INSTALLATION RESTORATION PROGRAM



NAVAL SUPPORT FACILITY INDIAN HEAD

3838 STRAUSS AVENUE INDIAN HEAD, MARYLAND 20640-5133



RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES

Date of Meeting: CANCELLED from October 15, 2020

RAB Member Attendees:

N/A

Additional Attendees:

N/A

RAB Members Not in Attendance:

N/A

RAB Update:

1. Latest Events

Due to restrictions from the COVID virus, the October 15, 2020 RAB meeting was cancelled. In lieu of a meeting, this minutes package was compiled that includes all of the information that would have been presented at the meeting. A copy of the proposed agenda from the cancelled meeting is included in Attachment A and the RAB presentations are included in Attachment C. The next RAB meeting is tentatively scheduled for Thursday, October 14, 2021. A copy of the draft agenda is included in Attachment B.

2. RAB Presentations

Presentations and updates prepared by NAVFAC Washington include the FY21 Budget Update, the Site 38 Groundwater Evaluation Update, the Site 68 Pre-EE/CA Investigation Update, and the Stump Neck Small Arms/Skeet Range Removal Action Update. Copies of all presentations are included in Attachment C.

3. Comments, Questions and Answers

Any comments or questions on this information package or any additional correspondence concerning the Installation Restoration Program (IRP) or the Munitions Response Program (MRP) at the facility can be directed to:

Public Affairs Officer
Naval Support Facility South Potomac
Attn: Public Affairs Officer, Code 00P
6509 Sampson Rd.
Dahlgren, VA 22448-5108
PHONE: (540) 284-0129

Dahlgren, VA 22448-5108 PHONE: (540) 284-0129 FAX: (540) 653-4269

Email: jeron.hayes@navy.mil

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

October 15, 2020

6:00 - 6:05 pm	ARRIVAL/WELCOME
	Mr. Joseph Rail
	Naval Facilities Engineering Command, Washington (NAVFACWASH)
	Remedial Project Manager
6:05 – 6:15 pm	FY21 BUDGET UPDATE
	Mr. Joseph Rail
6:15 – 6:30 pm	SITE 38-RUM POINT LANDFILL GROUNDWATER
	EVALUATION UPDATE
	Mr. Andrew Louder
6:30 – 6:45 pm	SITE 68-FORMER BUILDING 259 CONTAMINATION PRE-
0.30 – 0.43 pm	EE/CA INVESTIGATION UPDATE
	Mr. Alex Scott
	Mr. Alex Scott
6:45 – 7:00 pm	STUMP NECK SMALL ARMS/SKEET RANGE REMOVAL
_	ACTION UPDATE
	Mr. Joseph Rail
7.00	ADIOUDN
7:00 pm	ADJOURN

Attachment A

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

October 14, 2021

6:00 - 6:05 pm	ARRIVAL/WELCOME Mr. Joseph Rail Naval Facilities Engineering Command, Washington (NAVFACWASH) Remedial Project Manager
6:05 – 6:15 pm	UXO 14 & 15 STUMP NECK SMALL ARMS/SKEET RANGE REMOVAL ACTION UPDATE Mr. Andrew Louder
6:15 – 6:25 pm	UXO 9-SINGLE-BASE PROPELLANT GRAIN SPILL AREA SAMPLING UPDATE Mr. Andrew Louder
6:25 – 6:35 pm	SITE 43 FIELDWORK/FEASIBILITY STUDY UPDATE Mr. Andrew Louder
6:35 – 6:45 pm	BASEWIDE FIVE YEAR REVIEW UPDATE Mr. Alex Scott
6:45 – 7:00 pm	SITE 57-BUILDING 292 TCE CONTAMINATION VAPOR INTRUSION (VI) EVALUATION Mr. Alex Scott
7:00 – 7:15 pm	SITE 67-HOG-OUT FACILITY NON-TIME-CRITICAL REMOVAL ACTION UPDATE Mr. Joseph Rail
7:15 – 7:30 pm	SITE 68-FORMER BUILDING 259 CONTAMINATION EE/CA & ACTION MEMO UPDATE Mr. Joseph Rail
7:30 – 7:45 pm	SITE 69-BUILDING 1018 REMEDIAL INVESTIGATION/FEASIBILITY STUDY UPDATE Mr. Joseph Rail
7:45 – 8:00 pm	STUMP NECK MRP SITES REMEDIAL INVESTIGATION/FEASIBILITY STUDY UPDATE Mr. Joseph Rail
8:00 pm	ADJOURN Attachment B

Attachment C- RAB Presentations



FY21 BUDGET & SCHEDULE UPDATE

Presented By
Joseph Rail
Naval Facilities Engineering Command (NAVFAC)
Washington

10/15/20

FY21 Budget & Schedule Update



Approximate budget for FY 2021:

