site 28
- Installed wetland plants, shrubs and trees per specifications

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## Project Summary (Cont.)

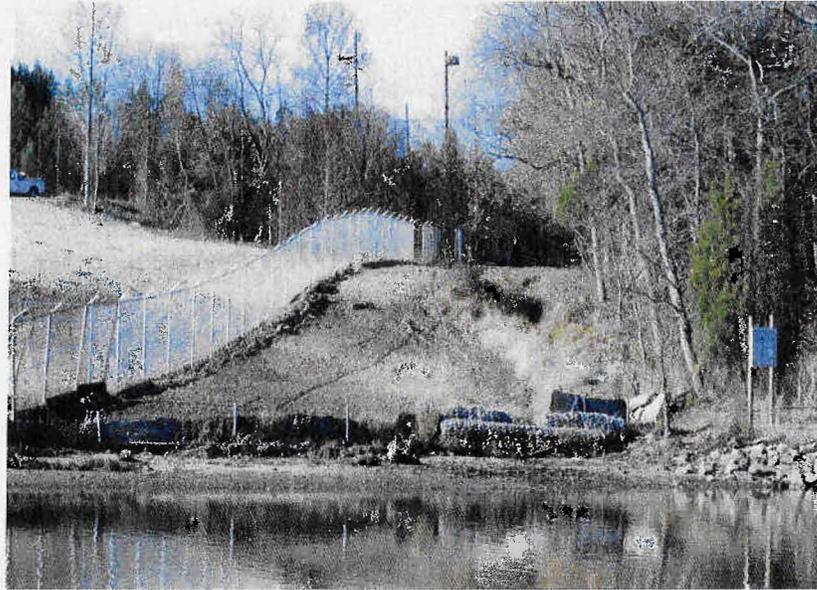


- Propellant grains
  - Total Grains: 14,185
  - Total Weight: 222,244 grams (490 lbs)
  - Total Number of Shipments: 74
- MPPEH (rings, lids, cans, etc)
  - Total 5X Certified (approx): 88,662 pieces
  - Total 5X weight (approx): 68,407 lbs (34 tons)
  - Total number of shipments: 3
- Once vegetation has been established and MDE and FEAD have given approval (Spring 2009), all E & S features will be removed.

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## *Project Summary (Cont.)*



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## *Project Summary (Cont.)*



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## *Project Summary (Cont.)*



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*Questions?*

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# NAVAL SUPPORT FACILITY, INDIAN HEAD

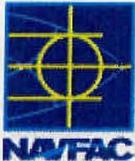


## UXO 32 (Scrap Yard) Removal Action Update

Joseph Rail  
NAVFAC Washington

February, 2009

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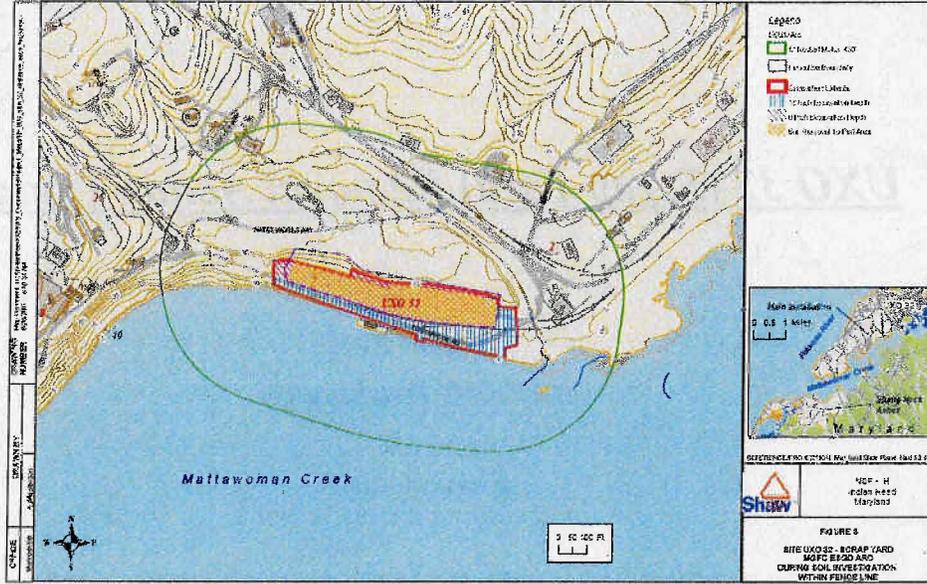
## UXO 32 Status Update



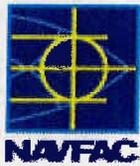
- *Site Background*
  - *Approximately 2.5 acre site located on the southeastern portion of NSF-IH*
  - *Comprised of 1.5 acre concrete pad and 1 acre roadway area outside fence*
  - *Location of a former coal & scrap metal storage area*
- *Goals for UXO 32*
  - *Reduce risks to human health and ecological receptors associated with the chemicals of concern (COCs)*
    - *COCs: PCBs and lead*
  - *Identification and disposal of remaining suspect MEC and MPPEH*
  - *Investigation, excavation, and screening of soils*



# UXO 32 Status Update



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# Current Site Conditions



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## *Current Site Conditions (cont.)*



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## *Site History*



- *In November 2002, UXO technicians inspected & identified many ordnance items and some were demilitarized*
- *In December 2002, work was stopped following a MEC-related accident*
- *Later, the site was transferred to the MRP and designated as UXO 32*
- *In August 2006, work resumed as Phase I to demilitarize large MPPEH and suspect MEC items*
  - *Included approved site waiver, ESS, and MPPEH support plan*
  - *Items were identified/treated with Pulsed Elemental Analysis (PELAN) and water jet cutting*
  - *Non-ordnance related scrap metal and debris also removed*
- *Phase I addressed larger items (above 5") leaving smaller MEC & MPPEH*
- *Remaining items were flagged but not investigated*

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## Phase I Work



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## Phase II Work



- *Finalize CNO Waiver, ESS, and MOA*
- *Package & remove 220# frag bomb and 8" projectile*
  - *Both items determined to be safe for storage & transportation by Dahlgren EOD*
- *Mobilize equipment & personnel in April 2009 (tentative)*
- *Complete clearing & grubbing in support & excavation areas*
- *Contained Detonation Chamber (CDC), day boxes, storage magazines, and mechanical screener will be positioned in approved site locations*
- *Visual/hand investigation (using hand tools) of all soils on concrete pad*
  - *Concrete pad area will be separated into 50' x 50' grids*
  - *Suspect MEC and MPPEH larger than CADs/PADs to be removed & inspected*
  - *A QC check will be completed to ensure each grid is free of large items prior to mechanical excavation & screening*

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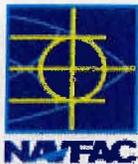


