



Restoration Advisory Board (RAB) Meeting

Former Naval Station Roosevelt Roads
Ceiba, Puerto Rico

Meeting #16
January 13, 2010


Tonight's Agenda

| | |
|--|---------------------------------|
| Welcome and Introductions | Mark Davidson, Navy Co-Chair |
| Clean Up Update | Mark Kimes, Baker Environmental |
| • Field work (Investigations) | |
| • Clean up activities | |
| • Reports submitted | |
| Re-Use Update | Mark Davidson |
| Break (7:30 – 7:45 pm) | |
| Other comments and questions from the public | Community Members |
| Planning Next Meeting and Closing | Susana Struve, Facilitator |



Action Items from last meeting


| Action Item | | Status |
|---|--|--------------------------|
| 1. Talk with DNER about areas of dead mangroves | EOB (Wilmarie Rivera) and DNER | New |
| 2. Talk with the Department of Health about Roosevelt Roads worker exposures (question) | EOB (Wilmarie Rivera) and Department of Health | New |
| 3. Information about zoning under "Caribbean Riviera proposal" | Local Reuse Authority (Freddy de Jesús) | Ongoing (after May 2010) |



Clean Up Update

(October 29, 2009 through January 13, 2010)

Mark Kimes
January 13, 2010



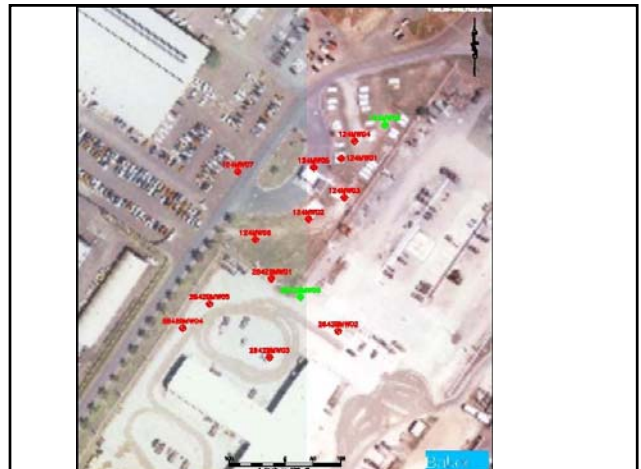
Field Work (Investigations) – AOC F Quarterly Groundwater Sampling

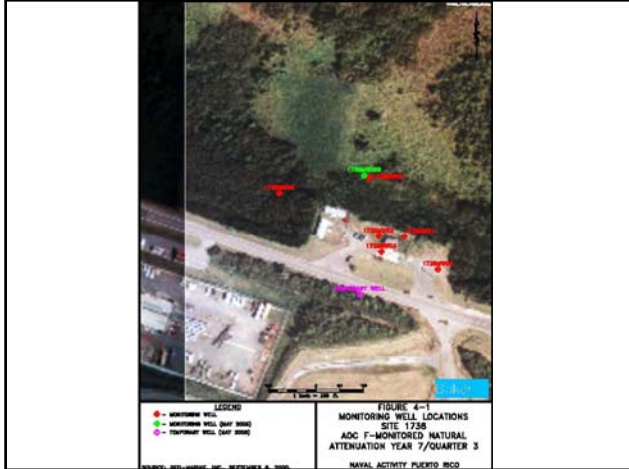
- Mobilized on November 9 and demobilized on November 11, 2009
- Conducted quarterly groundwater sampling from 3 of the 8 Monitored Natural Attenuation sites (124, 1738, and 2842B)



AOC F Groundwater Sampling (Continued)

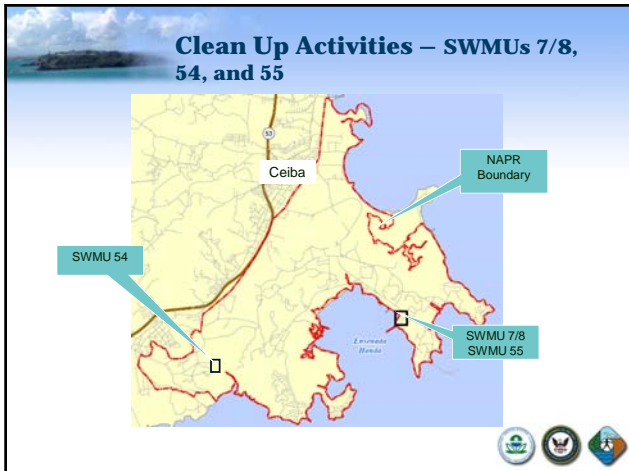
- Site 124: Groundwater sample collected from 1 groundwater monitoring well
 - for analysis of MIBE (petroleum-related chemical)
- Site 2842B: Groundwater samples collected from 2 groundwater monitoring wells
 - for analysis of Appendix IV volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), Methane, Sulfate, Dissolved Oxygen, and Ferrous Iron
- Site 1738: Groundwater samples collected from 4 groundwater monitoring wells
 - for analysis of Appendix IV VOCs, TPH, Methane, Sulfate, Dissolved Oxygen, and Ferrous Iron





AOC F Groundwater Sampling (Continued)

- Completed laboratory analysis and data validation of the groundwater samples
- Submitted the Draft Report to EPA and EQB on January 6, 2010



SWMU 7/8 –Recent Cleanup Activities

- Installed 9 petroleum product recovery wells
- Installed 10 monitored natural attenuation (MNA) wells
- Excavated 48 test pits to the water table
- Completed 11 test pits as temporary sumps
- Measured thickness of petroleum product :
 - Corrective Action Objectives (CAO) is 1/8-inch (0.01 feet) thickness
 - None of the temporary sumps had product greater than the CAO
 - None of the wells southwest of Forrestal Drive had product greater than CAO
- Petroleum product is only present northeast of Forrestal Drive

SWMU 7/8 – Product Investigation South of Forrestal Drive

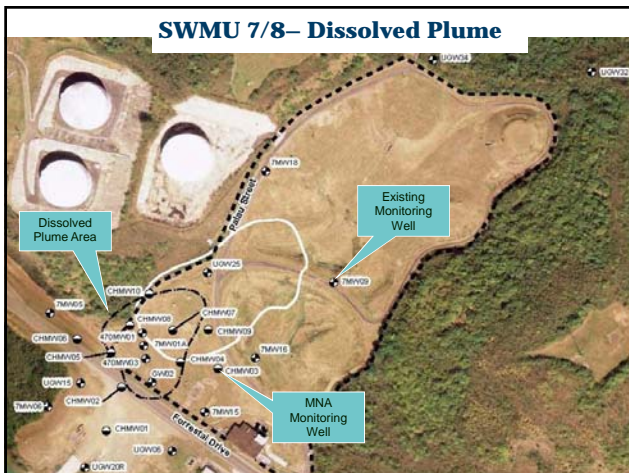


SWMU 7/8 – Upcoming Cleanup Activities

- Continue installing product recovery wells around MNA wells where product was found
 - over the next few months
- Evaluate the performance of solar powered pumps and high vacuum-extraction
 - late January or early February 2010
- Perform a product recovery test using Enhanced Fluid Recovery
 - January 2010
- Recover product
 - beginning in January and continuing until CAO are reached
- Sample MNA wells quarterly until CAO are reached



