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MINUTES AND AGENDA FOR RESTORATION ADVISORY BOARD MEETING HELD 17 MAY
2011 NSY PORTSMOUTH ME
05/17/2011
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**RESTORATION ADVISORY BOARD MEETING
PORTSMOUTH NAVAL SHIPYARD
KITTERY TOWN HALL, KITTERY, MAINE
May 17, 2011**

Restoration Advisory Board (RAB) members at the meeting included the following:

- RAB Community members – Doug Bogen, Jon Carter, Michele Dionne, Diana McNabb, Onil Roy, and Roger Wells.
- Navy RAB members – Lisa Joy, Portsmouth Naval Shipyard (PNS), and Linda Cole, Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Remedial Project Manager (RPM).
- Regulatory representative – Matt Audet, United States Environmental Protection Agency (USEPA), Iver McLeod, Maine Department of Environmental Protection (MEDEP).

Absent RAB members included the following:

- RAB Community members – Peter Britz, Mary Marshall, and Jack McKenna.

Guests at the RAB included:

- Matt Thyng and Debbie White of PNS.
- Amy Brand, CH2M Hill.
- Bill Deane from Shaw Environmental & Infrastructure, Inc. (Shaw E&I).
- Debbie Cohen and Matt Kraus from Tetra Tech NUS, Inc. (Tetra Tech).

INTRODUCTION

The meeting was opened by Lisa Joy (RAB Navy Co-Chair). Ms. Joy welcomed everyone to the RAB meeting and requested that attendees introduce themselves. The attendees introduced themselves and stated the organizations they represented.

STATUS OF WORK AND REGULATOR UPDATES

Linda Cole, NAVFAC Mid-Atlantic RPM, reviewed the update on the status of work at Operable Unit (OU) 1, OU2, OU3, OU4, OU7, OU9, and Site 30. The presentation is attached to the minutes.

Ms. Cole provided an update on funding for Fiscal Year (FY) 2012. The spending plan is under development and is anticipated to include funding for the remedial action at OU2. The current estimate for completion is \$29 million.

The following are highlights of the updates on the OUs:

- OU1 (Site 10 - Former Battery Acid Tank No. 24): The Navy is resolving regulatory comments on the draft Remedial Action Work Plan, submitted in January 2011. The Navy is still planning to conduct the field work for the remedial action this summer.
- OU2 [Site 6 - Defense Reutilization and Marketing Office (DRMO) Storage Yard, Site 29 – Former Teepee Incinerator Site, DRMO Impact Area (Quarters S, N, & 68)]: The final Feasibility Study (FS) Report and draft Proposed Remedial Action Plan (PRAP) were submitted in April 2011. The draft PRAP was presented at this RAB meeting. Soil sampling as part of the pre-design investigation sampling (to delineate the western boundary of contaminated soil at Site 6) was conducted in April 2011. The topographic and wetlands surveys that will support the remedial design will be conducted in a May/June timeframe. Since March 2011, site restoration activities for the DRMO Impact Area Removal Action continue and are almost complete. (After the status presentation, Ms. Cole showed photographs of the completed site restoration at the DRMO Impact Area.)
- OU3 [Site 8 – Jamaica Island Landfill (JILF), Site 9 – Former Mercury Burial Sites (MBI and MBII), and Site 11 – Former Waste Oil Tanks Nos. 6 & 7]: The Post-Remedial Operation, Maintenance, and Monitoring (OM&M) program continues. Round 10 sampling and inspection were conducted in April 2011. The Round 10 sampling will support the next 5-year review.
- OU4 (Site 5 – Former Industrial Waste Outfalls and Offshore Areas Potentially Impacted by PNS Onshore IRP Sites): The Interim Offshore Monitoring Program continues. Round 11 sampling was conducted in April 2011, in accordance with the Interim Offshore Monitoring Plan update (revision 1).
- OU7 (Site 32 – Topeka Pier Site): The Navy continued resolving regulatory comments on the draft Remedial Investigation (RI) Report.
- OU9 (Site 34 – Former Oil Gasification Plant, Building 62): There has been no change in the status of this site (the draft RI Report is under regulatory review).
- Site 30 – Former Galvanizing Plant, Building 184: The draft removal action work plan for removal of the tank vault within Building 184 at Site 30, submitted in April 2011, was presented at this RAB meeting.
- Community Involvement Plan (CIP): The CIP is an update to the 1996 Community Relations Plan (CRP). An update on the CIP was presented at the RAB meeting.

Ms. Cole reviewed photographs from May 2011 of the backyards of Quarters S and N showing site restoration activities after removal of the contaminated soil. Ms. Cole indicated that the landscaping activities included planting native trees and plants; no invasive species were included in the landscaping plan. Some of the trees and plants included paper birch, gray birch, high-bush cranberries, white cedars, winter berries, and red pines. Existing lilac trees were trimmed to allow for better growth. Matt Audet said that he visited the site last week and was pleased with how the site was restored. The Navy was also pleased with the completed landscaping.

REGULATOR UPDATE

USEPA --- Matt Audet indicated that USEPA was reviewing the draft PRAP for OU2 and will provide comments to the Navy this week.

MEDEP --- Iver McLeod indicated that MEDEP had been reviewing the draft PRAP for OU2 and provided comments the afternoon of the RAB meeting. As provided in their comments, MEDEP would like to discuss with the Navy some potential subsurface hot-spot removal in the waste disposal area portion of OU2 to see whether this may be a feasible consideration for the proposed remedy.

OU2 DRAFT PROPOSED REMEDIAL ACTION PLAN

Ms. Cohen of Tetra Tech provided a presentation on the draft OU2 Proposed Remedial Action Plan (PRAP) submitted on April 18, 2011. The Navy is waiting for regulatory comments on the draft PRAP. The presentation is attached to the minutes.

Ms. Cohen briefly reviewed the purpose and components of a PRAP, indicating that the major purpose is to solicit community input on the proposed remedy. Presentation of the draft PRAP to the RAB members is an important way to obtain early community input on the Navy's proposed remedy.

OU2 consists of Site 6 – DRMO Storage Yard, Site 29 – Teepee Incinerator Site, and the DRMO Impact Area – Quarters S, N, and 69. Currently Site 6 is covered with asphalt or a grass-covered interim impermeable cap. Buildings 298 (office building) and 310 (hose handling facility) are located on Site 29 and the land surrounding these buildings is covered with grass, concrete, or asphalt. These two sites are industrial areas. The DRMO Impact Area is a military residential area covered with grass, houses, and roads. The OU2 shoreline is steeply sloped and has shoreline erosion controls.