## Phase II Work (cont.)



- *Screen investigated soils through a mechanized screener*
  - *Screening shall ensure removal of all items including CADs/PADs*
  - *Non-ordnance related scrap metal and debris also removed*
- *Qualified UXO technicians will confirm identity of each item discovered, determine whether it is safe to move, and classify the potential explosive content*
- *Large machining items (lathes, drill presses, etc) without explosive residue will be treated as scrap metal*

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## 220# Frag Bomb & 8” Projectile



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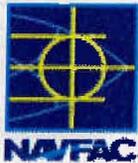


## Contained Detonation Chamber



- *CDC will be used to demolish suspect items which qualify for detonation*
  - *Items must be less than 105mm and contain no more than 13 lbs TNT equivalent*
  - *Detonation chamber must have a minimum ¼" armor plating on interior*
- *CDC has an established Explosive Safety Quantity Distance (ESQD) of 0 feet during operations*
- *30 foot exclusion zone (EZ) will be established around the CDC prior to detonation*
- *When EZ is active, only CDC operators and safety personnel are allowed within EZ area*
- *All items waiting for CDC treatment or which cannot be immediately packaged and transported off site will be stored in temporary magazines*

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## Contained Detonation Chamber



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## *Contained Detonation Chamber*



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## *Environmental Investigation*

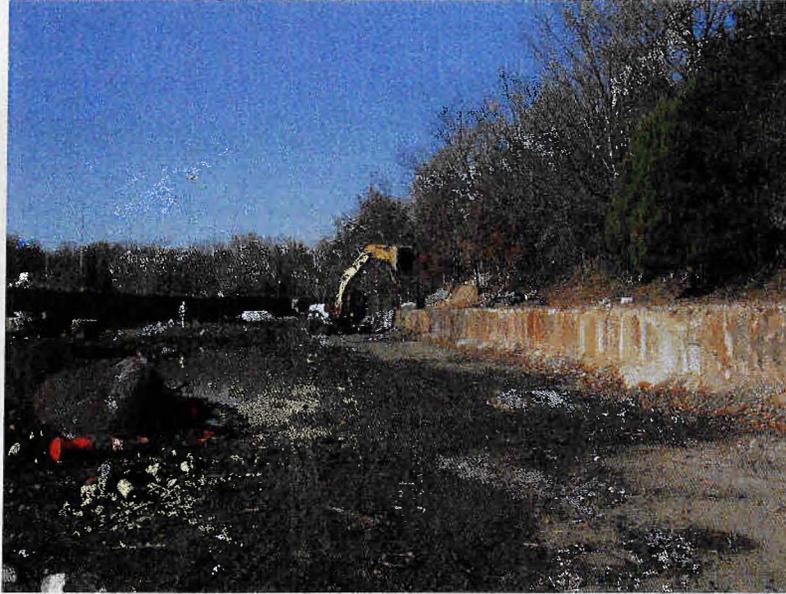


- *Once all soils and items inside the fence are removed, concrete pad will be cleaned and the area will be investigated based on expected COCs (PCBs and lead)*
- *Concrete pad condition will be evaluated and considered in final remedy*
- *COCs outside of fence will have been addressed during excavation, screening, and disposal of soil*
- *Excavation & screening during Phase II expected to last approximately 6 months*

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## *Environmental Investigation*



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## *UXO 32 Removal Action Update*



*Questions?*

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**NAVAL SUPPORT FACILITY,  
INDIAN HEAD  
RESTORATION ADVISORY BOARD**



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***Sites 19 and Stump Neck SWMU 14 Updates***

*Nathan DeLong  
NAVFAC Washington*

*February, 2009*

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***Sites 19 & SWMU 14***



- 
- ***Objective***
  - Present an update of additional sampling activities at:
    - Site 19 – Catch Basins at Chip Collection Houses
    - Stump Neck SWMU 14 – Photographic Lab Septic Tank System
  - Present a path forward

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ATTACHMENT (D)



## *Site 19- Catch Basins at Chip Collection Houses*



- *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
- Contaminants of concern include lead and explosives

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## *Site 19- Catch Basins at Chip Collection Houses*



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## *Site 19- SSP Investigation Results*



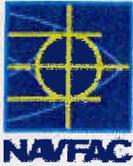
- SSP investigation was performed in October 2005
- Surface soil samples were collected around and downgradient of two chip collection basins, one associated with Building 785 and the other associated with Building 1051
- Samples were analyzed for TAL metals, explosives (including nitroglycerine and nitroguanidine), TOC, and pH
- No further investigation was recommended at Building 1051 because samples showed low or undetected concentrations of constituents
- Human health and ecological risks associated with nitroglycerin and lead downgradient of the Building 785 chip collection basin were identified
- In December 2006, IHIRT agreed that an additional investigation was warranted



## *Site 19 - Additional Investigation*



- Characterize the nature and extent of metals and explosives (including nitroglycerin and nitroguanidine) in surface and subsurface soil downgradient from the Building 785 catch basin.
- Determine if metals and explosives (including nitroglycerin and nitroguanidine) are present in groundwater downgradient from the Building 785 catch basin.
- Perform human health and ecological risk screenings to assess whether detected constituents in site soil pose potential risks to human health and ecological receptors.



## Site 19 – Additional Sampling



- Surface and subsurface soil samples were collected along transects at locations around the drainageway.
- Five sampling locations for each transect
  - One location in drainageway and
  - At each location, soil samples were collected from 0 to 0.5 feet bgs, 2 to 3 feet bgs, and 5 to 6 feet bgs. Samples tested for TAL Metals and explosives (nitroglycerin and nitroguanidine)
- These additional samples were taken to delineate the lateral and longitudinal extent of lead and nitroglycerin in the surface soil and subsurface soils
  - Includes two new transects south of Silo Rd.

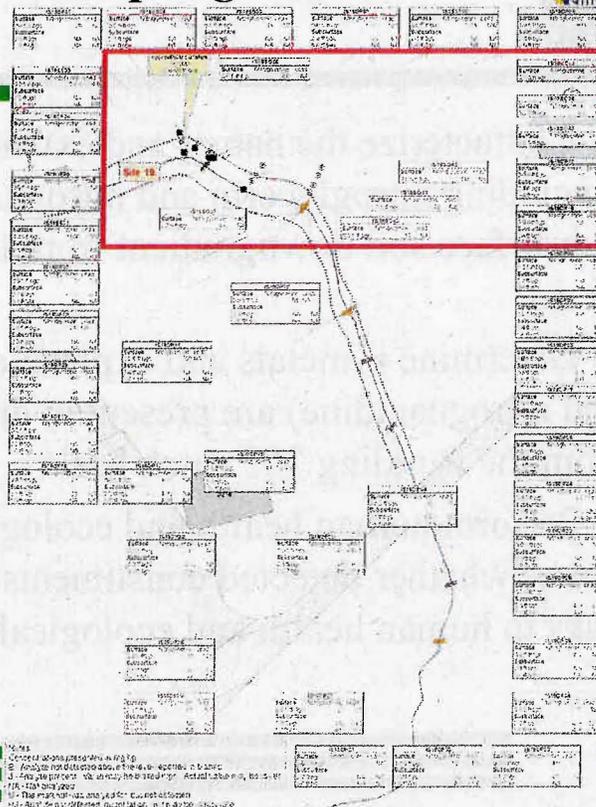
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## Site 19 – Sampling Results