SWMU 7/8 – Dissolved Plume

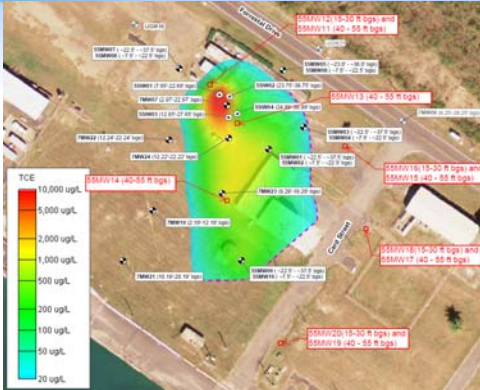


SWMU 54 – Benzene Plume Upcoming Cleanup Activities

- Evaluate if oxygen release compounds (ORC) is appropriate as a remedy
 - due to higher than expected benzene concentrations
- If appropriate, perform ORC pilot injections
- Monitor benzene concentration over time to evaluate technology success
- If ORC is not best option, then discuss other options
 - may include air sparging and/or soil excavation



SWMU 55 – Groundwater Sampling, New Wells



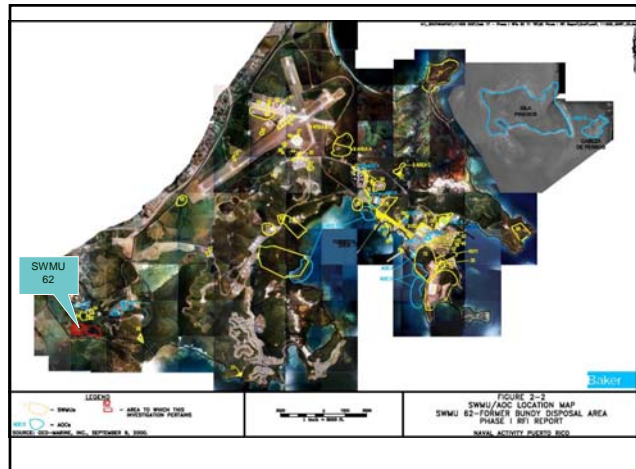
SWMU 55 – Recent Pilot Test Activities

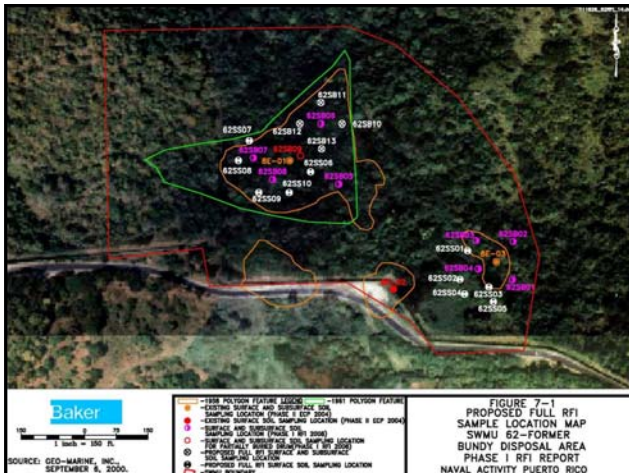
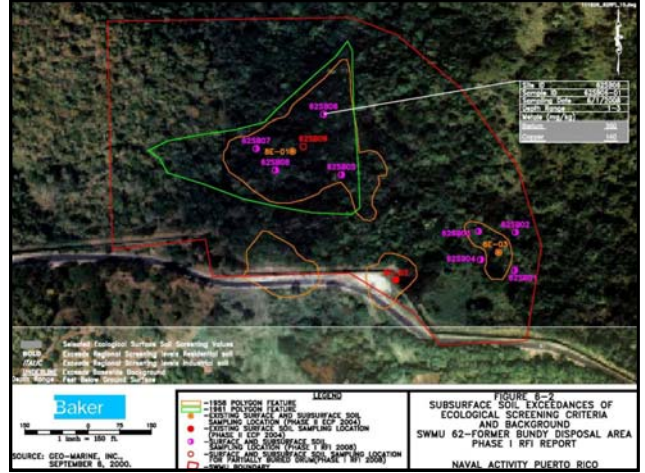
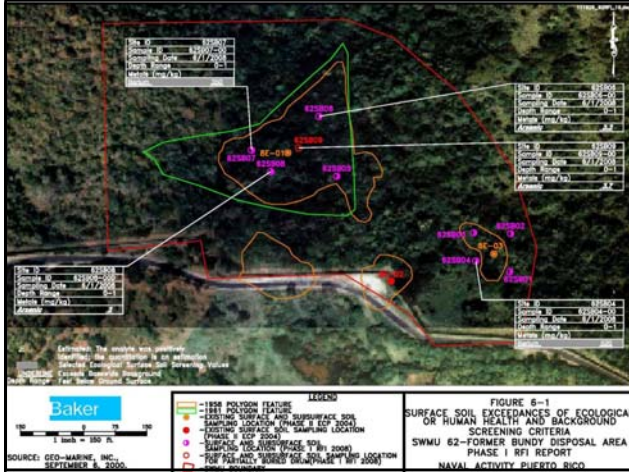
- Installed 4 injection wells and 10 monitoring wells
 - Collected samples from monitoring wells for analysis
- Performed aquifer tests to measure how quickly water moves underground
 - Injected 10,000 gallons of potassium permanganate solution
 - Measured injection radius and determined injection rates
 - Currently assessing how long potassium permanganate stays in subsurface, removing TCE
- Will monitor TCE concentration over time to evaluate technology success



Reports Submitted – Final Phase I RFI Report for SWMU 62 (Former Bundy Disposal Area)


- Submitted to EPA and EQB on October 29, 2009
 - Addressed EPA comments (February 2009) and EQB comments (March 2009)
- Full RCRA Facility Investigation (RFI) is recommended
 - To characterize the nature and extent of site contamination (metals) in the surface and subsurface soils