- \$4 mil for Installation Restoration Program (IRP)
- \$400K for Munitions Response Program (MRP)

Planned work includes:

- Remedial Investigation/Feasibility Study (RI/FS)
- Interim Removal Action (IRA)
- Remedial Action-Operation (RA-O)
- Long-Term Monitoring (LTM)
- Five Year Review

FY21 Budget & Schedule Update



• RI/FS for:

- Site 66 – Turkey Run Disposal Area

• IRA for:

- Site 43 Toluene Disposal Area
- Site 68 Former Building 259 Contamination
- UXO 14 Marine Rifle Range

• RA-O for:

- Site 17 Disposed Metal Parts Along Shoreline
- Site 47 Mercuric Nitrate Disposal Area
- Site 57 Building 292 TCE Contamination

FY21 Budget & Schedule Update



• LTM for:

- Site 11 Caffee Road Landfill
- Site 12 Town Gut Landfill
- Site 21 Bronson Road Landfill
- Site 28 Original Burning Ground
- Site 36 Closed Landfill
- Site 38 Rum Point Landfill
- Site 42 Olsen Road Landfill

Five Year Review for:

- Sites 11, 12, 14 (Lab Area), 17, 21, 28, 36, 38, 42, 47, 57, & UXO 32 (Scrap Yard)

Contacts and Questions



Points of Contact:

- NAVFAC Washington: Joseph Rail
- NAVFAC Washington (Base RPM): Andrew Louder

Questions?



SITE 38 GROUNDWATER EVALUATION & CLOSEOUT

Presented By
Joseph Rail
Naval Facilities Engineering Command (NAVFAC)
Washington

10/15/20

Site 38 Remedial Action



- ROD signed in 2014. Remedy Components:
 - -No action for sediment and surface water.
 - -Excavate and dispose of (or recycle) landfill waste and soils.
 - -Monitor groundwater per MDE regs and demonstrate manganese in groundwater is from upgradient.
- Remedial Action Objectives:
 - -Close the landfill in a manner that protects human health and the environment in accordance with MDE solid waste management regulations.
 - -Prevent unacceptable risks to human receptors from exposure to manganese in groundwater until groundwater conditions allow for UU/UE.
 - -Return groundwater to beneficial use to the extent practicable.
- Landfill waste and soils (and some MEC) excavated in 2017.
 - -Soil/Waste RACR completed.

Groundwater COC/LTM Analyses



- Manganese groundwater cleanup level:
 - -2014 ROD has 320 μg/L based on HI=1 (not adjusted)
 - -However, a current value based on HI=1 is 430 μg/L (not adjusted), because RSL changed to 430 μg/L in May 2014.
- Groundwater LTM sample analyses:
 - –Manganese (Groundwater COC)
 - -Maryland RCRA I & II tables parameters (ARAR for closed landfill), including VOCs, all metals, and several wet chemistry parameters.
 - -Explosives and SVOCs at EPA's request (via comment on 2017 LTM Plan) based on wastes encountered during landfill excavation.

Groundwater LTM Program



- Remedy Monitoring component details from ROD:
 - "Sampling to confirm that groundwater contaminants are attenuating and that no contaminants are migrating from the site at unacceptable levels."
- Eleven monitoring wells
- Three sampling events followed by evaluation of risk
 - -Event No. 1: Completed in July 2018. Data report complete.
 - -Event No. 2: Completed in June 2019. Data report complete.
 - -Event No. 3: Completed in March 2020. Data report complete.
 - •Groundwater LUCs inspected each time (no issues).

