



NAVAL ACTIVITY PUERTO RICO

Restoration Advisory Board Meeting

29 August 2018

Tonight's Agenda

Welcome and Introductions	Thuane Fielding (Navy)
Action Items from the Last Meeting	Thuane Fielding
Solid Waste Management Unit (SWMU) 11 Construction Update	Tim Wenk (Navy)
SWMU 3 Post Closure Care	Tim Wenk
Break	
Land Use Controls – Site Closure, Property Transfer, and Munitions	Tim Wenk
SWMU 28- Corrective Measures Evaluation	Tim Wenk
Status Update on Planned, Ongoing, and Completed Activities and comment periods for SBs	Tim Wenk
Other Questions and Comments from the Public	Members of the Public



Action Items From the Last Meeting

Thuane Fielding
Navy



SWMU 11 (Base Powerhouse)

Interim Corrective Measures Asbestos Abatement and PCB Removal

Tim Wenk

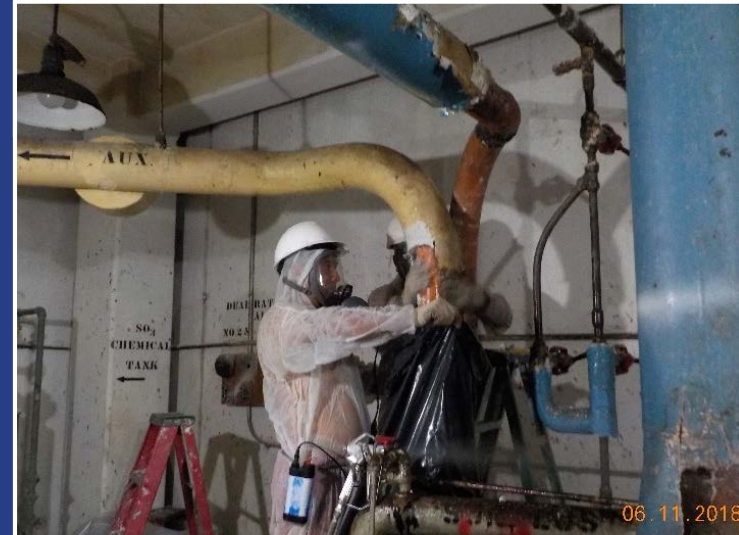
Background

- SWMU 11 consists of the interior area of Building 38
 - Features consist of boiler plant, associated piping and equipment, miscellaneous debris inside of the building
 - Building exterior is being addressed as a separate SWMU (SWMU 45)
- Known as the former Base powerhouse and in operation from the early 1940s through 1948
 - Building used for PCB storage
 - Fire occurred in late 1990s resulting in PCBs deposited on building interior surfaces
- Separated into 3 areas:
 - Area A - North room (condensers)
 - Area B - South room (furnaces)
 - Office area (Top floor and completely separate from building operations)



Remedial Action Plan (3 Phases)

- Phase 1
 - Mobilization, pre-cleaning of work areas and sealing building
 - Sampling/analysis & disposal of pooled water in north room
- Phase 2
 - Asbestos removal in south room
 - Debris removal in north room
 - Asbestos removal in north room
- Phase 3
 - PCB removal using decontamination gel throughout building
 - Confirmation sampling to determine effectiveness of PCB removal



Current Status

- Phase 1 complete
 - Building sealed and under negative pressure using 15 negative air machines
 - North room pooled water sampled, analyzed and transported off island for disposal
- Phase 2 in progress
 - All bulk asbestos removed from south room
 - Bulk debris sampled, analyzed and currently being removed from north room
 - Tar sealant from trenches has been sampled and sent to laboratory for analysis
- Phase 3 September 2018
 - Work will continue through the remainder of calendar year 2018





SWMU 3 Closure and Post Closure Care Activities

Tim Wenk
Navy



Background

- Former municipal landfill in use from 1961 until 2006
- Comprised of four areas
 - Area 1 - Inactive 1990; waste not completely documented but known to have municipal, construction, scrap metal and asbestos
 - Area 2 - Active in 2005; inactive in 2006
 - Area 3 - Constructed in 1999; inactive in 2006
 - Area 4 - Last active area; began use in 2000; inactive in 2006
- Two phases of closure:
 - Phase 1 - final cover system for Areas 2, 3, and 4, completed in 2007
 - Phase 2 - final cover system completed for Area 1 in 2016
 - Included 4-acre sedimentation basin and the area between Area 1 and the basin