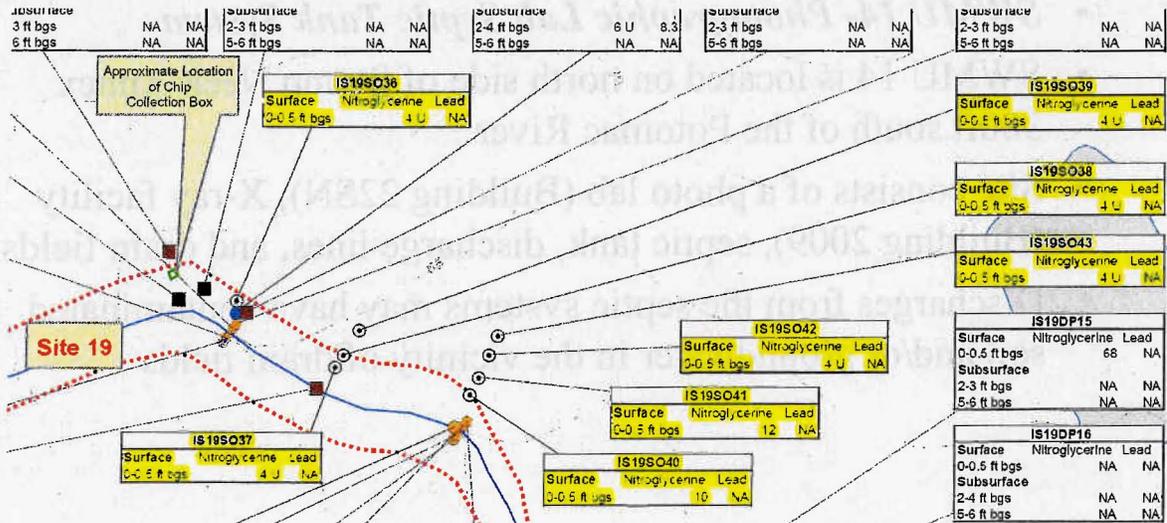
- Screening Levels
  - Nitroglycerin = none available
  - Lead = 400 mg/kg
- Most recent samples taken to further delineate lateral extent of lead and nitroglycerin in surface soil



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## Site 19 – Sampling Results



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## Site 19 – Additional Sampling Results



- Human Health and Ecological Risk Assessments showed COPC's of lead and nitroglycerin in surface and subsurface soils as well as arsenic and lead in groundwater
- The results from the surface and subsurface samples taken successfully delineate the extent of lead and nitroglycerin contamination at the site
  - No further action required south of Silo Rd.
- Groundwater sampling results showed no dissolved metals exceeding federal MCL's
- Path Forward
  - Finalize the SSP Report
  - Move to an EE/CA
  - Perform a Removal Action of the contaminated surface and subsurface soils north of Silo Rd.

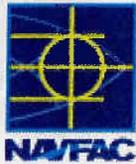


## *SWMU 14*

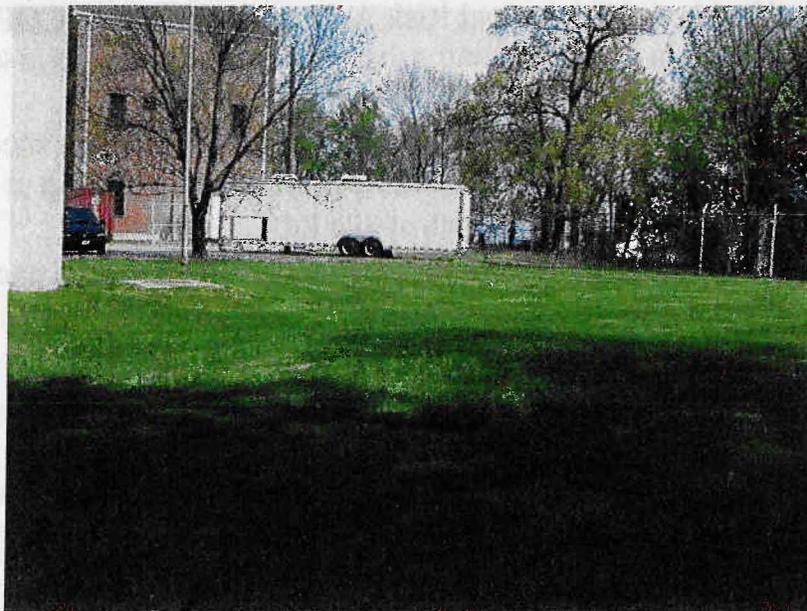


- *SWMU 14- Photographic Lab Septic Tank System*
- SWMU 14 is located on north side of Stump Neck Annex 300ft south of the Potomac River
- Site consists of a photo lab (Building 22SN), X-ray facility (Building 2009), septic tank, discharge lines, and drain fields
- Discharges from the septic systems may have contaminated soil and/or groundwater in the vicinity of drain fields

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## *SWMU 14- Photographic Lab Septic Tank System*



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## *Stump Neck SWMU 14 – SSP Investigations and Results*



- SSP investigation was performed in October/November 2005.
- Six soil borings were advanced (three in each leach field); one subsurface soil sample was collected immediately above the water table from each boring.
- Soil samples were analyzed for TCL VOCs, TCL SVOCs, TAL metals, TOC, and pH.
- Two monitoring wells were installed, one in each leach field.
- Groundwater sample was collected from IU14MW01, located in the older leach field. Sample was analyzed for TCL VOCs, TCL SVOCs, TAL metals (filtered and unfiltered), TOC, and pH.
- Groundwater samples could not be collected from IU14MW02, located in the newer leach field, due to insufficient well yield at the screened interval.

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## *Stump Neck SWMU 14 – SSP Investigations and Results (continued)*



- The SSP Investigation Report noted no human health or ecological risk concerns associated with subsurface soil.
- Cobalt was the only COPC identified in groundwater at Stump Neck SWMU 14. Cobalt may pose a risk to human health and ecological receptors.
  - The total and dissolved concentrations of cobalt (1,110 µg/L and 1,080 µg/L) in groundwater were higher than the 95 percent UTL background concentration (13 µg/L).
  - Applying a very conservative 10-to-1 dilution factor for groundwater discharge into a surface water body, the ecological screening value for cobalt is 230 µg/L.