Most Recent / March 2020 Results

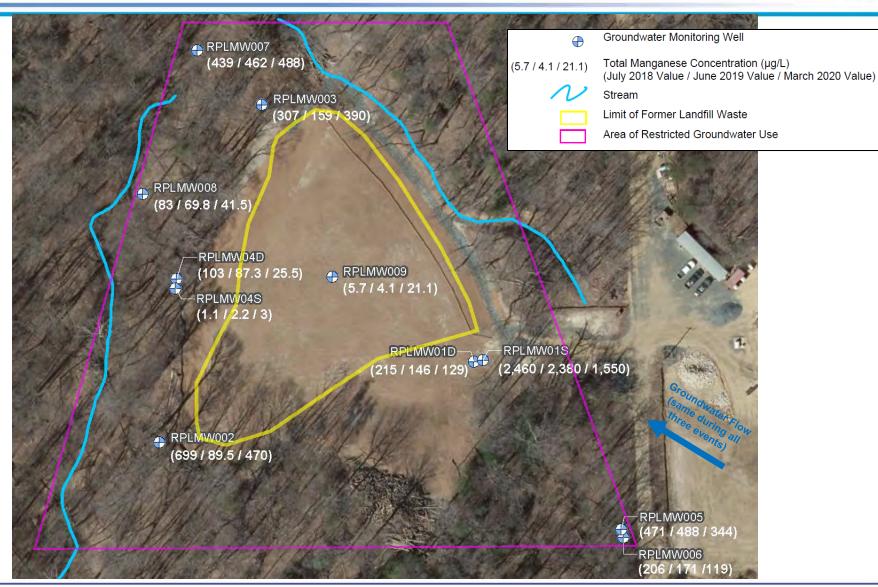


- VOCs, SVOCs, PAHs, and explosives were not detected (same as in July 2018 and July 2019)
- Total Manganese exceeds the cleanup level of 430 µg/L in three monitoring wells:
 - -MW01S (upgradient) at 1,550 μg/L
 - -MW02 (side-gradient) at 470 μg/L
 - -MW07 (downgradient) at 488 µg/L
- Manganese is below cleanup level within the former landfill footprint during all three events.
- Manganese is confirmed above cleanup level upgradient of the former landfill during all three events.

Managanese Results

Event Nos. 1 (July 2018), 2 (June 2019), and 3 (March 2020)





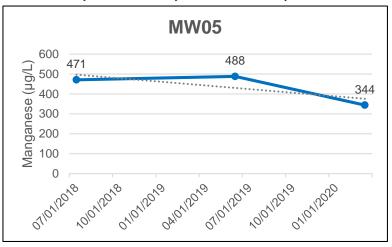
Site 38 LTM Complete

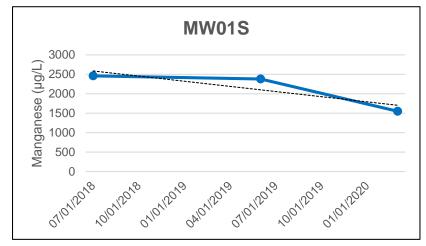


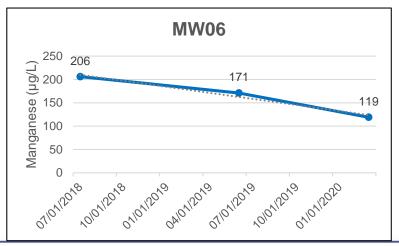
- Three LTM events completed prior to site closeout following removal of landfill, per MDE Solid Waste ARAR.
- Groundwater Evaluation drafted to conclude if COC (manganese) is from site or from upgradient source, per ROD.
 - **oCumulative data presentation.**
 - **ODemonstrate elevated manganese upgradient.**
 - Show lack of increasing trends on MDE RCRA I & II parameters.
 - ○Reevaluate HH risk.
 - Recommend no further action based on upgradient manganese and completing the three statutory LTM events.