Phase 1 Closure Construction – Areas 2 - 4

- Phase 1 closure construction began January 2007
- Navy accepted Phase 1 closure December 2007



Phase 2 Closure Construction – Area 1

- Phase 2 closure construction began December 2014
- Navy accepted Phase 2 closure December 2016



SWMU 3 Post-closure Care Activities

- Provide procedures for inspection and maintenance of engineering controls and monitoring to be protective of human health and the environment



SWMU 3 Post-closure Care Activities Cont.

- Regular inspections and reporting of the vegetative cover condition and Land Use Controls
- Long-term monitoring and reporting of groundwater and landfill gas



Path Forward

- Public review and comment of the Post Closure Care Plan in September/October timeframe
- Property transfer anticipated in December 2018
- Continue LTM and landfill maintenance per Post Closure Care Plan



Land Use Controls – Site Closure, Property Transfer, and Munitions

Tim Wenk
Navy

Overview of Land Use Controls

- Land use controls are in place for protection of human health and the environment
 - Examples
 - Signs
 - Deed restrictions
 - Fences/barricades
- LUCs may be interim or part of final corrective action
 - Interim during investigation activities
 - Final whenever site closure will not allow for unrestricted use
 - Restrictions are conveyed through the deed when property is transferred
- Signs are installed to warn of hazards and protect people from adverse impacts as a result of potential or actual hazards
- The public is urged to adhere to warnings and stay out of areas of known or suspected impacts

NAPR Sign Installation

- Informational/warning signs installed at the SWMU boundaries
- Notifies the public of the environmental hazards and provides a point of contact for additional information
- 63 sign locations across 25 NAPR environmental sites
 - Additional signs at Piñeros
- Initial installation: September 2013
 - Inspected quarterly
 - Missing/damaged signs repaired or replaced as necessary
- Next inspection: 4th quarter 2018
 - Replace missing and repair damaged signs as a result of 2017 hurricane activity