Reports Submitted – Final Semi-Annual Groundwater Monitoring Report for SWMU 3

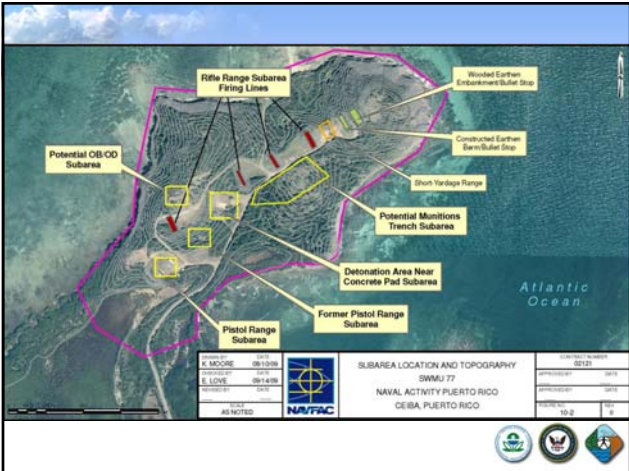
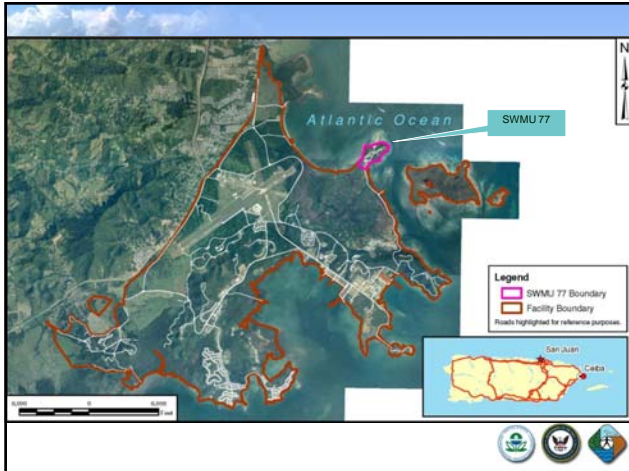
- Submitted to the EPA and EQB on October 29, 2009
 - In accordance with EPA e-mail (September 2009) and addressed EQB comments (July 2009)
- Results of the semi-annual groundwater sampling from March 2009 at the former Base Landfill
 - Recommended continuing the semi-annual detection monitoring at the landfill





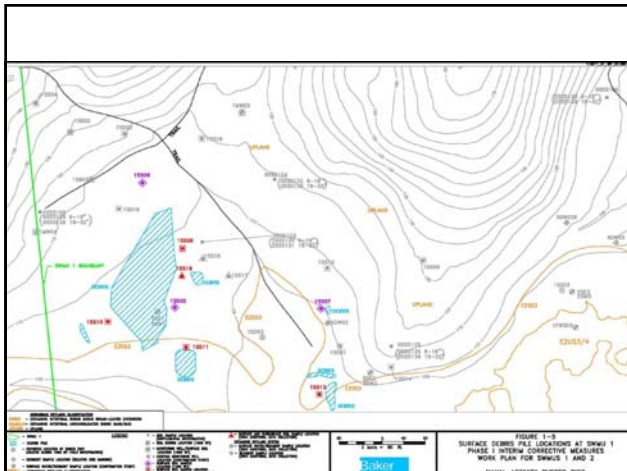
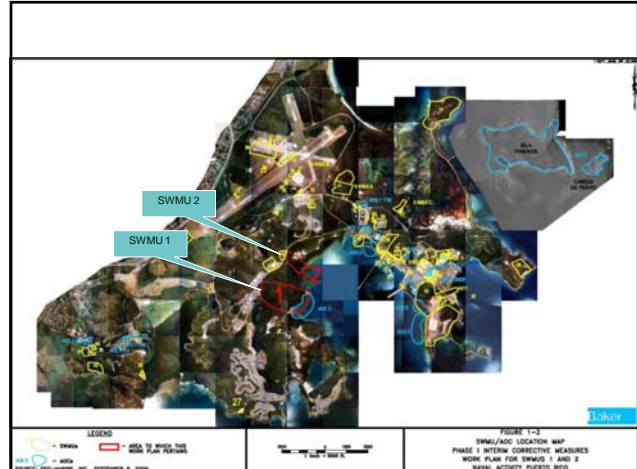
Reports Submitted – Draft Sampling and Analysis Plan for SWMU 77

- Submitted to EPA and EQB on November 6, 2009
- Plan to investigate potential Munitions Constituents (MC) and Munitions and Explosives of Concern (MEC)
 - in surface and subsurface soil at SWMU 77 (Small Arms Range)



Reports Submitted – Draft Phase I Interim Corrective Measures Work Plan for SWMU 1 and 2

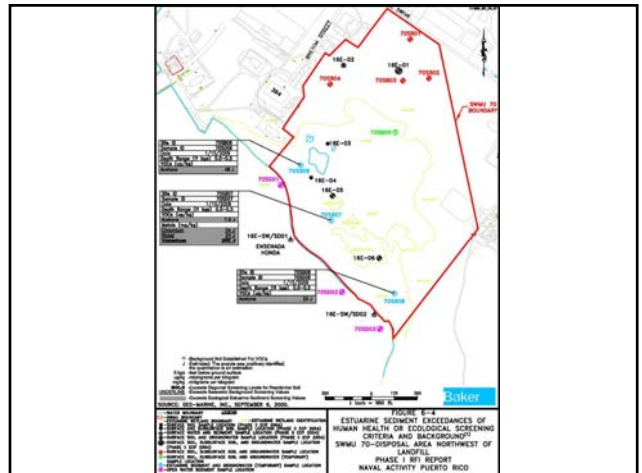
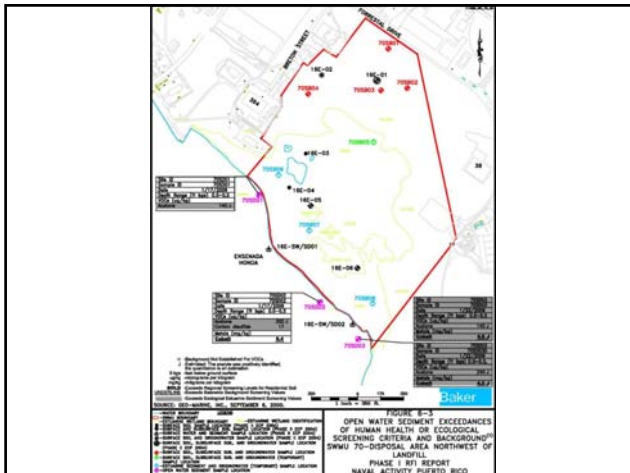
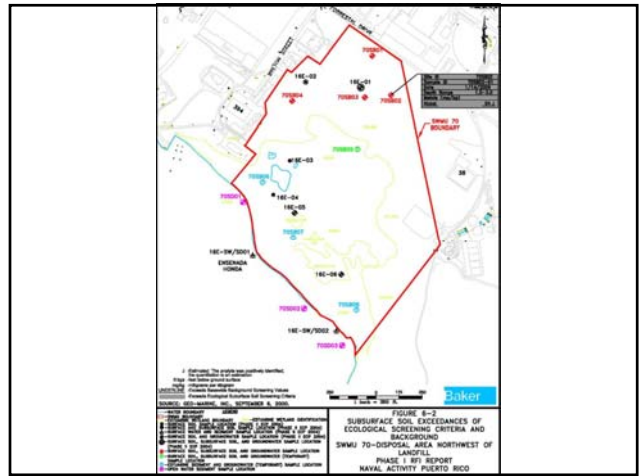
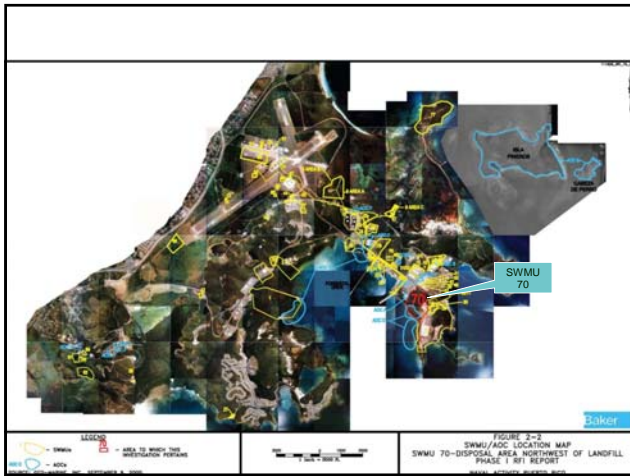
- Submitted to EPA and EQB on November 19, 2009
- Outlines the procedures to:
 - Delineate the extent of surface soil contamination at SWMUs 1 (Army Cremator Disposal Site) and 2 (Langley Drive Disposal Site)
 - Reduce the risk of environmental contamination by removing surface debris at SWMU 1
- Expect to begin removing debris in January 2010