Ms Cohen reviewed past contaminant sources at Sites 6 and 29 and the history of filling in the OU2 area. Sites 6 and 29 are located on filled land; Site 6 and most of Site 29 were filled in the early 1900s with soil and rock (including blasted bedrock) from the excavation and removal of Henderson's Point. The removal of Henderson's Point in the early 1900s was to facilitate navigation of boats through Portsmouth Harbor. Filling of the remaining portion of Site 29 began in the 1920s, and this portion of the site is the waste disposal area. Foundry slag was also found in fill material in one area of the DRMO Storage Yard.

The results of the various environmental investigations at OU2 are summarized in the 2010 Supplemental RI Report. This report presents the nature and extent of contamination and site risks. Ms. Cohen reviewed the nature and extent of contamination indicating that of the soil contaminants identified at OU2, lead concentrations define the maximum extent of soil contamination. Ms. Cohen pointed out the areas of contamination at OU2 (see the figure attached to the presentation in the attachment to these minutes), explaining that the boundary on the western side of OU2 is approximate and that a pre-design investigation (see Figure 4) is being conducted to refine the extent of contamination in this area. The results of the pre-design investigation will be used to determine the final boundary for the remedial design.

The risk conclusions provided in the RI Report indicate: there are no onshore ecological concerns; there are potential unacceptable risks for people exposed to chemicals in soil; and there are no unacceptable risks for exposure to groundwater. There are potential future concerns for groundwater migration to the offshore if precipitation/storm water infiltrates through the contaminated unsaturated zone soil in the capped area to groundwater that then migrates to the offshore area. The interim cap prevents infiltration of precipitation/storm water; however, if the cap was removed and water infiltrated through the contaminated soil in this area, there could be a potential risk to the offshore area. Ms. Cohen noted that the offshore area of OU2 is included in the OU4 interim offshore sediment monitoring program within Monitoring Station 11. Sediment is only located in a small intertidal area in the offshore area to the east of Site 29. The sediment is found behind rocks in the low tide portion at this location and over the past 10 years of monitoring, the Navy has not found any sediment accumulation in this area. Based on the various shoreline erosion controls placed along the OU2 shoreline, there are no current concerns for erosion; however, there could be a future concern if the shoreline controls failed. In answer to a question of whether there has been any recent erosion of the OU2 shoreline, Ms. Cohen indicated that upgrades to the shoreline controls were made in 2006 and 2008 after soil erosion was found on the slope east and west of the seawall south of Site 29. The area to the west of the seawall has a steep slope so concrete blocks shaped like jacks (called A-jacks) were used to stabilize the bottom of the shoreline slope.

Based on the site risks, remedial action objectives for Sites 6 and 29 within OU2 were identified in the FS Report to prevent human exposure to contaminated soil, protect the offshore environment from erosion of contaminated soil, and prevent future potential migration of contaminants from unsaturated zone soil to groundwater in the capped area. Ms. Cohen indicated that, in the development and evaluation of remedial alternatives for OU2, the Sites 6 and 29 areas were separated based on the type and distribution of contamination. Most of the Site 6 area and part of the Site 29 area are discussed as the DRMO area. The portion of Site 29 where waste material was disposed is discussed as the waste disposal area. In the DRMO area, the majority of contaminated soil is in the unsaturated zone, overlying a rock fragment layer (blast rock) with little to no soil. In the waste disposal area, the majority of contamination is in the tidally saturated and saturated zones. Contamination was removed from the

DRMO Impact Area as part of the 2010 removal action and further action is not required to protect human health and the environment; therefore, remedial alternatives were not evaluated for this area. Ms. Cohen explained that the risk assessment identified chemicals of concern for human health as antimony, copper, lead, nickel, PAHs, PCBs, and dioxins/furans. However, the average dioxins/furans concentration at OU2 was less than the residential soil cleanup level and remediation is not required based on dioxin/furan.

Remedial alternatives were identified to meet the remedial action objectives and then evaluated against the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-mandated criteria. Seven of the criteria are evaluated in the FS Report and the remaining two, state and community acceptance, are evaluated after the public comment period on the PRAP. Ms. Cohen noted this RAB process is important to help in development of the PRAP and she encouraged questions and comments during the presentation on the alternatives and the Navy's proposed remedy. During the presentation, Mr. McLeod indicated MEDEP was in agreement with the Navy's proposal, including no further action for the DRMO Impact Area.

Ms. Cohen reviewed the waste disposal area (WDA alternatives) and DRMO area (DRMO alternatives) in relation to the CERCLA criteria shown in Tables 2 and 3 of the presentation. For both the WDA and DRMO alternatives, USEPA guidance requires inclusion of a no action alternative (WDA-1 and DRMO-1) even though the alternative would not meet the threshold criteria of being protective of human health and the environment.

In addition to no action, the WDA alternatives included land use controls (LUCs) with monitoring (WDA-2), surface soil excavation with soil cover, LUCs and monitoring (WDA-3), and unsaturated zone soil excavation with soil cover, LUCs, and monitoring (WDA-4). Surface soil is 0 to 2 feet below ground surface (bgs) and the unsaturated zone is approximately 0 to 6 feet bgs. Table 2 provides the comparison of how each alternative compares for each criteria. The Navy's preliminary recommended alternative for the waste disposal area is Alternative WDA-3. Ms. Cohen reviewed the components of this alternative and the figure showing the area where excavation would be conducted and soil cover placed. There were several pockets of waste material found outside the proposed soil cover footprint that will be excavated. The proposed soil cover would go over the area where waste material remains in the subsurface, which currently goes up to the bedrock outcrop to the east. It was explained that the lines of site features on the figure do not align exactly with the lines showing the extent of the cover because of the angle at which the aerial photograph was taken. It was explained that the assumption for development of the alternative is that the final cover material (grass or asphalt) would be the same as what is currently present. Ms. Cohen reviewed the cover system detail figure that shows the pavement and vegetative sections considered for the cover. A cover, as opposed to an impermeable cap, was considered for the waste disposal area because risks indicated that only a cover was needed as a physical barrier to prevent people from being exposed to waste. Leaching of contaminants from the

unsaturated zone does not pose an unacceptable risk; therefore, an impermeable cap is not necessary to protect human health or the environment.