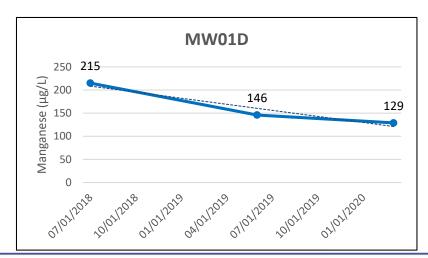


Manganese Trends – Upgradient Wells MW05, MW06, MW01S, MW01D



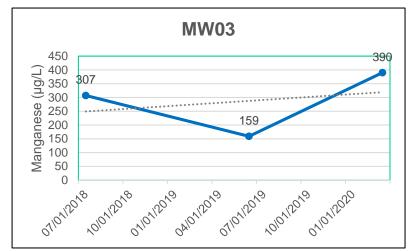


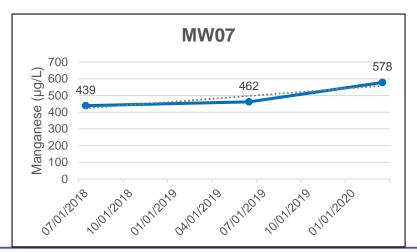


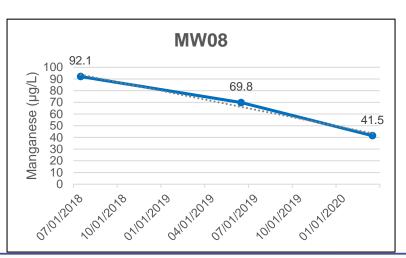




Manganese Trends – Downgradient Wells MW03, MW07, MW08

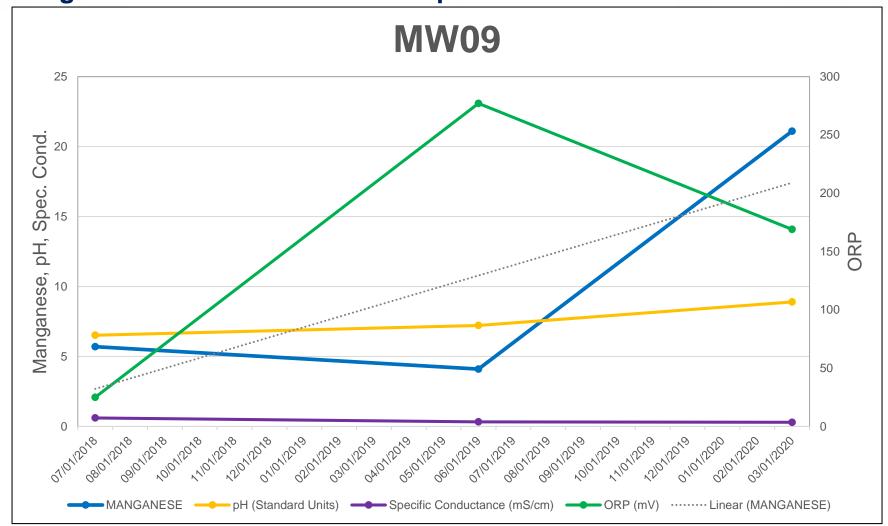








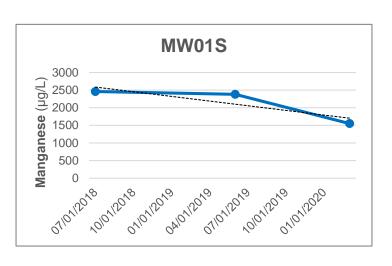
Manganese Trends – Landfill Footprint Well MW09

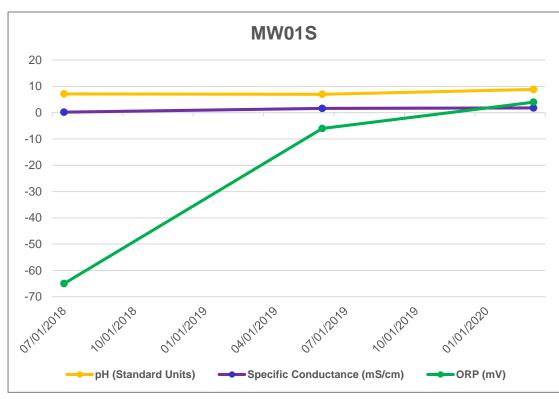




Groundwater quality parameter plots

- -Water quality data from trend plots- E.g.,
 - Certain metals/inorganics
 - •pH
 - Spec. Cond.
 - ORP





VOCs, SVOCs, PAHs, and Explosives



- No detections or problematic detections of VOCs, SVOCs, PAHs, or Explosives. The following are the only detections in these analytical suites during Event No. 3:
 - Bromomethane detection (0.93 J μg/L) in duplicate of non-detect(<1) parent sample at MW07.
 - This COPC is evaluated in the HH risk evaluation. It contributes an HQ of 0.12 for Gastrointestinal System target organ.
 - (Iron contributes HQ of 0.49 to same GS target organ).
 - Bis(2-ethylhexyl)phthalate detection (1.3 J) at well MW08.
 - This is evaluated in the COPC screening but is below the RSL.

MDE RCRA I & II Parameter Trends



- Three temporal data points of marginally different values for most parameters.
- Generally downward trends or variable trends in downgradient wells GW03, GW07, GW08. Some increases between LTM Events 1 and 3, but not at levels above background that cause an unacceptable risk. E.g.,
 - Nitrate-N:
 - Increase from <0.05 to 0.12 mg/L in GW03
 - No increase (remains <0.05 mg/L) in GW07
 - Increase from 0.098 to 0.36 mg/L in GW08
 - Iron (Background Threshold Value is 18,700 μg/L):
 - Increase from 1,360 to 2,900 μg/L in GW03
 - Increase from 6,770 to 6,870 µg/L in GW07
 - Increase from 1,040 to 3,050 µg/L in GW08

Human Health Risk-Ratio Evaluation



- Risk screening analysis based on methodologies used to calculate EPA RSLs to conservatively assess potential exposure and toxicity to human receptors.
- Tap water RSLs based on a lifetime resident for carcinogens and a child resident for noncarcinogens.
 - RSLs based on HQ of 0.1 because of the additive noncarcinogenic effects of some chemicals (some chemicals affect the same target organ or exhibit similar mechanisms of action)
 - •RSLs based on ILCR of 1×10⁻⁶ were used for carcinogenic chemicals. A cancer risk of 1×10⁻⁶ may be interpreted as one additional case in one million exposed individuals.