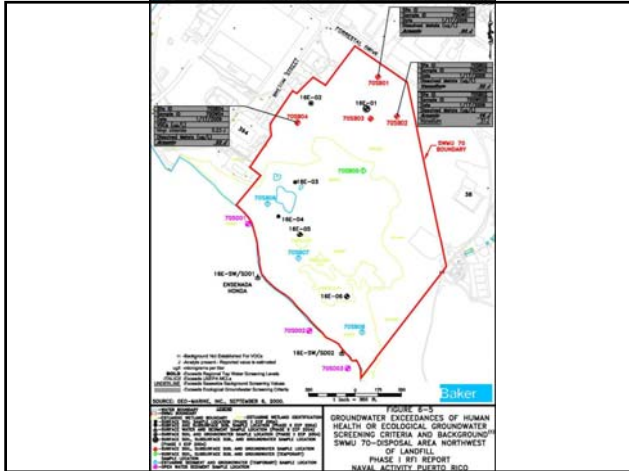


Reports Submitted – Final Phase I RFI Report for SWMU 70

- Submitted to EPA and EQB on November 19, 2009
 - Addressed EPA and EQB comments (July 2009)
- Full RCRA Facility Investigation is recommended
 - Delineate site contamination at former Disposal Area Northwest of Landfill:
 - Surface soil (metals), subsurface soil (metals), estuarine (wetland) sediment (metals), and groundwater (VOCs and metals); define the likely source area(s);
 - Determine the potential for unacceptable risks to human health and/or the environment.

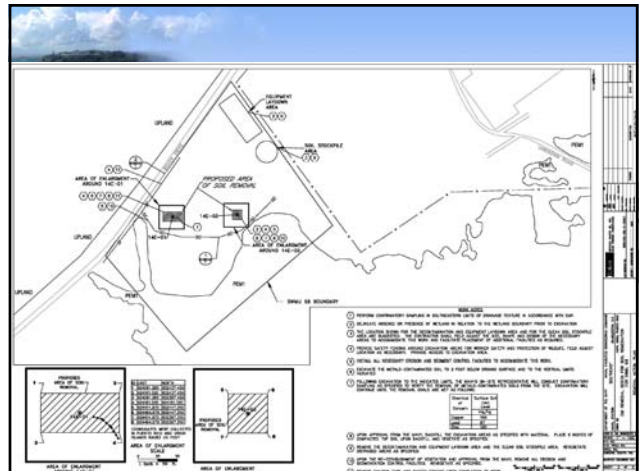
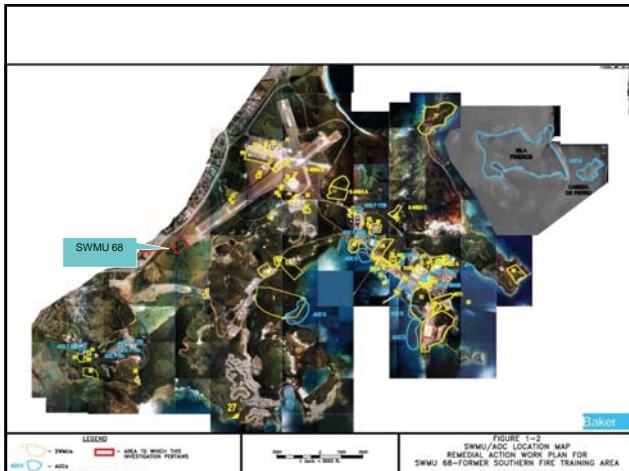






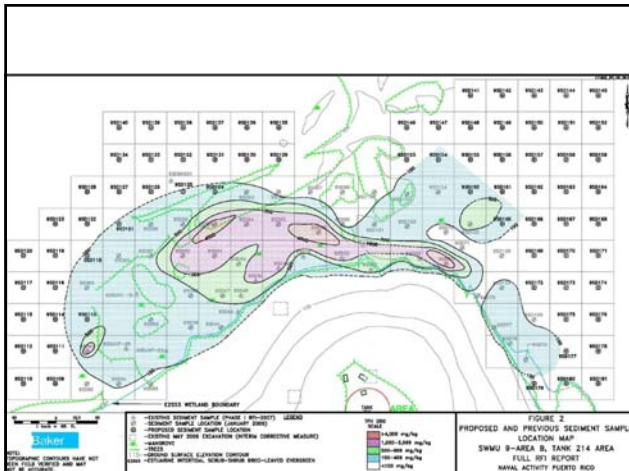
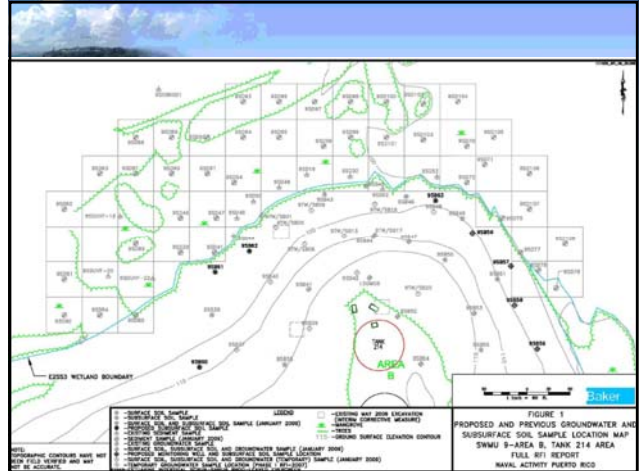
Reports Submitted – Draft Corrective Measures Implementation Design and Work Plan for SWMU 68