The major difference in the evaluation of implementability for WDA-3 and WDA-4 is that Building 310 affects the implementability of WDA-4 because it would be difficult to dig 6 feet bgs around Building 310. The contamination extends under Building 310, at present the building is being used by the Shipyard, and the Navy does not know whether the building will be removed in the future. LUCs would be used to prevent exposure to contamination under the building. If the building were removed, implementability of WDA-4 may be easier; however, costs would be greater to remove the building. In answer to a question of why not remove all the waste material, Ms. Cole explained that the depth of the waste is as deep as 40 feet bgs and is very close to the seawall; even if the building was removed, it would not be feasible to remove all the waste material in consideration of the risks at the site. LUCs would still be part of a remedy for any waste material remaining at the site. Because leaching is not a concern, LUCs would be sufficiently protective. In review of the table, it was noted that the criteria for reduction of mobility, toxicity, and volume of contaminants is through treatment. Because no treatment is being conducted as part of any alternative, this criterion is rated as poor, even though there would be reduction of contamination through excavation in alternatives WDA-3 and WDA-4. There is a mixture of contaminants in the waste disposal area so treatment would not be feasible. Mr. Audet explained that USEPA prefers to use treatment, if possible, as part of remedial actions and this is why the criterion is evaluated.

There was discussion of where MEDEP thought deeper excavation in the waste disposal area may remove a hot-spot area of contamination. Mr. McLeod explained there was an approximate 350 square foot area west of the southern end of Building 310, close to the seawall. Mr. McLeod explained that further discussion of this area was needed to see whether it may be possible to dig a few feet deeper. Ms. Cole indicated that the Navy just received MEDEP comments and was in the process of resolving them. She also indicated that the remedy could not compromise the integrity of the seawall. In some areas, especially by the seawall, waste material is under the water table and would be difficult to excavate.

In addition to no action, the DRMO area alternatives included LUCs with monitoring (DRMO-2); excavation to meet residential criteria with LUCs and monitoring (DRMO-3); excavation to meet industrial land use with LUCs and monitoring (DRMO-4); and excavation to meet industrial land use outside of the interim capped area, placement of a permanent cap over the interim cap, with LUCs and monitoring (DRMO-5). Excavation of soil would be to the top of the rock fragment layer (where there is little to no soil), which averages 6 feet bgs. However, there are areas where the rock fragment layer is deeper or shallower. Table 3 provides the comparison of how each alternative compares for each criterion. The Navy's preliminary recommended alternative for the DRMO area is Alternative DRMO-4. Ms. Cohen reviewed the components of this alternatives and a figure showing the excavation areas, indicating that the excavation areas for DRMO-4 are consistent with where hazardous materials were formerly stored in

the DRMO Storage Yard. In review of the comparison of alternatives, Ms. Cohen indicated that, because of the large volume of soil that would need to be excavated as part of DRMO-3, it has more human health and environment concerns than DRMO-4 and DRMO-5 because of the concerns for managing the volume of contaminated material. DRMO-3 and DRMO-4 have better long-term effectiveness than DRMO-5 because the very high lead concentrations (greater than 10,000 ppm) would be removed rather than capped. While DRMO-3 is much more expensive than DRMO-4 and DRMO-5, there is not a significant difference in cost between DRMO-4 and DRMO-5.

The following summarizes additional questions and answers related to the DRMO area:

- Has the interim capped area been monitored for cracks? The interim cap was installed in 1993 as a temporary measure in the interim of implementation of a final remedy. The cap consists of concrete over an impermeable layer. A grass cover is over the concrete. Although there is no monitoring program, the cap material was tested as part of a treatability study in 2003. The testing showed that the cap material was still impermeable.
- What is the future land use after the capped area is excavated? It will be industrial; however, the surface material could be grass or asphalt. Ms. Cole mentioned that the Navy could consider a rain garden as part of site restoration in this area.
- Mr. Bogen asked how a potential future sea level rise is accounted for in evaluating potential risks of contaminant migration from the unsaturated zone. Ms. Cohen explained how contaminant fate and transport modeling, conducted as part of the RI, accounted for the potential risks from leaching of unsaturated zone soil. Matt Audet noted that the modeling assumed a worst-case scenario. Ms. Cole added that when contamination is left in place as part of a remedy, five year reviews are required to ensure that the remedy remains protective of human health and the environment. Changes in site conditions that could affect the protectiveness are evaluated as part of the five year review process.
- Why were construction worker versus residential excavation areas evaluated for the DRMO area and not for the waste disposal area? The distribution of contamination in the DRMO area was higher in some areas and much lower in others, such that areas of contamination could be delineated based on construction worker (i.e., industrial use) versus residential use. For the waste disposal area, contaminated material was found throughout the area, such that the remediation area for industrial use would not be different than the remediation area for residential use.
- Do LUCs include maintenance of asphalt and shoreline controls? LUCs would consider the necessary action to ensure that site conditions remain suitable for continued industrial use.

Asphalt is not required to prevent exposure to underlying soil and is not part of the remedy. Shoreline controls would be included in the LUCs.

As discussed earlier, further action is not required for the DRMO Impact Area because contaminated soil was removed as part of the 2010 removal action. Mr. Audet indicated that additional information should be provided in the PRAP that explains why the Navy proposes that further action is not required for the DRMO Impact Area. Because the DRMO Impact Area is immediately adjacent to the DRMO, there was discussion of how the boundary between the clean and contaminated areas would be distinguished. Mr. Deane explained, as part of the DRMO Impact Area removal action, soil was excavated between the backyards of Quarters S and N and the DRMO area so that there is a clean zone between the backyards and the DRMO area. The fence between the properties was installed in this clean zone. Also, a geotextile was placed between the excavated and unexcavated areas so that it will be easy to distinguish between the remediated area and the DRMO area.

The Navy is waiting for regulatory comments/resolution of regulatory comments on the draft PRAP and is anticipating submitting the draft final PRAP in June 2011. The dates for the public comment period, informational meeting, and public hearing will be determined after submittal of the draft final PRAP, and the information will be provided in the final PRAP. A public notice will also announce the start of the public comment period and provide information on the meeting and public hearing. The notice will provide information on the availability of the PRAP in the Information Repositories. The Navy is anticipating that the public comment period will begin in June or July and is hoping that the public meeting can be held the week of July 11, 2011.