NOTAC

Target Organ HIs

Human Health Risk-Ratio Evaluation

SUMMARY OF RESIDENTIAL RISKS AND HAZARD INDICES FOR EXPOSURES TO GROUNDWATER

	ILCR			Non-Cancer HQ		
Chemical	Maximum Concentration ⁽¹⁾ (ug/L)	Tapwater RSL ⁽²⁾ (ug/L)	Estimated ILCR	Primary Target Organs	Tapwater RSL ⁽²⁾ (ug/L)	Estimated HQ
Metals						
Arsenic	2.7	0.052	5.2E-05	Dermal, CVS	6	0.45
Cobalt	2.5	NA	NA	Thyroid	6	0.42
Iron	6870	NA	NA	GS	14000	0.49
Manganese	1550	NA	NA	CNS	430	3.6
/OCs						
Bromomethane	0.93	NA	NA	GS	7.5	0.12
		Total ILCR	5E-05		Total HI	5

- 1 The maximum concentration was used as the exposure point concentration.
- 2 USEPA Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites, May 2020.

HI = Hazard Index	Total CVS HI =	0.5
HQ = Hazard Quotient	Total Dermal HI =	0.5
ILCR = Incremental Lifetime Carcinogenic Risk	Total GS HI =	0.6
NA = Not Applicable	Total CNS HI =	4
RSI = Regional Screening Level	Total Thyroid HI =	0.4

Target Levels: cumulative ILCR = 1E-04 for carcinogens, cumulative HI = 1 for noncarcinogens

Target Organ Abbreviations:

CNS = Central Nervous System

CVS = Cardiovascular System

GS = Gastrointestinal System

Groundwater Human Health Risk-Ratio Evaluation



- ILCR within EPA's acceptable risk range of 1×10⁻⁴ to 1×10⁻⁶. Therefore, no unacceptable carcinogenic risks.
- Total cumulative HI is 5, which is above EPA threshold of 1.
 - oTarget organs: Cumulative HI for CNS > 1 (manganese and bromomethane).
 - **OPrimary risk driver is manganese**
- All metals COCs except manganese are lower than background
 - **OMax cobalt of 0.5 μg/L is from upgradient well MW05.**
 - **OMax manganese of 1,550 μg/L is from upgradient well MW01S.**

Chemical	EPC - Max Concentration (µg/L)	Background Threshold Value (µg/L)
Metals		
Arsenic	2.7	7.09
Cobalt	2.5	17.7
Iron	6,870	18,700
Manganese	1,550	897

Conclusion



- Groundwater medium can be closed out based on the stipulations in the ROD.
 - Three LTM events were completed.
 - Trend analyses do not indicate issues warranting further response.
 - Human health risk evaluation completed.
 - Non-cancer HI is greater than threshold of 1. Manganese is main risk driver.
 - However, max concentrations of the COCs (except manganese) are less than background threshold values.
 - Manganese is elevated above the manganese PRG of 430 ug/ L (HI=1) in upgradient wells and flowing into the site.

Conclusion



- Upgradient manganese source may need investigation.
 - On-Annex property or state property on other side of fence.
 - Put on Team's partnering Parking Lot
- Closeout Process
 - Memo and signatures cover for Final Groundwater Evaluation Report.
 - Final RACR for Site 38 (soil RACR completed previously)

Upcoming Deliverables



- Draft Groundwater Evaluation Report
 - Demonstrate elevated manganese upgradient
 - Show lack of increasing trends on MDE RCRA I & II parameters
 - Reevaluate risks as needed to demonstrate no issue.
 - Recommend no further action based on upgradient manganese and completing the three statutory LTM events.
 - Final Groundwater Evaluation Report
 - With NFA Concurrence Signature Page
 - Site close-out / Complete RACR for groundwater (signature currently on schedule for May 2021).

Contacts and Questions



Points of Contact:

- NAVFAC Washington: Joseph Rail
- NAVFAC Washington (Base RPM): Andrew Louder

Questions?



SITE 68 Former Building 259 Contamination Pre-EE/CA Investigation

Presented By

Joseph Rail

Naval Facilities Engineering Command (NAVFAC)