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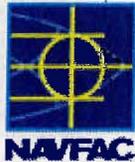


## Stump Neck SWMU 14 - Additional Investigations



- Determine if metals (total and dissolved) are present in wells IU14MW01 (older drain field), IU14MW02 (newer drain field), beneath former septic tank and both drain fields.
  - MW02 was found dry, MW03 installed and used instead
    - MW03 was sampled for TCL VOCs, TCL SVOCs, TAL metals (total and dissolved), TOC, and pH
- Perform human health and ecological risk screenings to assess whether detected constituents in groundwater pose potential risks to human health and ecological receptors.

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## Stump Neck SWMU 14 – Results



- Cobalt-60 was analyzed in samples from wells IU14MW01 and IU14MW03. Results were non detect.
- **Human Health**
- Only cobalt was found to be a COPC in the monitoring well samples.
- **Ecological**
- Only cobalt likely poses potential risk after accounting for dilution upon discharge to river

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## Stump Neck SWMU 14 – Additional Cobalt Sampling



- Objective
  - Characterize the extent of Cobalt in groundwater
  - Take 20 groundwater samples by means of a grid system across the site
    - Grid has 50 foot spacing, with each sample being taken in approximate grid center
  - Two upgradient groundwater samples also collected
- Analysis
  - All groundwater samples were analyzed for total and dissolved Cobalt
  - Background Cobalt at the site is listed as 39.6 ug/L

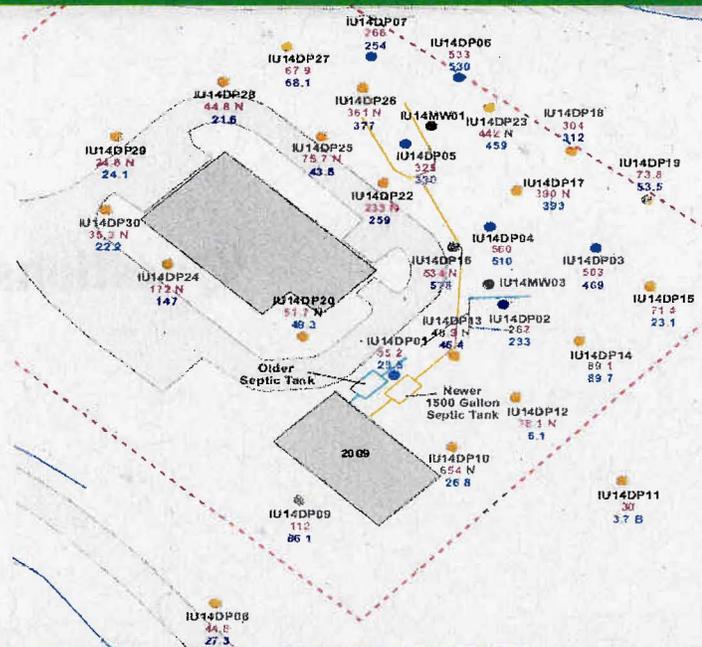
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## Stump Neck SWMU 14 – Additional Cobalt Sampling (cont.)



- Red are total cobalt
- Blue are dissolved cobalt



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## *Stump Neck SWMU 14 – Additional Cobalt Sampling (cont.)*



- As of July 7, 2008, risk-based concentrations (RBCs) have been replaced with regional screening levels (RSLs).
  - Cobalt RBC = 700 ug/L
  - Cobalt RSL = approximately 11 ug/L
- Path Forward
  - Move SWMU 14 to the RI/FS Phase

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## *Sites 19 and SWMU 14*



**Questions?**

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Site Inspection Sampling Plan  
Small Arms/Skeet Range  
Stump Neck Annex  
Naval Support Facility,  
Indian Head, Maryland

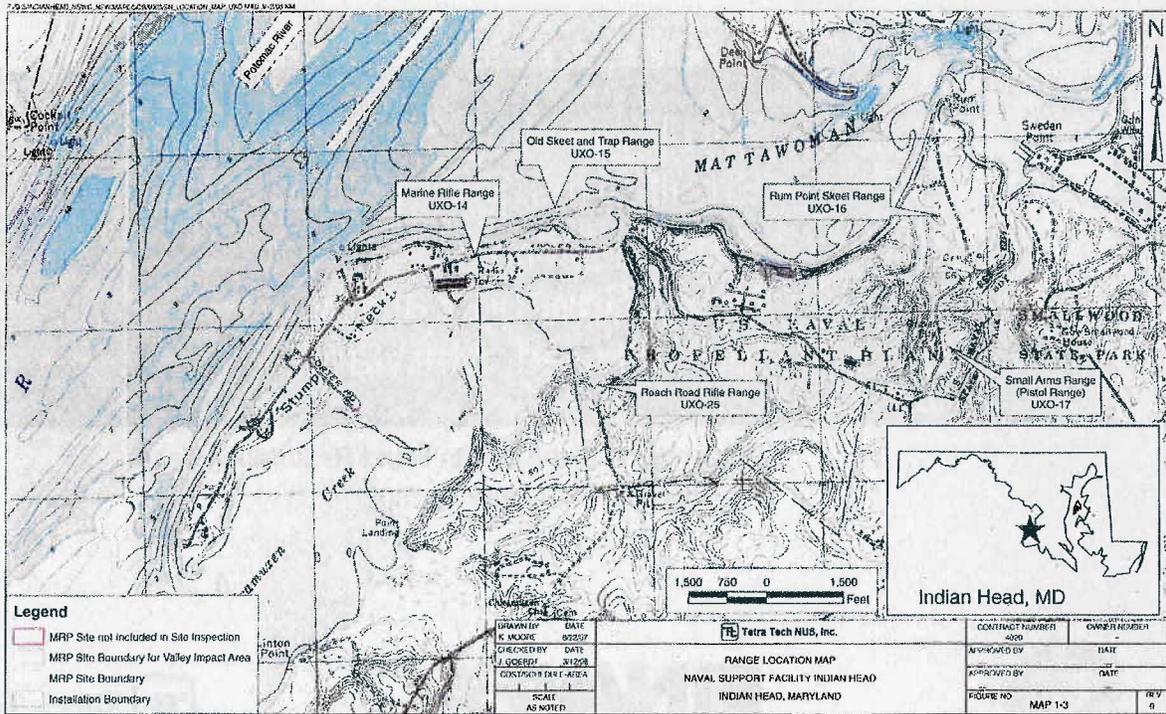
Presentation to the Indian Head Restoration Team  
Wednesday, December 3, 2008