- Submitted to EPA and EQB on November 19, 2009
- Outlines the procedures
 - To remediate the metals contamination in the surface soils from two areas at SWMU 68 (Former Southern Fire Training Area)
 - To protect ecological receptors
- The soil removal will begin after regulatory approval



Reports Submitted – Responses to EPA and EQB Comments on the Draft Full RFI Report for SWMU 9 – Area B, Tank 214 Area

- Submitted to the EPA and EQB on November 19, 2009
- Proposal for Additional Sampling
 - To further delineate contamination in subsurface soil, estuarine (wetland) sediment, and groundwater



Reports Submitted – Draft Phase Corrective Measures Study Investigation Report for SWMU 74

- Submitted to EPA and EQB on November 19, 2009
- Included results of soil and groundwater sampling conducted along the fuel pipelines and hydrant pits
 - To determine if any releases of petroleum products occurred from this pipeline system
 - The system was split into five areas: Airfield Area, SWMU 9 Area A/B, JP-5 Hill and DFM Area, SWMU 9 Area C, and Fueling Piers Area
 - This investigation did not include SWMU 7/8 (Tow Way Fuel Farm), because that was already investigated and is being cleaned up
- Provided recommendations for the Phase II investigation to delineate the areas of contamination identified from Phase I



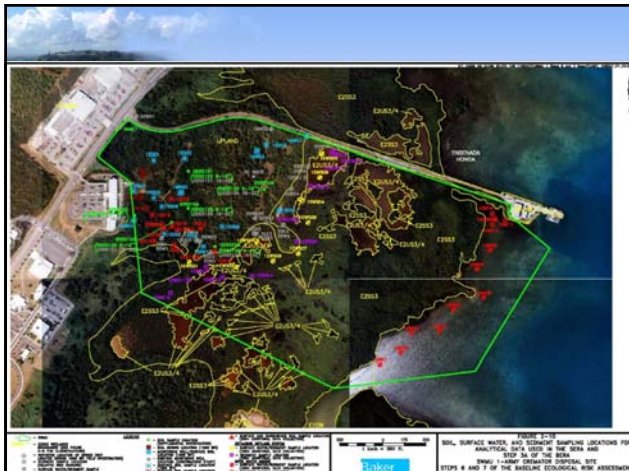
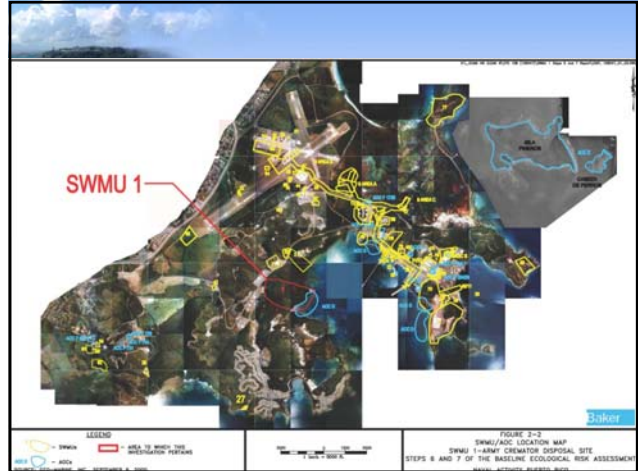


Reports Submitted RCRA – Quarterly Progress Report for August 1, 2009 through October 31, 2009

- Submitted to the EPA and EQB on November 24, 2009
 - Provides the status on the activities being performed under the RCRA Order at NAPR
 - Contains the Tow Way Fuel Farm (TWFF) Quarterly Summary Progress Report No. 51
 - Final summary report for the TWFF after the implementation of the corrective measure

Reports Submitted – Draft Final Steps 6 and 7 of the Baseline Ecological Risk Assessment for SWMU 1 (Army Cremator Disposal Site)

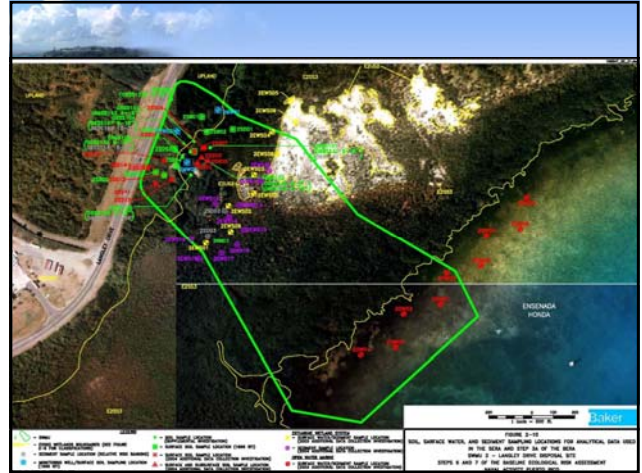
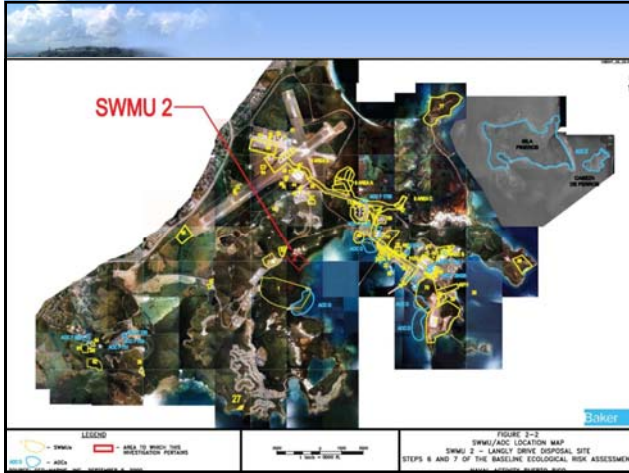
- Submitted to the EPA and EQB on December 1, 2009
 - Addresses EPA and PREQB comments dated September 17, 2009 on the draft version of this report
 - Reports on the findings of the baseline ecological risk assessment for all media from SWMU 1
 - Recommends an Interim Corrective Measure (ICM) to remove contaminated surface soil hot spots and surface debris removal
 - Following the ICM it is recommended that SWMU 1 proceed to a Corrective Measures Study to
 - further address low-level metals contamination in soil
 - Recommends Corrective Action Complete without controls for sediments in Ensenada Honda