Washington

10/15/20

Site 68 Location





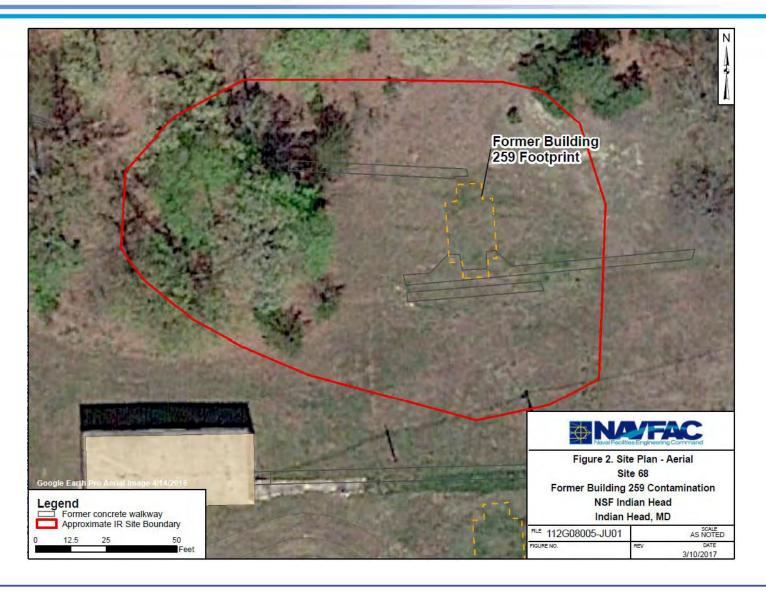
Site 68 Background & History



- Location: Building 259 Old Storehouse / Detonator Production.
- Current Use: None. Demolished
- Contaminant source: Mercury and lead from detonator production outside building. Lead azide was produced outside the building and cooled by water that ran through the trench.
- World War I: Building 259 was a former inert storehouse constructed in 1917. Detonator production activities occurred during World War I timeframe.

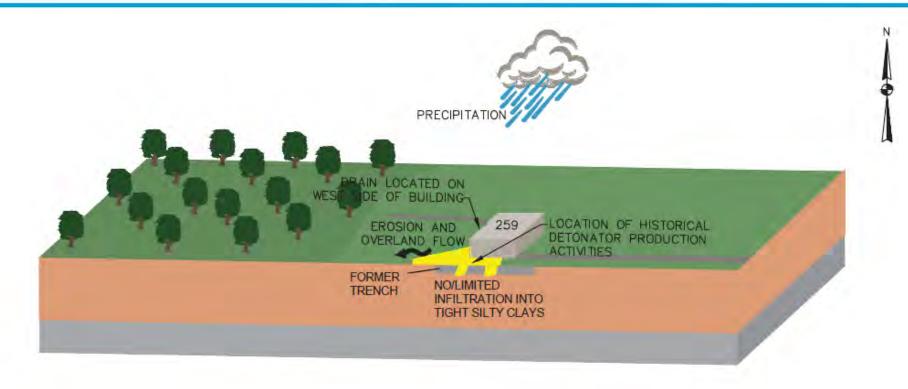
Site 68 Layout

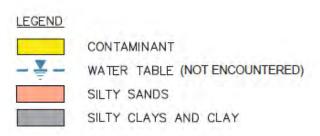




Conceptual Site Model based on SSP Investigation

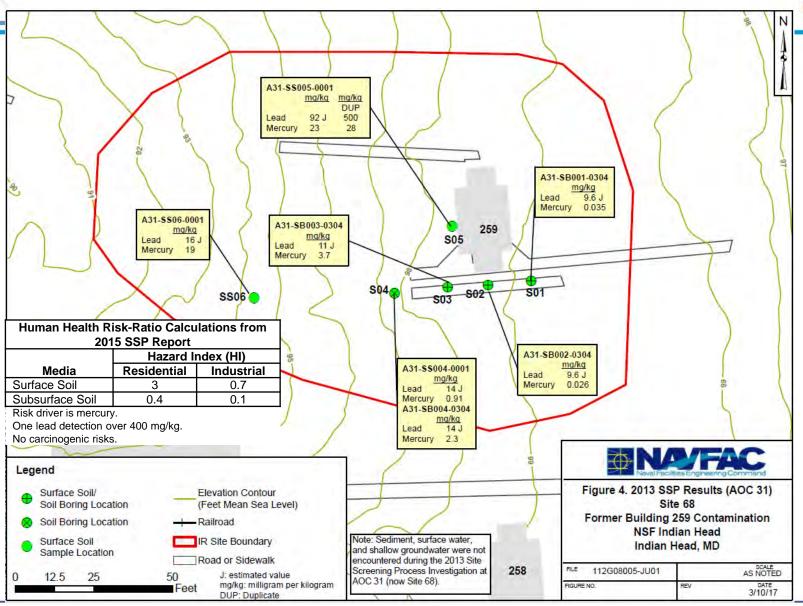






2013 SSP Investigation Results





Pre-EE/CA Investigation



Problem Statement:

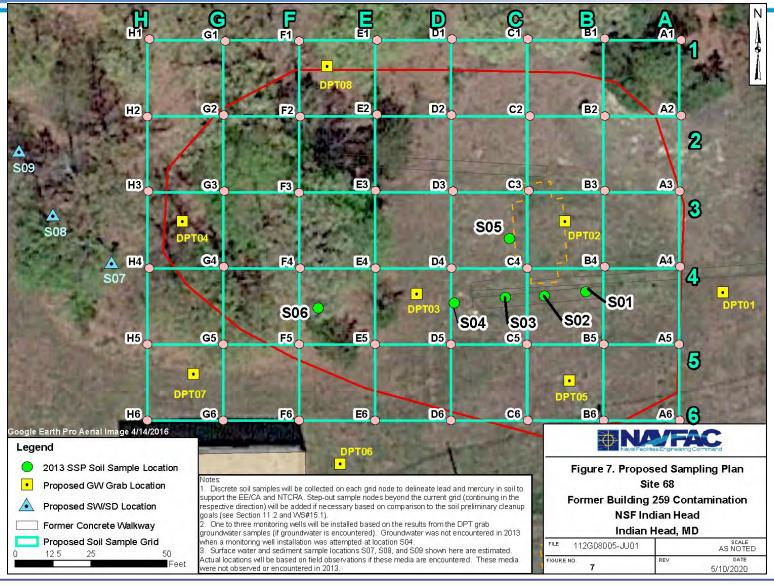
- Soil must be evaluated to refine the spatial contamination limits of mercury and lead for removal alternative development in the EE/CA.
- The presence or absence of sediment, surface water, and shallow groundwater media must be observed/reconfirmed. Any sediment, surface water, or groundwater encountered during this investigation will be sampled and undergo the SSP.
- The subsurface lithology and presence or absence of water table must be confirmed at more locations at the site. Lithology soil borings must be performed at locations upgradient of, within, and downgradient of the source area.



Analytic Approach:

- If the Team concludes that the extent of lead and mercury in soil has been determined... based on comparison to the preliminary removal action cleanup levels... then proceed with the soil EE/CA. Otherwise, recommend additional soil data collection.
- If groundwater, sediment, or surface water are not present, then recommend NFA for these media.
- If groundwater, sediment, or surface water are present, then
 proceed with SSP risk evaluations; otherwise conclude that
 the missing media are not an environmental risk. The outcome
 of the SSP risk evaluations for these other media will
 [determine if] additional actions are warranted or to
 recommend NFA for each respective medium.







Preliminary

Removal Action Cleanup Goals for Soil

Surface Soil (mg/kg)		Basis
Mercury	3 ⁽¹⁾	Ecological risk-based action value used for determining extent of NTCRA at IRP Site 28 (CH2M HILL, 2005 and 2006b).

Subsurface Soil (mg/kg)

Lead	200	Maryland cleanup level for residential soil (starting July 2020)
Mercury	11	Human health residential risk-based cleanup value (HI=1) used for the remedial action at the Lab Area IRP site(s) (CH2M HILL, 2011).

^{1.} Value is the maximum mercury soil concentration submitted for toxicity testing for the Site 47 Baseline ERA (CH2M HILL, 2005, 2006a, and 2006b). No adverse effects (survival or growth) were observed in any of the bioassay samples from Site 47 (28-day tests with the earthworm *Eisenia foetida*).



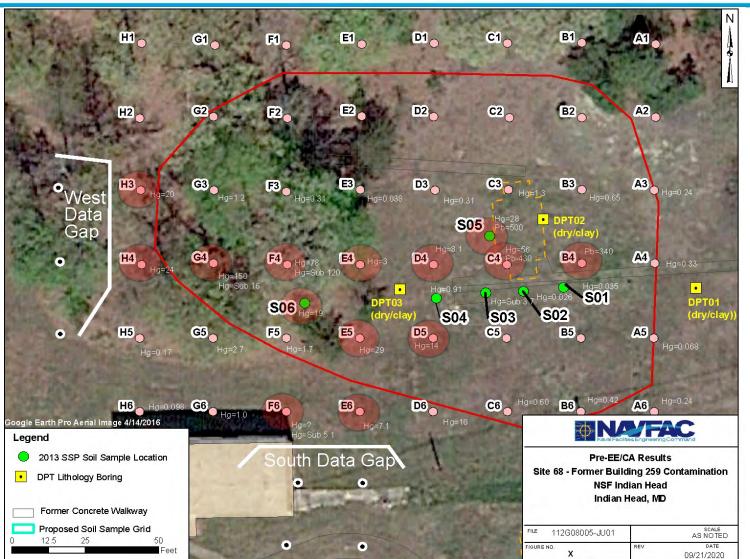
Results:

- No surface water, sediment, or groundwater media observed or encountered again (like during 2013 SSP Investigation).
- DPT lithology borings
 - olndicate tight clay again.
 - **No water table encountered.**
 - oRefusal at 15 feet at DPT01, DPT02, and DPT03.
- Surface and subsurface soil results for mercury and lead.
 - Lead exceedance near same 2013 location. Awaiting other data.
 - Mercury contamination unbound at southwest and west. Awaiting one value.