**PROHIBIDO EL PASO
SIN AUTORIZACIÓN**

**ESTA ÁREA TIENE
PELIGROS AMBIENTALES**

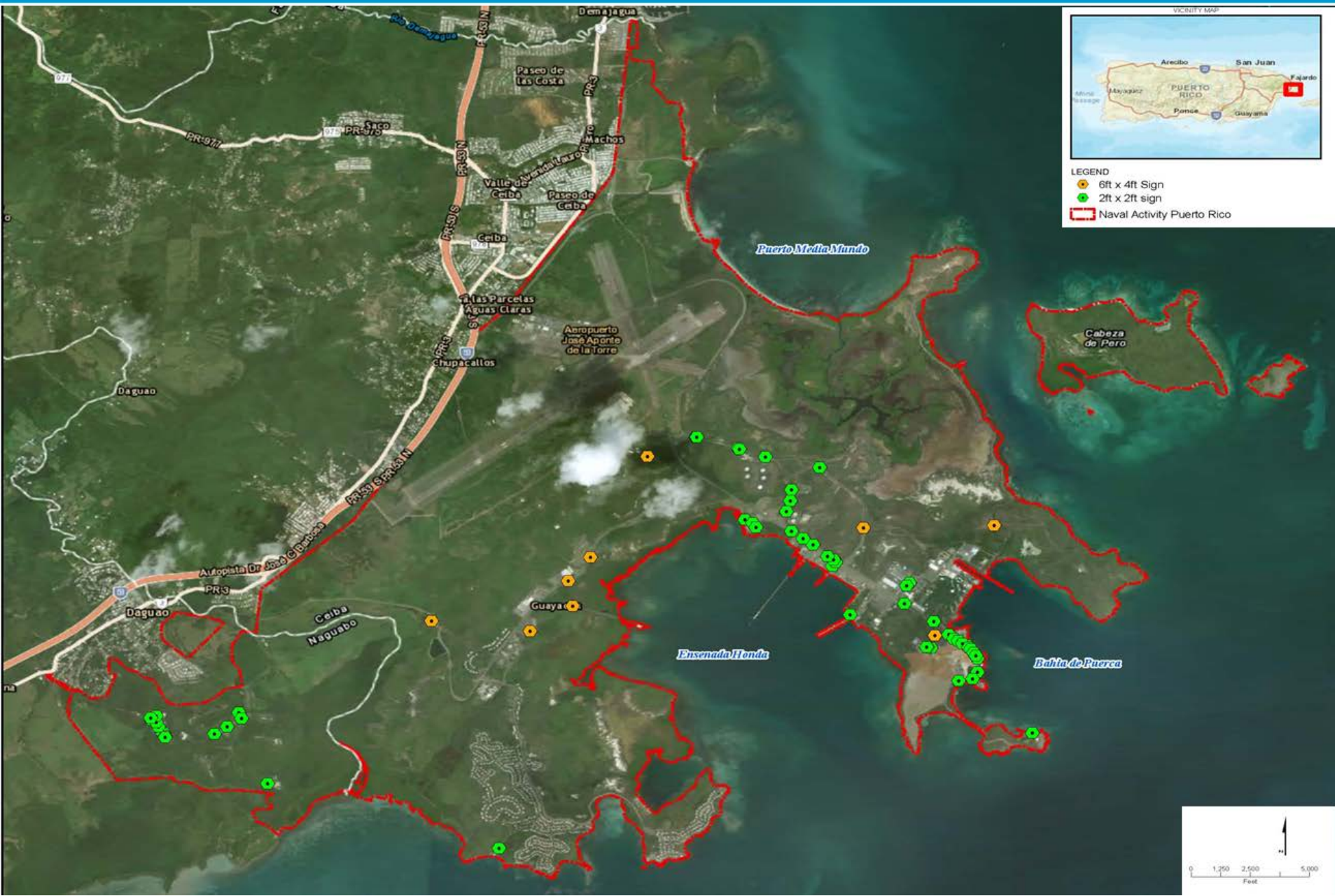
**Comuníquese al
787-758-4747 X5116
para obtener más detalles.**

NO UNAUTHORIZED ACCESS

**THIS AREA HAS KNOWN
ENVIRONMENTAL HAZARDS**

**Contact 787-758-4747 X5116
for additional information.**

NAPR Sign Locations



NAPR Sign Inspection/Maintenance Photos



Sign barely visible during inspection event



Vegetation cleared during maintenance event

NAPR Sign Inspection/Maintenance Photos



Sign becoming obscured by vegetation



Vegetation cleared during maintenance event

Piñeros Island Sign Installation

- Sign inspection and maintenance are part of the periodic land use control monitoring activities at Piñeros Island (Area of Concern E) until final corrective measures are determined and implemented
- Munitions and explosives of concern (MEC) and/or material potentially presenting an explosive hazard (MPPEH) may be present on land and in the waters around Piñeros Island
- Warning signs have been placed at beach access points around the island
- There are 24 sign locations posted at accessible areas around the island
- Initial installation: May 2014
- Next inspection and maintenance: January 2019