Reports Submitted – Draft Steps 6 and 7 of the Baseline Ecological Risk Assessment for SWMU 2 (Langley Drive Disposal Site)

- Submitted to the EPA and EQB on December 4, 2009
 - Reports the findings of the baseline ecological risk assessment for all media from SWMU 2
 - Recommends an Interim Corrective Measure
 - to remove metals contaminated surface soil hot spots
 - Following the ICM it is recommended that SWMU 2 proceed to a CMS
 - to further address low-level metals contamination in soil and estuarine (mangroves) sediment
 - Recommends Corrective Action Complete without controls for sediments in Ensenada Honda





Reports Submitted – Draft Project Closeout Report - Remedial Action for Soil Remediation at Various Sites

SWMU 9 (Tanks 212 through 217 Sludge Disposal Pits)
 SWMU 13 (Bldg 258 Pest Control Area)
 SWMU 46 (Transformer Storage Pad)
 SWMU 53 (Bldg 64 Former Malaria Control Shop)
 AOC C (Transformer Storage Pads near Bldg 2042)

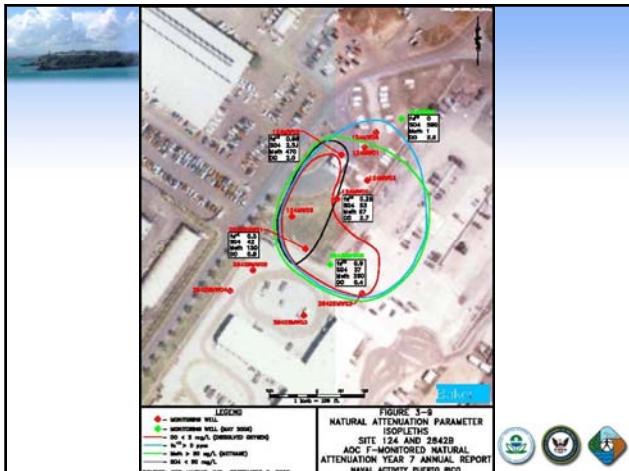
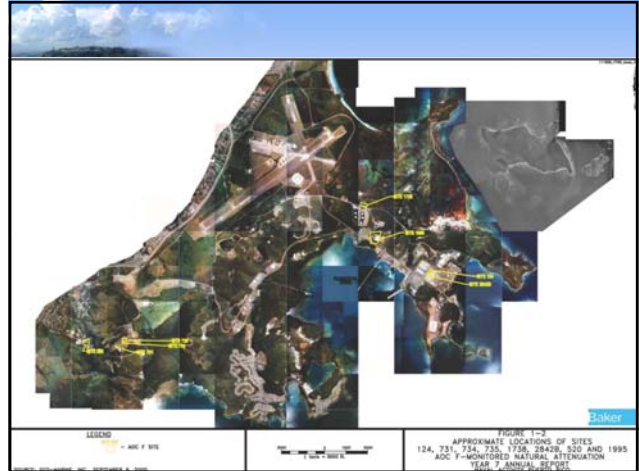
- Submitted to the EPA and EQB on December 4, 2009
 - Documents the completion of the contaminated soil removal project at the above listed SWMUs
 - Correction Action is Complete at these sites

Reports Submitted – Final MNA AOC F Year 7 Annual Report

- Submitted to the EPA and EQB on December 30, 2009
 - Reported groundwater sampling
 - to determine if monitored natural attenuation is continuing to reduce contamination at the 8 Underground Storage Tank sites
 - Addressed EPA and EQB comments dated September 29, 2009
 - Site 124 and 2842 B
 - Identifying decreasing trends in the TPH and BTEX concentrations
 - Natural attenuation processes are occurring at these sites
 - Continue to monitor the low levels of MIBE in the groundwater
 - Replace wells with submerged screens
 - Site 520
 - Continue to monitor the generally increasing trend of benzene in groundwater
 - Install and monitor new wells to assist in delineating contamination to the north, east and southeast of well 520MW02

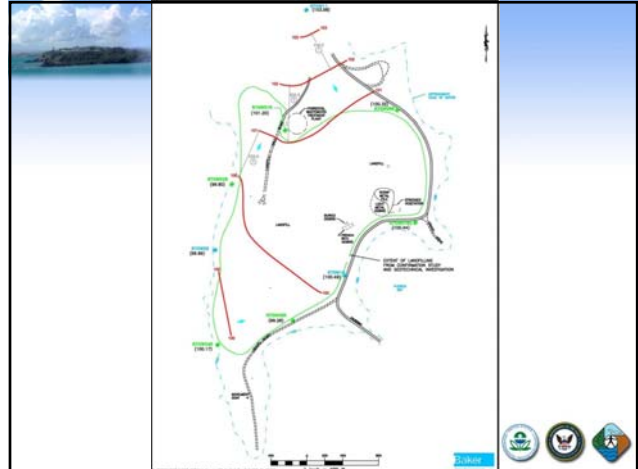
Reports Submitted – Final MNA AOC F Year 7 Annual Report (continued)

- Sites 731/734/735
 - Limited groundwater contamination is still present at these sites, and concentrations continue to be below PRCOB target levels
 - Fuel-related compounds are now being detected in the wells installed in May 2008. Additional monitoring of these wells is required. If contamination persists additional wells may need to be installed
- Site 1738
 - Total TPH concentrations are generally increasing while BTEX constituents remain steady at one of the wells
 - Biodegradation is occurring at the contaminated well
 - A plume of MIBE has been identified at this site
 - Additional wells are proposed to be installed along with a proposal to address MIBE in the groundwater at this site.
- Site 1995
 - No adjustments to the sampling plan are required at this site
 - The monitoring network is sufficient and the analytical results indicate that there is no items for concern at the present time



Reports Submitted – Draft Semi-Annual Groundwater Monitoring Report – SWMU 3, Former Solid Waste Landfill September 2009 Sampling Event

- Submitted to the EPA and EQB on December 30, 2009
 - Presents the results of the semi-annual groundwater sampling from September 2009 monitoring the groundwater at the Base Landfill
 - One compound, nickel, exceeded the overall prediction limit established for the landfill.
 - The results from the March 2010 sampling event will be reviewed to determine if this exceedance of nickel is still present
 - Recommended that the semi-annual detection monitoring continue at the landfill