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Goals				
Surface Soil				
(mg/kg)				
200				
(HH)				
3 (Eco)				
Subsurface Soil				
(mg/kg)				
200				
(HH)				
1 (HH)				



- Await remaining lead data and one mercury value.
 - oConfirm lead bounded.
 - Confirm step-out locations for mercury (still analyze Hg & Pb).
- Remobilize for expanded step-out samples on south and west:
 - **CWAP** modification.
 - Subcontract modifications.
 - **Outility Clearance.**
 - •Surface and subsurface soil samples for lead and mercury.
 - Additional subsurface soil sampling at F4 and G4.
 - Additional subsurface soil sampling intervals at expanded locations to avoid another remobilization.

EE/CA and Action Memo



- Compiled EE/CA and Action Memo documents awaiting input of target removal area to complete development and comparative analysis of alternatives.
- Removal Action Objectives
 - oReduce ecological risk from exposure to mercury contamination in surface soil above the cleanup level.
 - oPrevent residents, trespassers, and vulnerable site workers from exposure to lead and mercury in surface and subsurface soil at concentrations above the cleanup levels.
- Removal Action Alternatives
 - oLUCs (removed can use for HH, but not for Eco)
 - **○Excavation**
 - Soil Cover (new from LANT comment)
- Need to
 - **○Complete add'l step-out samples fieldwork**
 - **oFinalize Cleanup Levels**
 - **oFinalize Target Removal Area / Volume**

Site 68 Upcoming Milestones



- Dec 2020 Fieldwork mobilization
- Jan 2021 Draft EE/CA and Action Memo
- April 2021 Final EE/CA
- June 2021 Final Action Memo (after EE/CA public review period)
- July 2021 Signed Action Memo

Contacts and Questions



Points of Contact:

- NAVFAC Washington: Joseph Rail
- NAVFAC Washington (Base RPM): Andrew Louder

Questions?



STUMP NECK SMALL ARMS/SKEET RANGE REMOVAL ACTION UPDATE

Presented By

Joseph Rail

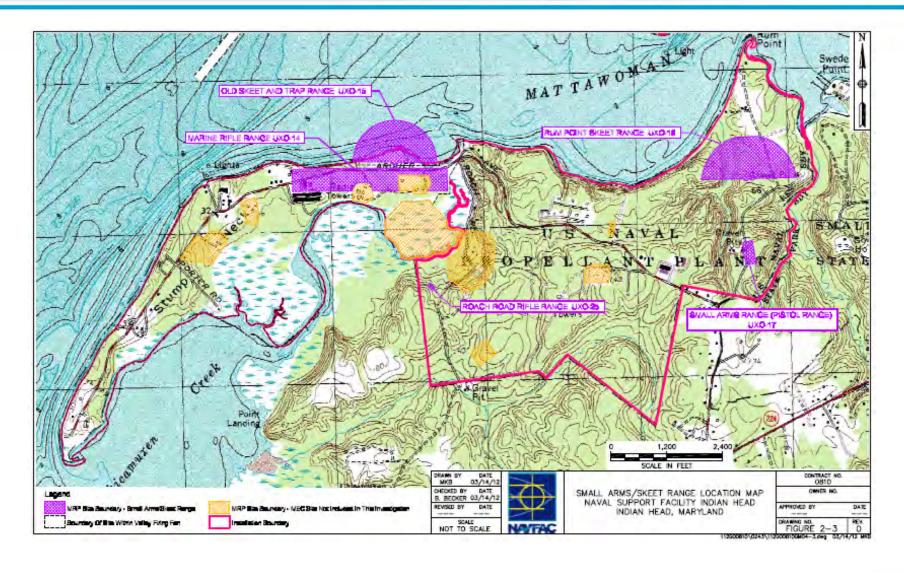
Naval Facilities Engineering Command (NAVFAC)

Washington

10/15/20

Small Arms/Skeet Range Locations





Project Background



UXO 14 & 15:

- Work resumed in May 2020 following NOSSA approval of an Explosive Safety Submission (ESS.)
- Remaining work included munitions surface clearance, soil excavation (for lead and PAH contamination) & offsite disposal, tree planting, and site restoration.
- Contractor demobilized from site in September 2020 and plans to return in early 2021 to complete grading and erosion repairs.

<u>UXO 14- Marine Rifle Range-</u> 30.4 acres, used from 1911 to 1918 for rifle training, includes multiple firing lines, two target berms, and hillside impact area.

<u>UXO 15- Old Skeet and Trap Range-</u> 29.3 acres, used from 1967 to 1991 for small arms recreational activity, includes two firing points and associated impact area.

UXO 14 Excavation & Lead Stabilization





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UXO 14 Tree Planting





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UXO 14 Current Conditions





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UXO 15 Excavation



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UXO 15 Backfilling





UXO 15 Current Conditions





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Points of Contact:

- NAVFAC Washington: Joseph Rail
- NAVFAC Washington (Base RPM): Andrew Louder

Questions?