Piñeros Island Sign Placement



Piñeros Island Sign Photo

UXO warning signs
installed at the North Beach
– January 2018



Piñeros Island Sign Photo



UXO warning sign
installed at the
Southwest Beach –
January 2018

Piñeros Island – MEC/MPPEH Find – March 2018





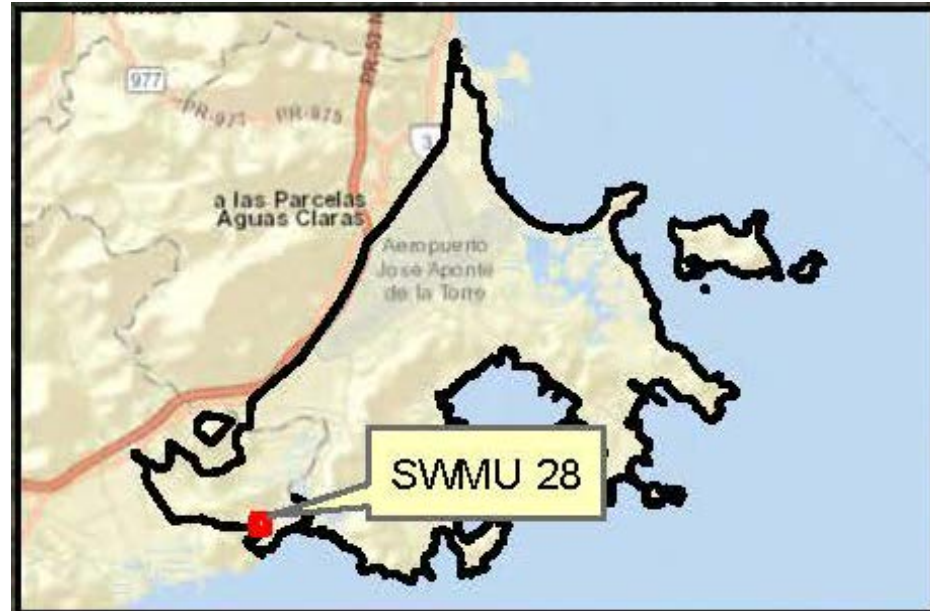
SWMU 28- Corrective Measures Evaluation

RCRA Facility Investigation Report Addendum

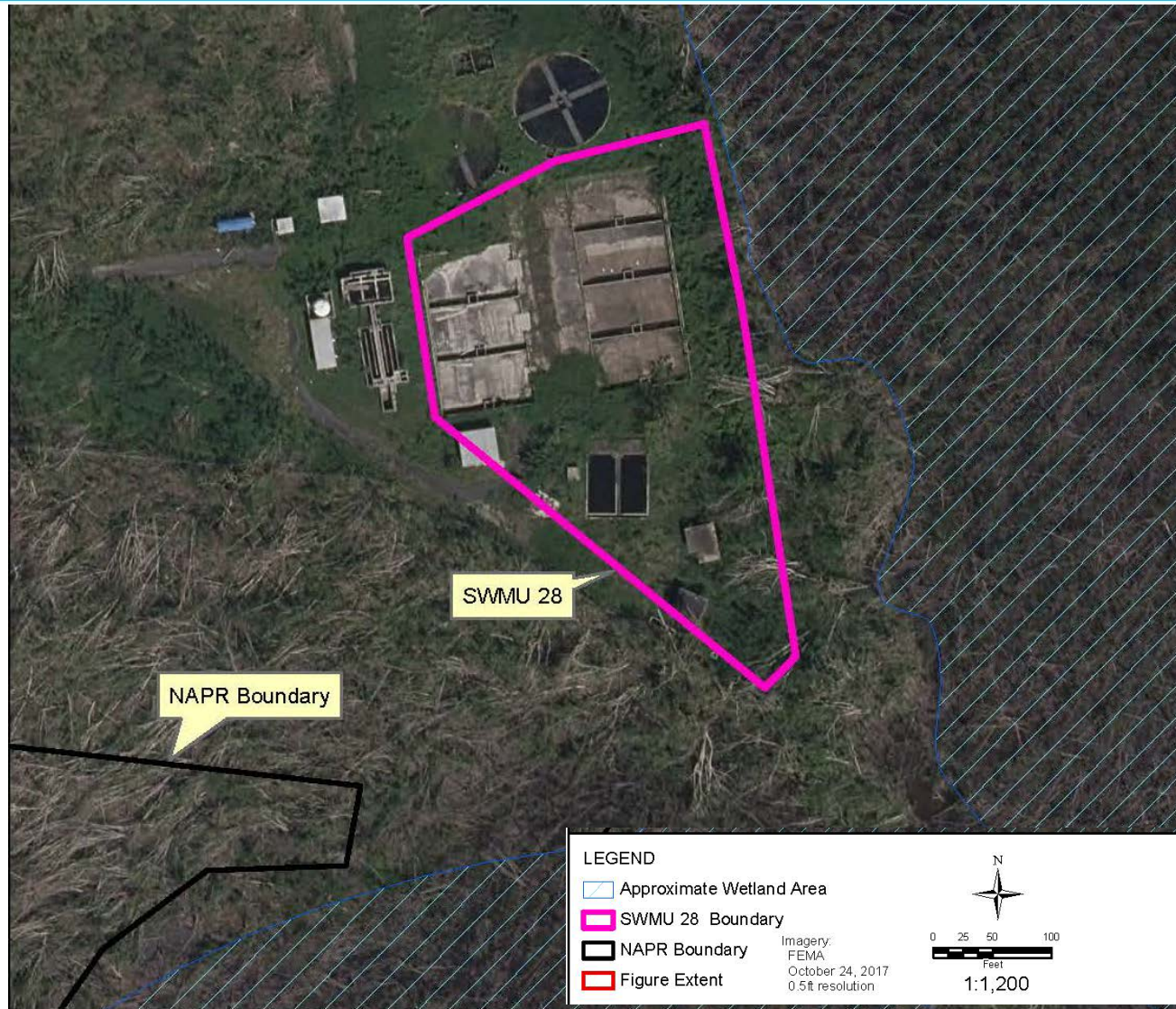
Tim Wenk
Navy

SWMU 28 – Bundy Wastewater Treatment Plant Sludge Drying Beds

- Former sludge drying beds for the Bundy Area Waste Water Treatment Plant (WWTP)
 - Constructed in the early 1970s
 - Received domestic sewage from the Bundy housing area, officer's quarters, enlisted personnel barracks, and military messes