Reports Submitted – Draft MNA AOC F - Year 7 Quarter 3 Report

- Submitted to the EPA and EQB on January 6, 2010
 - Reports quarterly groundwater sampling at 3 of the 8 sites at AOC F
 - to determine if monitored natural attenuation is continuing to reduce contamination at the Underground Storage Tank sites
 - Site 124I2842B
 - Continued sampling is recommended to monitor the TPH and BTEX trends as well as the MIBE concentrations
 - Proposes to replace certain wells with submerged screens
 - Site 1738
 - Benzene was detected in the downgradient well in Quarter 2 but not detected during Quarter 3 sampling event
 - Recommended that quarterly monitoring continue as part of the MNA program to monitor and exhibit BTEX and TPH compounds at the site
 - Develop a proposal to address the MIBE plume at this site



Reports Submitted – Background Soil Concentrations of Inorganic Compounds for use at the Airfield

- Addendum B to the Summary Report for Environmental Background Concentrations of Inorganic Compounds for Airfield Soil
- Submitted to the EPA and EQB on January 6, 2010
 - The need for revising the surface soil background data set for use in SWMU investigations at the airfield at NAPR was discussed and agreed to during a meeting attended by USEPA, PREQB, Navy, Techlaw (consultant to EPA), TRC (consultant to EQB), and Baker (consultant to Navy) on October 30, 2008 at EPA offices
 - These background soil values for the airfield will be utilized for evaluating inorganics in soils at the SWMUs located within the airfield



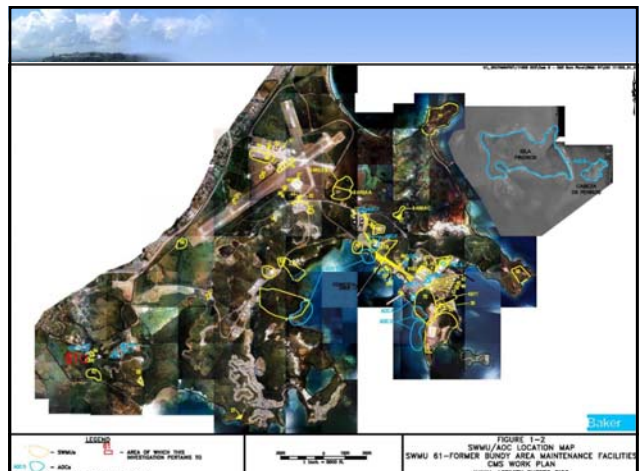
Reports Submitted – Background Freshwater Drainage Ditch Sediment Concentrations of Inorganic Compounds

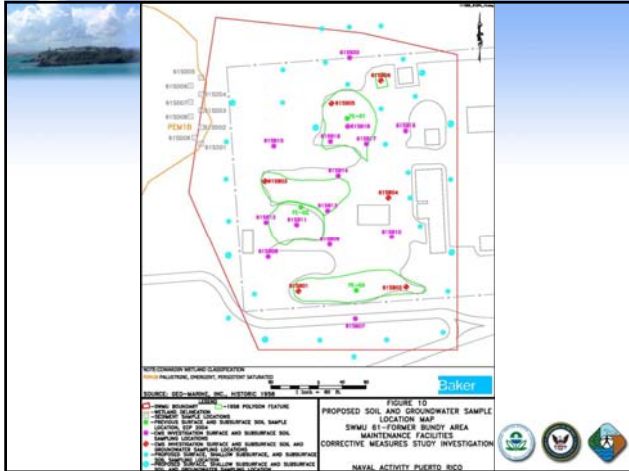
- Addendum C to the Summary Report for Environmental Background Concentrations of Inorganic Compounds for Freshwater Drainage Ditch Sediment was submitted to the EPA and EQB on January 6, 2010
 - The need for revising the surface soil background data set for use in SWMU investigations at the airfield at NAPR was discussed and agreed to during a meeting attended by USEPA, PREQB, Navy, Techlaw (consultant to EPA), TRC (consultant to EQB), and Baker (consultant to Navy) on October 30, 2008 at EPA offices
 - These background values for freshwater drainage ditch sediments will be utilized for evaluating inorganics in freshwater drainage ditch sediments at the SWMUs located within NAPR



Reports Submitted – SWMU 61 Corrective Measures Study Investigation Request for Additional Sampling dated January 8, 2010

- Submitted to the EPA and EQB on January 8, 2010
 - Revisions to the proposed sampling for SWMU 61
 - Addressed EPA Comments dated December 15, 2009





EPA and EQB Comments

- PREQB comments dated November 18, 2009
 - Draft MNA AOC F - Year 7 Quarter 2 Report dated October 14, 2009
 - EQB approved the MNA Year 7 Quarter 2 Report
- EPA comments dated December 15, 2009
 - SWMU 61 (Former Bundy Area Maintenance Facilities) Draft Corrective Measures Study Investigation Results and Request for Additional Sampling, dated October 7, 2009
 - EPA requested modifications to the proposed additional sampling

EPA and EQB Comments (Continued)

- EPA comments dated December 15, 2009 (continued)
 - SWMU 62 Response to Comments and Revisions to Final Phase I RFI Report, dated October 29, 2009.
 - EQB approved the Final Phase I RFI Report for SWMU 62 (Former Bundy Disposal Area)
 - EPA made two minor comments that will be addressed in an addendum to the report
 - SWMU 70 Response to Comments and Revisions to Final Phase I RFI Report, dated November 19, 2009
 - EQB approved the Final Phase I RFI Report for SWMU 70 (Disposal Area Northwest of Landfill)
 - EPA provided contingent approval of the document pending the Navy including the analysis of cobalt for the soils in the Full RFI

Re-Use Update

Mark Davidson

January 13, 2010



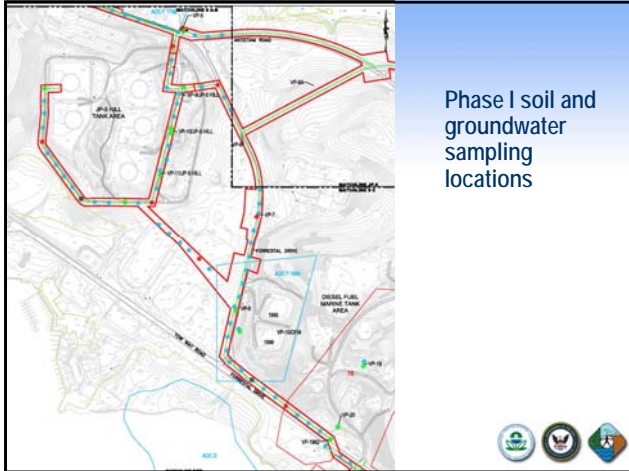
Information requested: Discuss the dry dock and its nomination as a historical site

- The Dry Dock is part of Science Park parcel to be transferred to the Commonwealth
- Memorandum of Agreement between Navy and State Historic Preservation Officer (SHPO)
 - Agreement on which properties on base have cultural, architectural, or historical significance
 - Any special requirements for preservation
- Memorandum of Agreement lists the dry dock as “eligible” for inclusion (listing) on the National Register of Historic Places
 - Met criteria for:
 - architectural resource (style/design)
 - historical resource (built in 1943, WW II era)