COMMUNITY INVOLVEMENT PLAN UPDATE

Ms. Amy Brand, of CH2MHILL, provided an update on community involvement as part of the remedial process. The presentation is attached to the minutes. Ms. Brand provided a presentation on the plans to update the CIP at a RAB meeting last year and this RAB meeting presentation provides information on what has been done since then.

Ms. Brand explained that both USEPA and the Navy require community involvement during CERCLA cleanup activities. The Navy considers community involvement to be an integral component of their Environmental Restoration Program. The CIP, previously referred to as a CRP, provides the blue print for how the public will be kept informed and have opportunities to provide input in the cleanup process.

Community interviews and other sources of information are used to form the basis for the CIP. For the PNS CIP, a list of approximately 75 potential interviewees was developed and the Navy requested interviews from people selected from this list. The interviews in March 2011 focused on identified stakeholders not involved specifically with the RAB. Face-to-face and telephone interviews were held. Ms. Brand indicated that she would be talking to several of the RAB members who were not interviewed

in March 2011. Interviews were held with 39 people and included a range of people who may have a community involvement. The people may represent several types of stakeholders and their comments and input were not specifically assigned to a specific type of stakeholder when being evaluated. Ms. Brand reviewed the general results of the interviews.

In answer to a question of how many people need to be interviewed, Ms. Brand indicated that USEPA advises at least 20 people. Initially, approximately 20 people were identified for interviews for PNS and, based on recommendations during these interviews, additional people were interviewed. Various local towns were represented in the list of people. In answer to a question of whether there is any current community access to the Shipyard, Debbie White from Shipyard Public Affairs Office(PAO) indicated that the Shipyard is able to host some civic, community, and school groups. She mentioned a history tour and program that is available at the Shipyard to these groups. In answer to a question of whether there is any community access to Clark's Island, such as through a private boat landing on the island, the Navy indicated that Clark's Island is government property with some special ecological communities and is not accessible to the general public.

DRAFT SITE 30 REMOVAL ACTION WORK PLAN

Mr. Bill Deane, Shaw E&I, provided a presentation on the draft Remedial Action Work Plan for OU1. The presentation is attached to the minutes. The draft work plan was submitted in April 2011; regulatory comments are due this week.

Site 30 is the Former Galvanizing Plant, Building 184. Site 30 consists of a former acid tank vault below the ground in a portion of Building 184. The vault was used to hold tanks associated with galvanizing operations in the 1940s and for a clean room facility in the 1950s. When use of the tank vault discontinued, the Shipyard filled in the vault, and covered it in concrete. By the early 1960s, the building was converted to a welding school, which was its use until recent relocation of the welding school. No one is currently in the building; however, after the removal action is complete, another tenant will be moved in. The objective of the removal action is to remove all contaminated material associated with Site 30 to allow for unrestricted/unlimited use.

Mr. Deane reviewed the activities associated with the removal action that are discussed in the work plan. After regulatory comments are received on the draft removal action work plan, the Navy will finalize the work plan. The Navy is anticipating finalizing the work plan, mobilizing in summer 2011, and completing the Construction Completion Report in winter 2011.

The following summarizes the questions and answers during the presentation:

- Does sulfur (the major chemical detected in the fill material) have a risk level? It is not likely because the list of metals provided are the USEPA's target analyte list, which does not include

sulfur. [Post-meeting note: The Navy confirmed that sulfur is not on the USEPA's target analyte list and it is not a chemical included on the USEPA's Regional Screening Level table.]

- Where does the water come from that is in the tank? It is not certain. Past surface water runoff may be a source. Although the Navy estimated a volume of water that will need to be removed, this was a rough estimate.
- What is "TCLP" analysis indicated in the characterization sampling slides? TCLP stands for toxicity characteristic leaching procedure and this is conducted to determine whether any of the material would be characterized as hazardous requiring disposal at a hazardous waste facility, rather than a solid waste facility. It was noted that the characterization analytical parameters are the standard ones used for characterization of materials for offsite disposal.

ISSUES

Upon completion of presentations, Ms. Joy asked whether there were any other issues that needed to be discussed. No other issues or topics were raised.

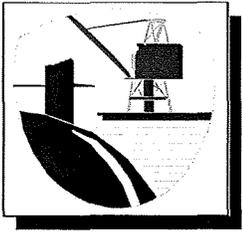
FUTURE MEETINGS

Ms. Joy indicated that the Navy was proposing September 13, 2011, as the next meeting. The agenda will include an update on project activities over the summer.

Post-meeting note: The next RAB meeting is scheduled for September 13, 2011, and will be held in the meeting room at Kittery Town Hall, 200 Rogers Road, Kittery, Maine. Planned agenda items will be provided with the invitation to the next meeting.