MRP Site Inspection; Small Arms/Skeet Ranges;  
Stump Neck Annex

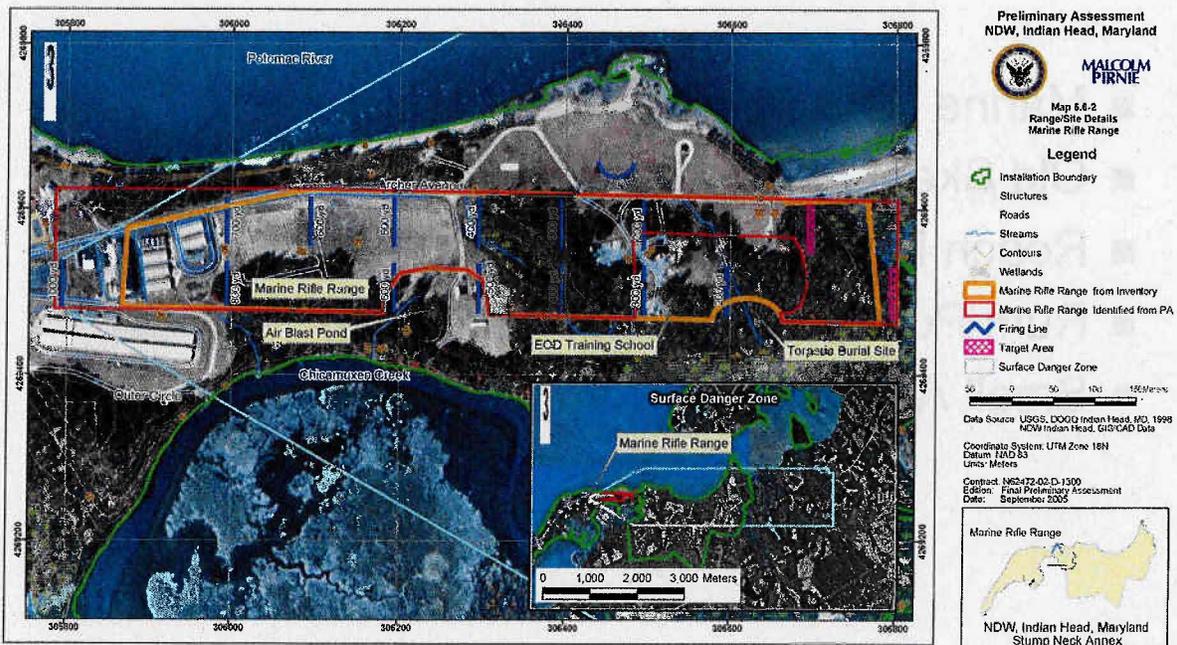
- Marine Rifle Range (UXO 14)
- Old Skeet & Trap Range (UXO 15)
- Roach Road Rifle Range (UXO 25)
- Rum Point Skeet Range (UXO 16)
- Small Arms (Pistol) Range (UXO 17)

# Locations of Small Arms/Skeet Ranges



P120801-2

# Marine Rifle Range



P120801-3

## Marine Rifle Range



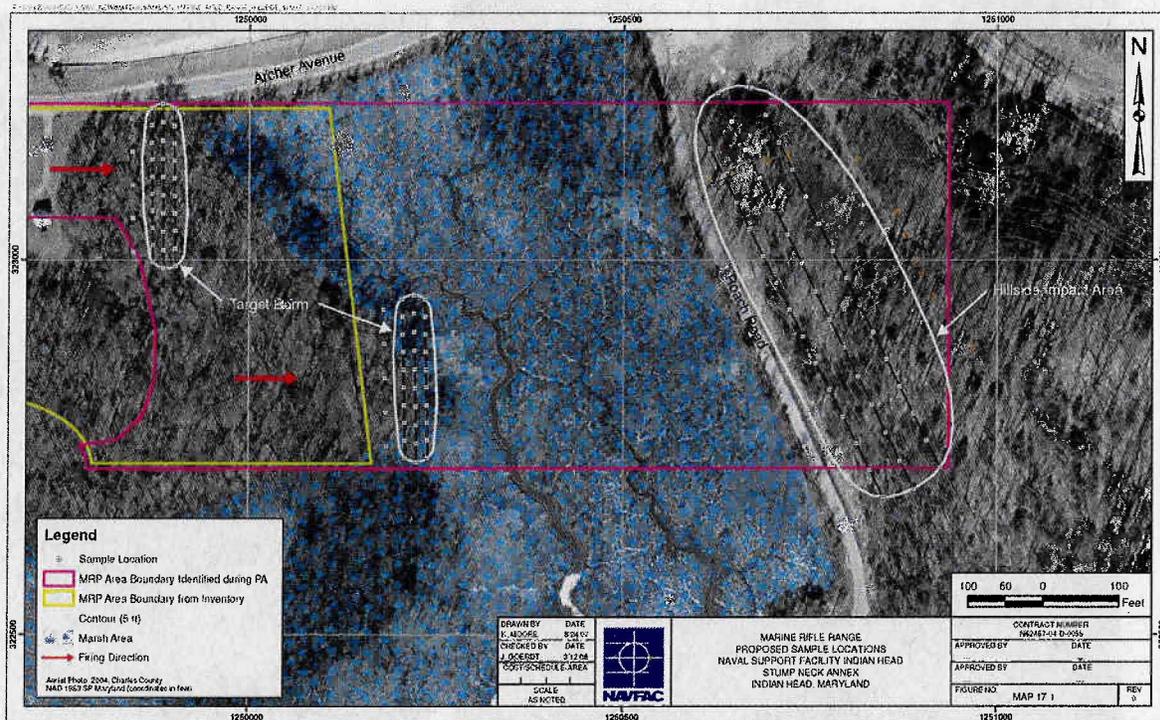
P120801-4

## Marine Rifle Range – CSM

- Two discrete target butts on east end of rifle range
- Firing points at 100 yard intervals from 200 yards to 1,000 yards
- Used from 1911 through 1918--use appears to be heavy
- MC consists primarily of lead, antimony, copper, zinc, arsenic, and tin
- MC impacts at berms and hillside to east of berms
- Human and ecological risks may exist due to metals in soils
- Potentially complete pathways exist