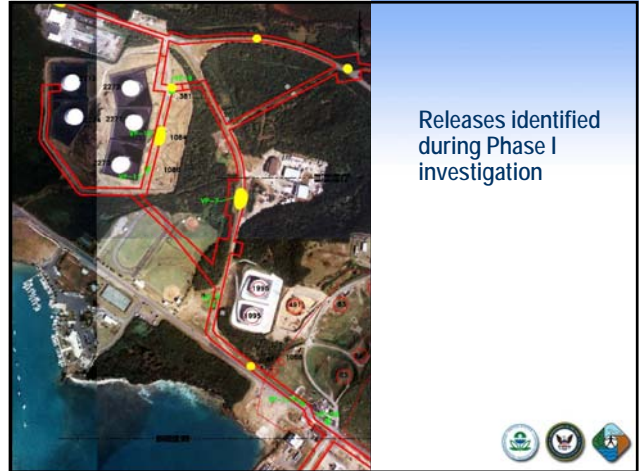
Information requested: Discuss the dry dock and its nomination as a historical site (continued)

- Base closure and eventual transfer of dry dock was considered an “adverse effect”
 - To mitigate this adverse effect, the Memorandum of Agreement required Navy to adequately record its architectural/historical significance
 - Accomplished by providing architectural reports and photographic documentation of the dry dock to SHPO and DNER
 - Completed by Navy
- Transfer deed will provide “notice” that dry dock was identified as eligible for listing on National Register of Historic Places
- New owner will need to consult with State Historic Preservation Officer on use/development of dry dock

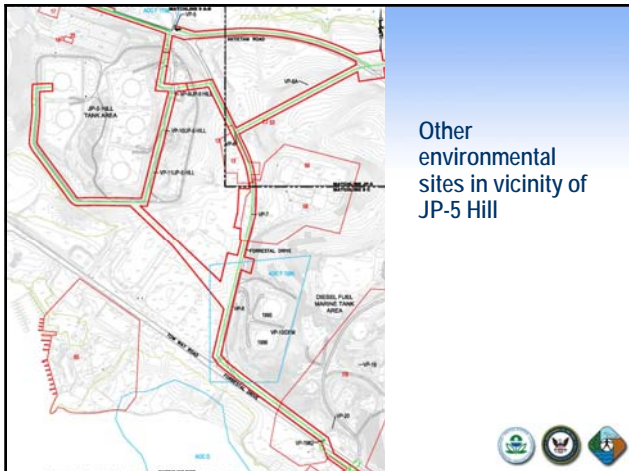
JP-5 Hill Tank Farm and associated piping



Phase I soil and groundwater sampling locations



Releases identified during Phase I investigation



Other environmental sites in vicinity of JP-5 Hill



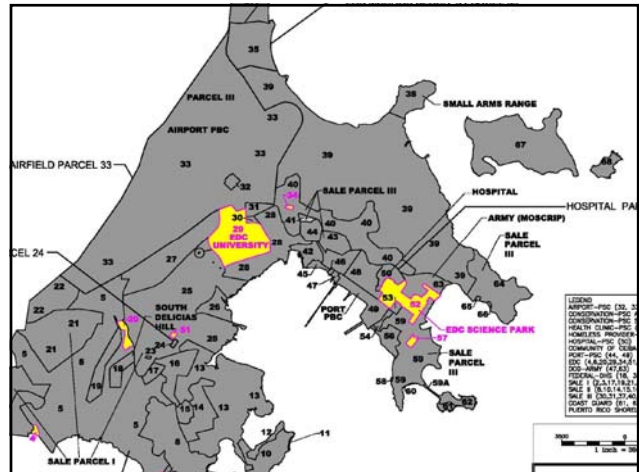
Information requested: Detailed environmental site/structural report about fuel tanks site Fuel Tanks

- Concern of potential environmental impacts due to future use of JP-5 Hill fuel tanks and associated piping
 - Raised during Oct 09 RAB meeting following a tank farm explosion/fire in San Juan
- Environmental Investigation of pipeline
 - Soil borings every 100 ft
 - Two sub surface soil samples taken at each soil boring and each valve box (535 samples)
 - Surface soil sample taken every 10th boring (28 samples)
 - Groundwater samples collected every 10th boring and at all valve boxes (54 samples)



Information requested: Detailed environmental site/structural report about fuel tanks site Fuel Tanks (continued)

- Path forward
 - expand investigation of releases identified during Phase I investigation (Phase II investigation)
- Structural integrity investigation and reporting of fuel tanks
 - Responsibility of future owner prior to use
 - Navy has no intention of using tanks
- Navy's intentions:
 - transfer the port property (tanks) prior to allowing use of tanks



Information requested: Discuss the status of the Economic Development Conveyance (EDC) application submitted by the LRA, and any environmental impacts EDC Application Status

- Portal del Futuro submitted the EDC application to Navy May 2009
- Current EDC application includes
 - Science Park
 - University
 - Three waste water treatment plants
 - Water treatment plant
 - Fire station
 - Bowling alley



Information requested: Discuss the status of the Economic Development Conveyance (EDC) application submitted by the LRA, and any environmental impacts EDC Application Status (continued)

- Following the Caribbean Riviera concept (end of June), Portal del Futuro asked Navy to put EDC application on hold
 - Awaiting resolution of special gaming reform legislation (“Enabling Legislation”)
- If gaming legislation is approved, Local Reuse Authority (LRA) will likely amend the application to request additional land
 - Sale Parcel III
- If gaming legislation is disapproved, LRA likely ask Navy to process the EDC application as is
- Any Environmental Impacts due to EDC application?
 - Navy to carve-out (retain ownership) of environmental sites
 - Navy continue with environmental cleanup



Information requested: Status of request to have Local Reuse Authority (LRA) provide information on Caribbean Riviera conceptual plan and its zoning plan

- LRA is planning a public meeting in Ceiba around end of January 2010 to discuss Caribbean Riviera
- Special gaming legislation has been introduced. Should be acted on during this upcoming session.



Other public comments and questions?



Closing: next RAB meeting

- Next RAB meeting April 2010
 - At Club Cívico La Seyba, if available
 - Please remember to call ahead, or send an alternate, if you cannot attend
- Agenda suggestions for next time?
 - Call Ramón Figueroa, RAB Community Co-Chair (787-235-1473)
- Thank you for participating!



Questions between meetings

Mark Davidson or David Criswell
Navy BRAC Program Management Office
Southeast

4130 Faber Place Dr, Ste 202
North Charleston, SC 29405

Teléfono:
843-743-2135 (Davidson)
843-743-2130 (Criswell)

Email:
mark.e.davidson@navy.mil
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Wilmarie Rivera

Federal Facilities Coordinator
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