 - The WWTP is no longer in operation
 - Sludge was removed from the drying beds at the time of closure



SWMU 28 – Site Layout



SWMU 28 – Previous Environmental Investigations

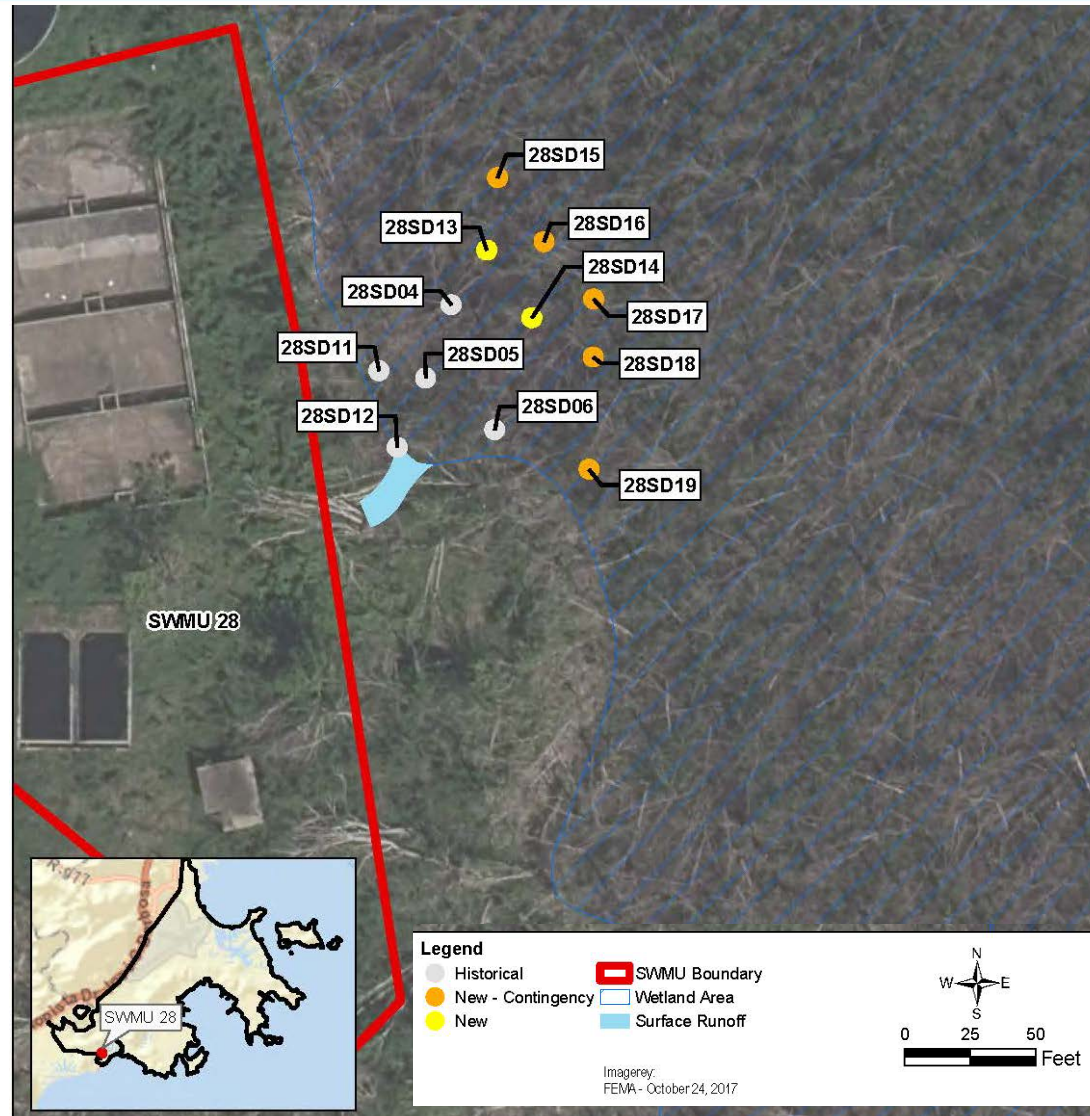
- Final Phase I RCRA Facilities Investigation (RFI) Report – 2007
- Final Full RFI Report – 2008
 - Elevated levels of metals (mainly mercury) in soil for ecological exposures
- Interim Corrective Measure (ICM) – July 2013 – September 2014
 - Removed contaminated soil based on ecological exposures
- Final Corrective Measures Study (CMS) Report – 2017
 - Post-ICM risk evaluations identified barium, beryllium, silver, and mercury as ecological contaminants of concern (COCs) in sediments from the wetland east of the site
 - No human health risks identified