ATTACHMENTS

AGENDA AND PRESENTATIONS FROM MAY 17, 2011



Portsmouth Naval Shipyard Restoration Advisory Board Meeting Agenda

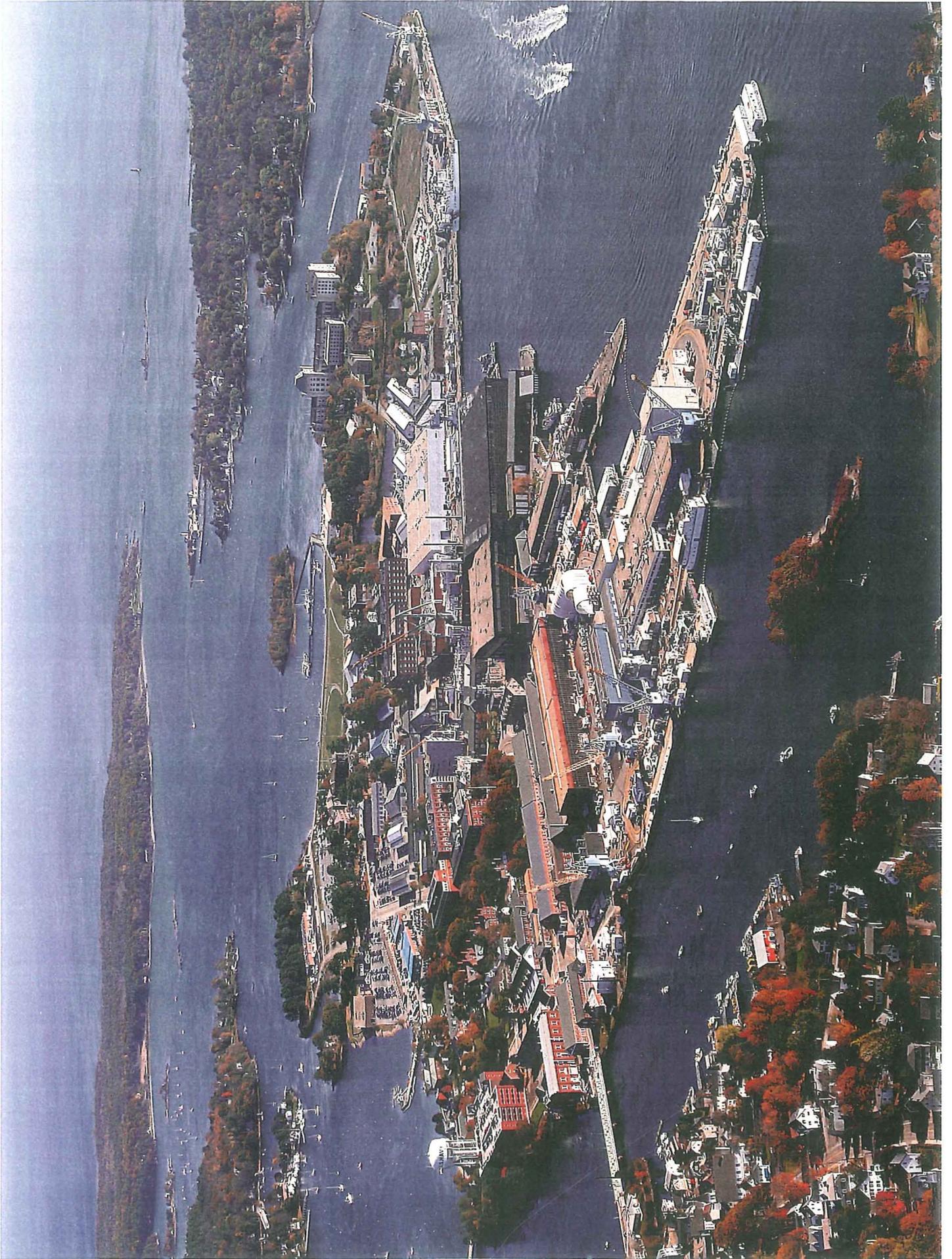


Date – May 17, 2011

Place – Kittery Town Hall, Kittery, ME

Time – 7 p.m. - 9 p.m.

- Introductions – Ms. Lisa Joy, Navy RAB Co-chair**
- Community Co-chair Remarks – Mr. Doug Bogen**
- Status of Work - Ms. Linda Cole, Navy**
- Regulator Updates – Mr. Matt Audet, USEPA and Mr. Iver McLeod, MEDEP**
- Draft PRAP for OU2 – Ms. Deborah Cohen, Tetra Tech**
- Community Involvement Plan Update – Ms. Amy Brand, CH2M Hill**
- Draft Site 30 Remedial Action Work Plan - Mr. Bill Deane, Shaw E&I**
- Other Issues as Required**



Installation Restoration Funding History

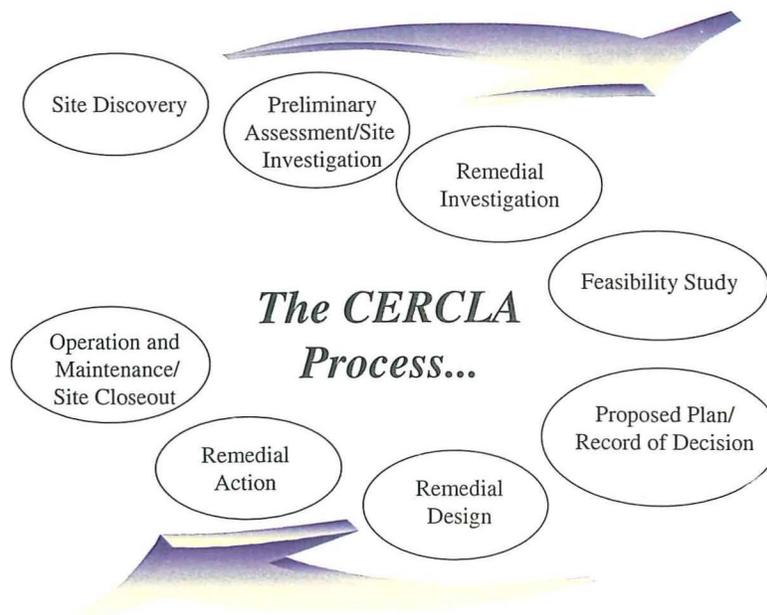


- Approximately \$60 Million spent to date
- FY 2010 spent \$1.0M
- FY 2011 spent plan \$1.9M
- **FY 2012 spending plan underdevelopment (funding available for the Remedial Action at OU2)**
- **Estimated \$29M for Cost-to-Complete**

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Portsmouth Naval Shipyard Installation Restoration Program, May 2011

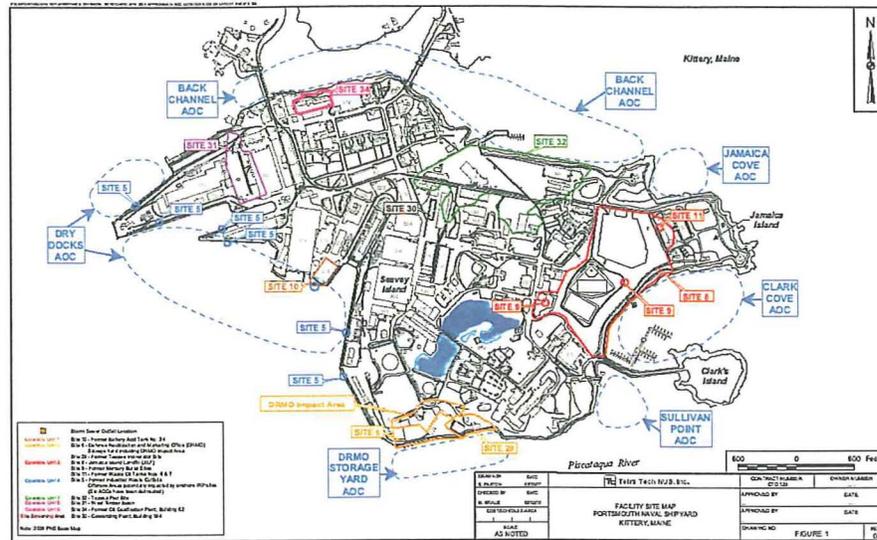
CERCLA Process



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Portsmouth Naval Shipyard Installation Restoration Program, May 2011