P120801-5

# Marine Rifle Range – Data Collection



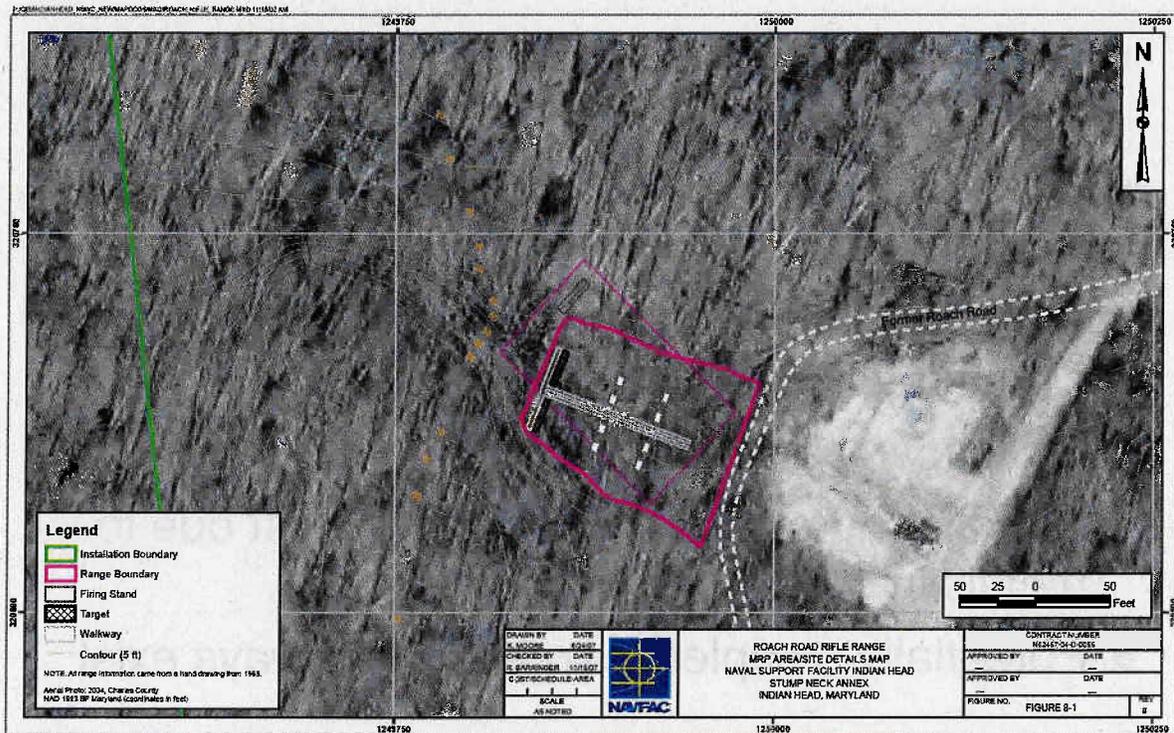
P120801-6

# Marine Rifle Range – Data Collection

- Collect sample at
  - Range floor immediately in front of berms (5 samples each)
  - Berms (30 samples each)
  - Hillside behind berms (45 samples)
- Step-out (vertical or horizontal as necessary)
- Drainage way/sediment samples based on walk-over
- Analytical program for
  - Pb by XRF in field
  - Pb, Sb, As, Zn, Cu, and Sn in lab
  - Analyze 20% but no less than 20 samples by laboratory

P120801-7

# Roach Road Rifle Range (UXO 25)



P120801-8

# Roach Road Rifle Range



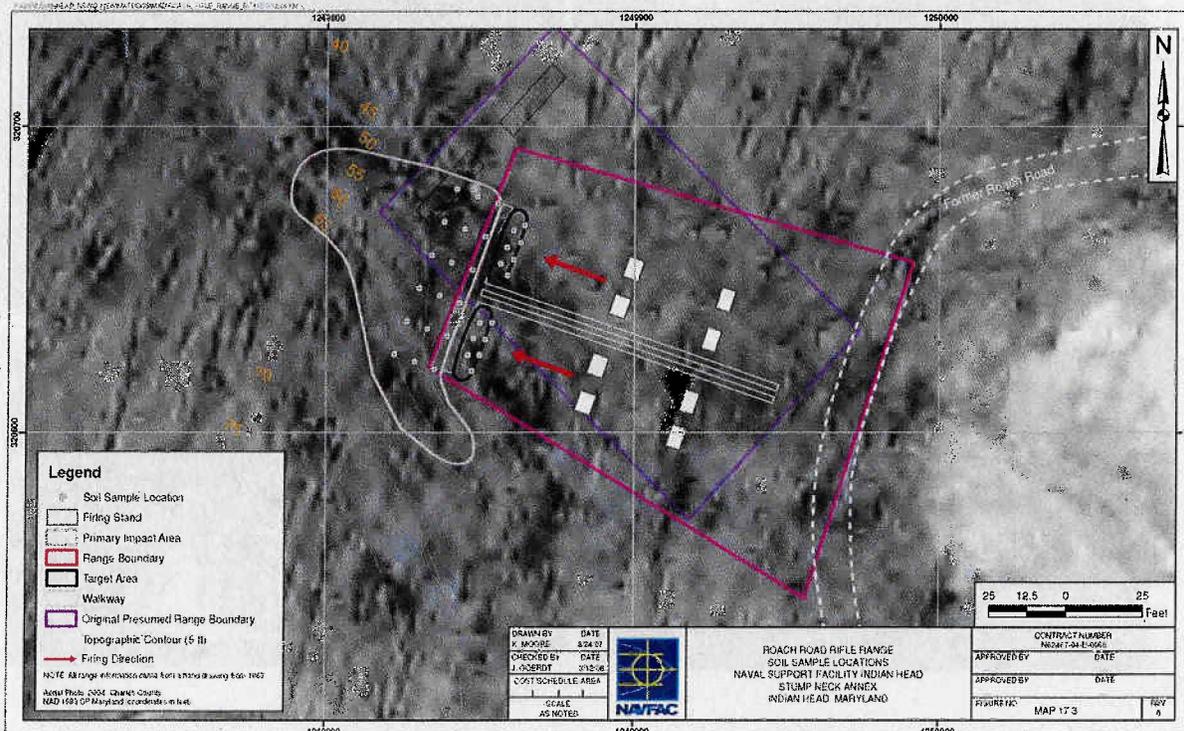
P120801-9

# Roach Road Rifle Range - CSM

- Small arms firing range used from 1967 through 1980s
- Consisted of firing points, target, and barricade (target butt) behind the targets
- MC consists primarily of lead, antimony, copper, zinc, arsenic, and tin
- MC impacts at berm
- Human and ecological risks may exist due to metals in soils
- Potentially complete exposure pathways exist

P120801-10

# Roach Road Rifle Range – Data Collection



P120801-11

# Roach Road Rifle Range – Data Collection

- Collect sample at
  - Primary impact berms - hillside (32 samples)
- Step-out (vertical or horizontal as necessary)
- Drainage way/sediment samples based on walk-over
- Analytical program for
  - Pb by XRF in field
  - Pb, Sb, As, Zn, Cu and Sn by lab
  - Analyze 20% but no less than 20 samples by laboratory

P120801-12

# Small Arms (Pistol) Range (UXO 17)



P120801-13

## Small Arms (Pistol) Range



P120801-14

## Small Arms (Pistol) Range - CSM

- The earthen slope behind the former range targets is on east end of range
- Firing points were within 25 yards of the targets which were located in front of the hillside, which served as the backstop
- Used from mid-1980s through 1991
- MC impacts in lower hillside

P120801-15





## Old Skeet & Trap Range (UXO 15)



P120801-20

## Old Skeet & Trap Range - CSM

- Located along Potomac River
- Shot fall zone extends into the Potomac River
- In use from 1966 through 1991
- Primary impacts from PAHs from skeet on land portion
- Primary impacts from metals (Lead) on land and water
- MC consists primarily of PAHs, lead, antimony, copper, zinc, arsenic, and tin
- Human and ecological risks may exist due to metals in soils
- Potentially complete exposure pathways exist