SWMU 28 – Re-evaluation of Potential Ecological Risks

- Ecological risk assessment (ERA) from the 2017 CMS was evaluated against current NAPR ERA protocol
 - Constituents of concern limited to barium
 - Extent of barium wetland sediment concentrations driving ecological risk may not have been sufficiently delineated
 - A wetland survey warranted to evaluate the characteristics of the wetland area adjacent to the site
 - Collection of additional data may support a risk management decision on whether or not a No Further Action determination is appropriate

SWMU 28 – February 2018 Sediment Sampling

- Wetland sediment samples collected for barium analysis to define the extent barium driving ecological risk
- Historical sampling locations were resampled and new sampling locations added
- A biological/wetland reconnaissance survey also performed



SWMU 28 – 2018 Investigation Results

- Barium concentrations in historical sediment samples continue to exceed the ecological screening value; however, concentrations were below the ecological screening value at the new sample locations
 - The area exceeding the barium ecological screening value is about 4,000 ft² (< 0.1 acre)
- The biological/wetland survey confirmed the presence and extent of an intertidal forested mangrove wetland east of the site
 - West of the WWTP is subtropical dry forest
 - Playa El Corcho and Caribbean Sea are about 1,200 feet to the south and southeast of the site
 - The existing wetland is fully functional, and supports flora and fauna consistent with the habitat present

SWMU 28 – Conclusions and Path Forward

- 2017 CMS recommended excavation and disposal to address residual ecological risk
- 2018 risk evaluation recommends no further action
 - Although barium was identified as a constituent of concern in sediment for ecological receptors, the spatial area potentially impacted is less than 0.1 acre
 - Removal action would result in a small reduction in potential ecological risks and significant detrimental ecological impacts
 - Benefits from removal do not outweigh negative impacts to habitat
- An addendum to the 2008 Full RFI is being prepared for formal regulatory review and approval



Status Update on Completed, Planned and On-going Activities

Tim Wenk
Navy

Completed, Ongoing, and Planned Activities

Completed Activities (May 2018 - July 2018)

- Public comment period for Statements of Basis at SWMUs 27, 57, 80
- LTM sampling at SWMUs 7/8 and 55
- Base-wide well rehab
- SWMU 60 test pitting activities

Ongoing/Planned Activities (August-November)

- SWMU 3 landfill post-closure care activities and public comment period for the Post Closure Care Plan
- SWMU 2 Corrective Measures Study Sampling
- SWMU 79 Interim Corrective Measures sampling
- SWMU 62 Debris removal/ RFI Data Gap Investigation
- SWMU 11 Interim Corrective Measures Construction
- SWMU 54/61 Data Gap Investigation
- SWMU 14 PFAS Sampling
- SWMU 3 PFAS and MC Sampling
- SWMU 70 Debris Removal
- Work planning/reporting at several SWMUs



Questions/ Comments from the Public