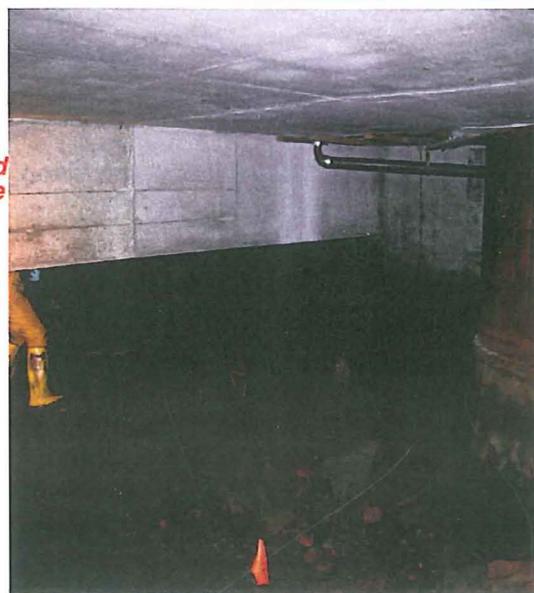
IR Sites As Currently Defined



OPERABLE UNIT 1 (Site 10)



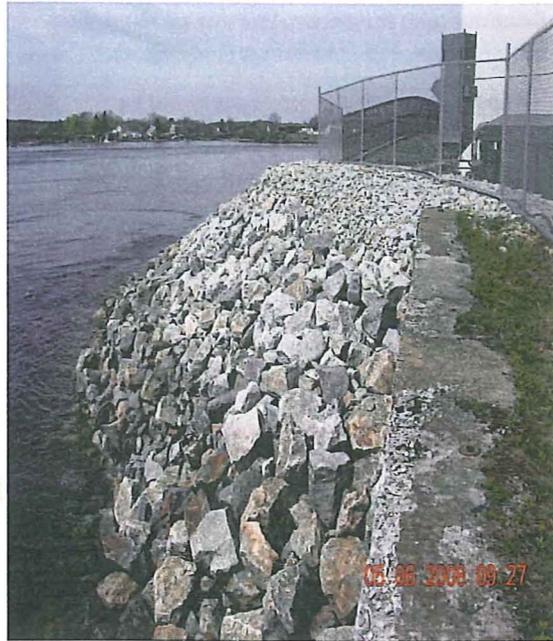
- Remedial Action Work Plan
 - Draft Report issued Jan 11
 - Resolving regulatory comments
 - Received EPA comments 12 Apr and MEDEP comments 28 Feb; response issued 21 Apr
- Land Use Control Remedial Design (LUC RD)
 - Draft issued Dec 10 (within 90 days of signature of the ROD)
 - Regulatory review
- Long Term Management Plan under development



OPERABLE UNIT 2 (Sites 6 and 29 and the DRMO Impact Area)



- FS Report
 - Final issued Apr 11
- Draft PRAP
 - Issued 18 Apr 2011 (within 90 days after Draft Final FS Report)
 - Regulatory Review
- Draft ROD
 - To be issued 30 days after end of public comment period
 - FY11 goal (Final ROD)
- OU2 Pre-design Investigation
 - Final Work Plan issued Nov 10
 - Soil sampling conducted week of 11 Apr 2011
 - Topographic and wetlands survey will be conducted May/June
- Remedial Design awarded



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Portsmouth Naval Shipyard Installation Restoration Program, May 2011

Removal Action - DRMO Impact Area at Operable Unit 2



- First phase of archeological survey in Spring 2010
- Second phase of archeological survey in September 2010
- Soil excavation completed
- Site restoration activities being conducted; ECD 30 May



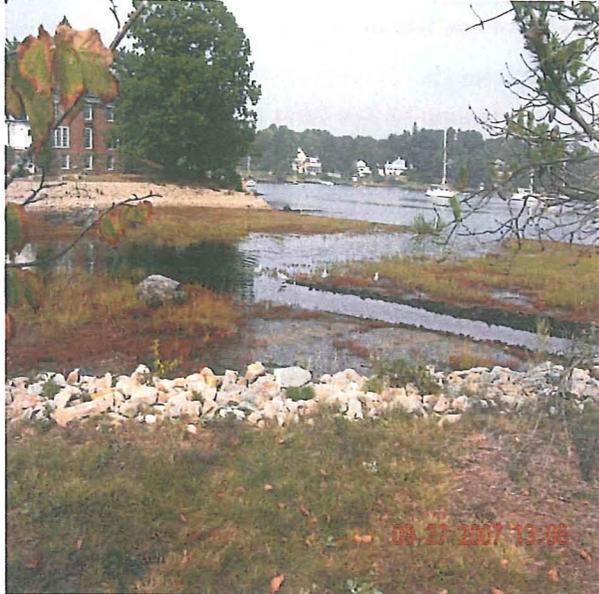
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Portsmouth Naval Shipyard Installation Restoration Program, May 2011

OPERABLE UNIT 3 (Site 8)



- Continue with Post-Remedial Action Operation, Maintenance, and Monitoring (OM&M)
- OM&M field work - **Round 10 conducted the week of 18 Apr 2011**
- Land Use Control Remedial Design (LUCRD)
 - Draft Final issued March 2010
 - *Regulatory comment resolution*
- OM&M Plan Update
 - Draft Plan issued April 2009
 - *Regulatory review/comment resolution*
- OM&M Rounds 1 to 9 Report
 - **Regulatory comment resolution completed**
 - **Final Report issued April 2011**
- Five Year Review
 - Start Jul/Aug 2011
 - Due Jun 2012



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Portsmouth Naval Shipyard Installation Restoration Program, May 2011

OPERABLE UNIT 4 (Site 5 and Offshore Areas of Concern)



- FS Report
 - Draft Report issued July 2010
 - Regulatory review/resolving regulatory comments
- Interim Offshore Monitoring Plan (IOMP) Update
 - Final Report issued November 2010
 - **Round 11 conducted the week of 18 Apr 2011**

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Portsmouth Naval Shipyard Installation Restoration Program, May 2011

OPERABLE UNIT 7 (Site 32)