P120801-21

## Old Skeet & Trap Range - Study Boundaries

- Soils and drainage way sediments are media of concern
- Groundwater not addressed
- Entire shot fall zone
- Initial soils vertical boundary of 1 foot bgs – may extend
- Initial sediment vertical boundary of 6 inches

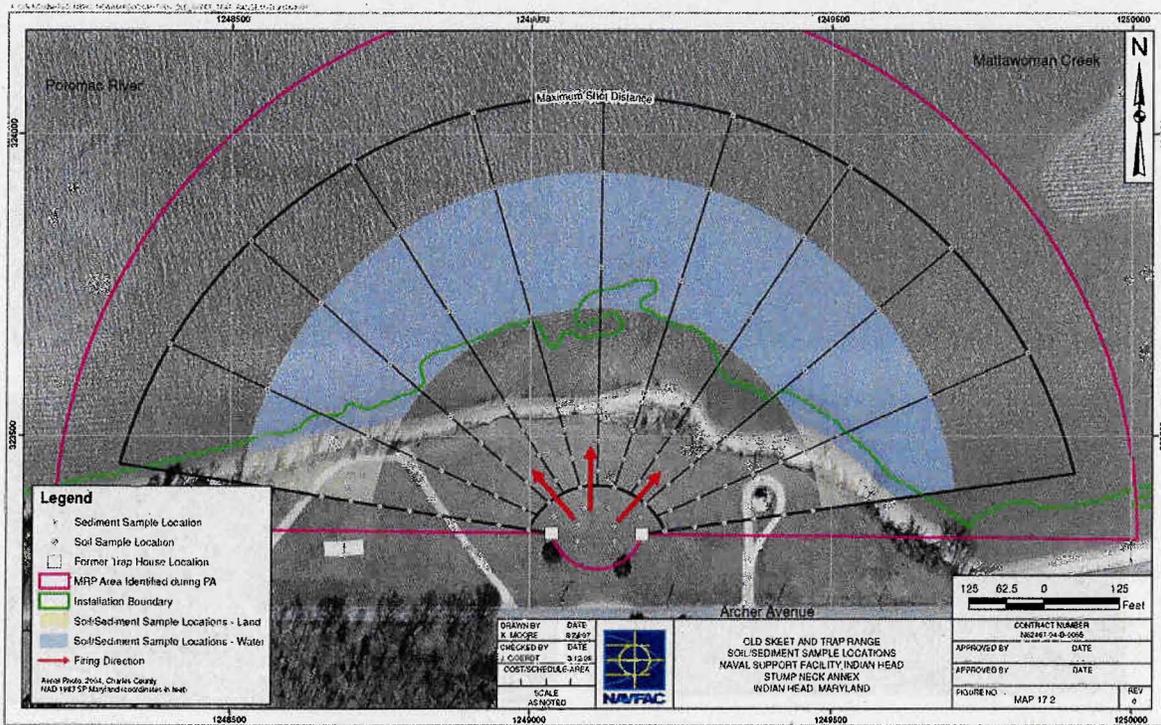
P120801-22

## Old Skeet & Trap Range - Data Collection

- Collect samples at
  - 56 surface soil locations
  - 25 sediment samples within Potomac River
- Step-out (vertical or horizontal as necessary)
- Drainage way/sediment samples based on walk-over
- Analytical program for
  - Pb by XRF in field
  - PAHs, Pb, Sb, As, Zn, Cu, and Sn by lab
  - Analyze 20% but no less than 20 samples by laboratory
  - 3 samples for soil property (pH, TOC, CEC)

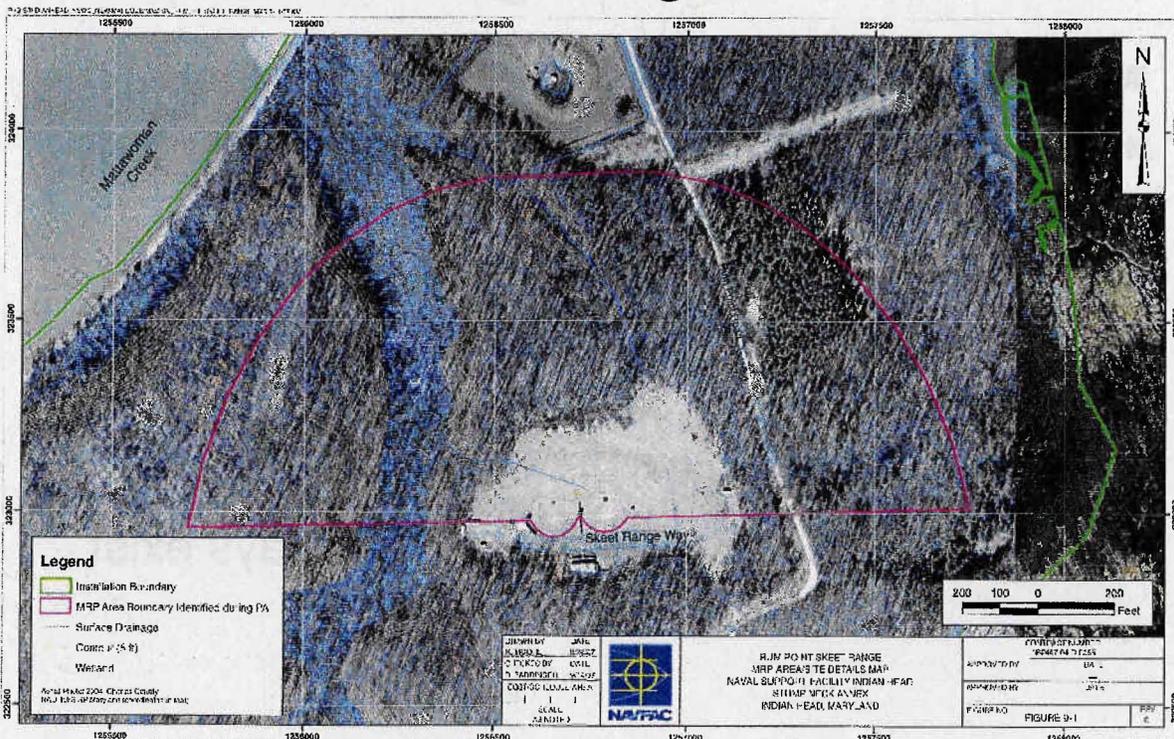
P120801-23

# Old Skeet & Trap Range - Data Collection



P120801-24

# Rum Point Skeet Range



P120801-25

## Rum Point Skeet Range



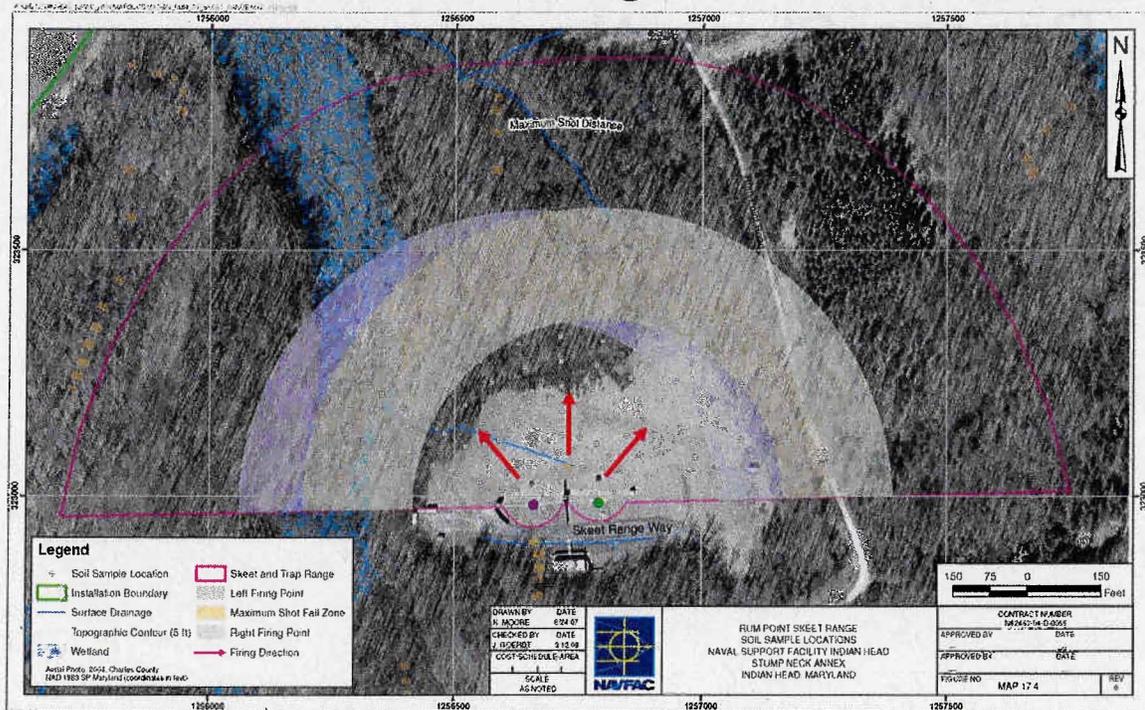
P120801-26

## Rum Point Skeet Range - CSM

- Primary impacts from PAHs and metals
- MC consists primarily of PAHs, lead, antimony, copper, zinc, arsenic, and tin
- Human and ecological risks may exist due to PAHs and metals in soils
- Ecological risks may exist due to PAHs and metals in Potomac River sediments
- Potentially complete exposure pathways exist

P120801-27

# Rum Point Skeet Range - Data Collection



P120801-28

# Rum Point Skeet Range - Data Collection

- Collect samples at
  - 81 surface soil locations
- Step-out (vertical or horizontal as necessary)
- Drainage way/sediment samples based on walk-over
- Analytical program for
  - Pb by XRF in field
  - PAHs, Pb, Sb, As, Zn, Cu, and Sn by lab
  - Analyze 20% but no less than 20 samples by laboratory
  - 3 samples for soil property (pH, TOC, CEC)

P120801-29

# MRP Site Inspection; Small Arms/Skeet Ranges; Stump Neck Annex

■ 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

February 19, 2009

### Arrival/Welcome

No questions were asked nor comments made during this topic.

### Site 28 Removal Action

Question: What kinds of propellants were found?

Answer: Single based propellant grains.

Question: Where did they take the excavated soil?

Answer: The excavated soil was taken to a permitted off-site disposal area (King and Queen Landfill.)

Question: What did this project end up costing?

Answer: The removal action was originally supposed to cost \$1.1 million, but ended up costing just over \$2 million due to the discovery of propellant grains and MPPEH that required labor-intensive screening.

Question: Were any of the objects found during the excavation salvageable?

Answer: No. All objects were certified as scrap metal and sent to a recycling facility.

Question: Could an ESS be written so that you would be able to store more than one pound of propellant grains at a time?

Answer: Yes, but the more pounds you store would result in larger exclusion zones for the site.

Question: How did the grains get there and what years were they placed there and what size were they?

Answer: It is not completely known how the grains got to the site and it appears that they were disposed there over time. The grains were approximately the size of a cigarette butt, and it is not known what year(s) the grains were disposed of.

Question: What was the non-inert material and how did the non-inert material get handled?

Answer: The non-inert material were the propellant grains and they were the only materials that were considered energetic. The propellant grains were handled by NSWC and expended through thermal treatment.

Question: What happened to the inert material?

Answer: The inert material was sent to a smelter for recycling.

#### UXO 32 Scrap Yard Removal Action Update

Question: Is the screening performed on a sample basis or is it done over the whole site?

Answer: Mechanical Screening will be performed in all areas where MPPEH, such as CADs and PADs are comingled with piles of soil. Screening will continue until the concrete pad is exposed in entirety. This accounts for most, but not all, of the site.

#### Sites 19 and Stump Neck SWMU 14 Updates

Question: Where did the NG at Site 19 come from?

Answer: The NG at Site 19 came from grains that were sent through burlap sacks in the chip collection area. Any NG that wasn't captured by the sacks would have been deposited in the drainage swale.

Question: Was there a carrier of NG at Site 19 that was the cause of it's deposition?

Answer: The deposition of NG into the soil was likely from wastewater (containing NG) that was generated from the chip collection houses.

Question: Was the septic system at SWMU 14 pumped regularly?

Answer: Perhaps, but the building is now connected to a sewer system.

Question: How was background concentration established for Cobalt in groundwater and was it naturally occurring?

Answer: The background concentration for cobalt in groundwater at NSF Indian Head was established during a Background Soil Investigation that was completed in 2002. Since the background levels are lower than the levels seen in the groundwater samples taken from SWMU 14, it is believed that the levels of cobalt in groundwater at the site are not naturally occurring.

#### Small Arms/Skeet Range Update

Question: In reference to the Small Arms Pistol Range, will you just be looking at the hillside, or will you be looking at other locations?

Answer: We will be looking for munitions constituents (MC) at the bottom of the berm and the hillside in general.

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

June 18, 2009

- 5:00 - 5:10**            **ARRIVAL/WELCOME**  
Mr. Joseph Rail  
Naval Facilities Engineering Command, Washington (NAVFACWASH)  
Remedial Project Manager
- 5:10 - 5:30**            **SITE 17 & 47 GROUNDWATER REMEDIAL ACTIONS**  
Mr. Joseph Rail
- 5:30 - 5:40**            **UXO 32 (SCRAP YARD) UPDATE**  
Mr. Joseph Rail
- 5:40 - 5:50**            **SITE 8 SAMPLING RESULTS**  
Mr. Nate Delong
- 5:50 - 6:00**            **MRP MAIN AREA SI UPDATE**  
Mr. Joseph Rail
- 6:00**                    **ADJOURN**