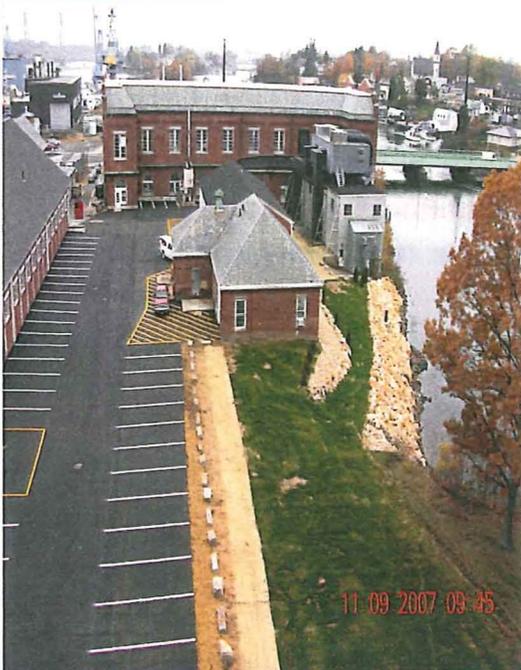
- Draft RI issued in October 2010
- *Resolving regulatory comments*
- *Draft Final anticipated for June 2011*



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Portsmouth Naval Shipyard Installation Restoration Program, May 2011

OPERABLE UNIT 9 (Site 34)



Draft RI Report

- Draft Report issued Feb 11
- Regulatory review

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Portsmouth Naval Shipyard Installation Restoration Program, May 2011



- Revised EE/CA and Action Memorandum (Revision 2)
 - Final EE/CA issued October 2010
 - Public comment period held November 3 to December 2, 2010
 - Final Action Memorandum signed on December 7, 2010

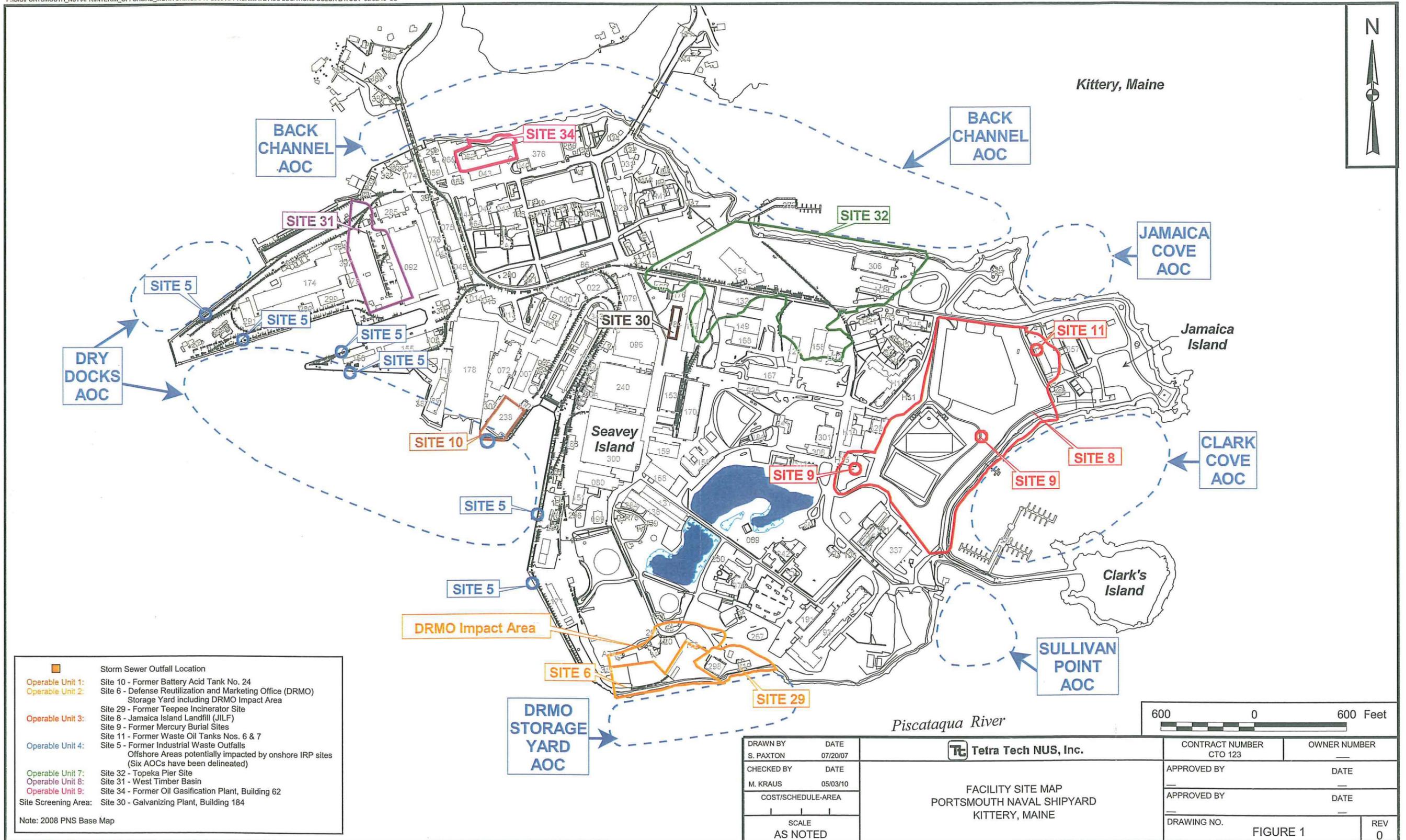
- Removal Action Work Plan
 - **Draft issued April 2011**
 - **Regulatory review**

Community Involvement Plan



The Community Involvement Plan (CIP) is an update to the 1996 Community Relations Plan (CRP).

- Face-to-face interviews were conducted the week of 14 March 2011
- Telephone interviews **were completed the following week**
- The Draft CIP will be submitted for regulatory and RAB review



- Storm Sewer Outfall Location
 - Operable Unit 1: Site 10 - Former Battery Acid Tank No. 24
 - Operable Unit 2: Site 6 - Defense Reutilization and Marketing Office (DRMO) Storage Yard including DRMO Impact Area
 - Operable Unit 3: Site 29 - Former Teepee Incinerator Site
 Site 8 - Jamaica Island Landfill (JILF)
 Site 9 - Former Mercury Burial Sites
 Site 11 - Former Waste Oil Tanks Nos. 6 & 7
 - Operable Unit 4: Site 5 - Former Industrial Waste Outfalls
 Offshore Areas potentially impacted by onshore IRP sites (Six AOCs have been delineated)
 - Operable Unit 7: Site 32 - Topeka Pier Site
 - Operable Unit 8: Site 31 - West Timber Basin
 - Operable Unit 9: Site 34 - Former Oil Gasification Plant, Building 62
 - Site Screening Area: Site 30 - Galvanizing Plant, Building 184
- Note: 2008 PNS Base Map

DRAWN BY S. PAXTON	DATE 07/20/07
CHECKED BY M. KRAUS	DATE 05/03/10
COST/SCHEDULE-AREA	
SCALE AS NOTED	

Tetra Tech NUS, Inc.

FACILITY SITE MAP
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

CONTRACT NUMBER CTO 123	OWNER NUMBER ---
APPROVED BY ---	DATE ---
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DRAWING NO. FIGURE 1	REV 0

Draft Proposed Plan for Operable Unit 2

Portsmouth Naval Shipyard

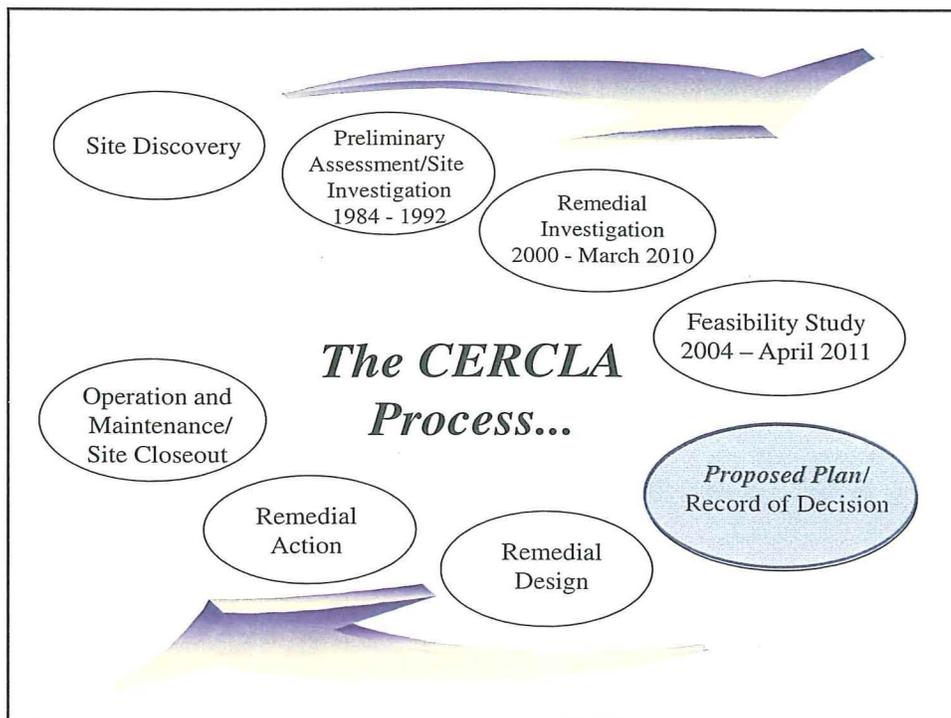
Date: May 17, 2011

Presenter:

Deborah Cohen, Tetra Tech NUS, Inc.

Presentation Objectives

- Explain the purpose and general components of the Proposed Plan (also referred to as Proposed Remedial Action Plan or PRAP).
- Discuss the contents of the Navy's draft Proposed Plan for Operable Unit (OU) 2.
- Present the Navy's preliminary recommendations for remediation of OU2.



Purpose of a Proposed Plan

- The Proposed Plan is a document used to facilitate public involvement in the remedy selection process – EPA guidance EPA/540/R-98/031, July 1999.
- A Proposed Plan:
 - presents remedial alternatives that were evaluated and the preliminary recommendations concerning how best to address contamination at a site,
 - explains the reasons for the preliminary recommendations,
 - highlights key information from documents supporting the preliminary recommendation and refers the reader to these documents for more information and,
 - provides information on the public comment period, public meeting/hearing, and methods to provide comments.

Major Sections in the Plan

- Introduction - identifies the site and describes the public participation process.
- Site Background - provides facts about the site which provide the context for subsequent sections.
- Site Characteristics - describes nature and extent of site contamination.
- Scope and Role - explains how the operable unit fits into the overall site strategy.
- Summary of Site Risks - provides a brief explanation of the risk assessment results.
- Remedial Action Objectives - describes what the proposed site cleanup is expected to accomplish.
- Summary and Evaluation of Alternatives - describes the options evaluated in the Feasibility Study.
- Preferred Alternatives - describes the proposed alternatives and affirms that it is expected to fulfill statutory and regulatory requirements.
- Community Participation - provides information on how the public can provide input on the remedy selection process.

Introduction to OU2

- OU2 consists of Site 6 – the Defense Reutilization and Marketing Office (DRMO) Storage Yard, Site 29 – the Former Teepee Incinerator Site, and the DRMO Impact Area.
- Contaminated soil at the DRMO Impact Area was addressed in the 2010 Removal Action. Anticipating that No Further Action (NFA) is required for the DRMO Impact Area.

OU2 Layout



Site Background

- The DRMO storage yard was associated with the reuse, transfer, donation, sale, and disposal of excess Department of Defense property.
 - Hazardous materials included lead battery cells and plates that were stockpiled on uncovered pallets. These activities were discontinued around 1983.
 - Scrap metal was stored in Building 146. The building was demolished in 2003.
- At Site 29, activities were related to open burning, industrial incineration, and waste disposal. Ash was disposed of in the waste disposal area.
 - Open burning of trash occurred from around 1918 until 1965.
 - The incinerator was used from 1965 to 1975.

Site Background (continued)

- Snow plowing in the DRMO storage yard appears to have pushed equipment and/or pieces of stored materials to adjacent areas.
- An interim cap was installed in 1993 to cover areas of exposed contaminated soil to minimize surface runoff of contaminants.
- Shoreline stabilization activities were conducted in 1999, 2006, and 2008.
- Environmental investigations were conducted at OU2 in 1984-1998 and in 2007-2008. Data from these investigations were summarized in the 2010 Supplemental RI Report [N00102.AR.001743].

Site Characteristics

- Site 6 is covered with asphalt and the grass-covered interim cap. Jersey barriers run along the eastern and northeastern portion of the capped area, and a fence encompasses the remainder of the capped area.
- The area surrounding Building 298 and the waste disposal area at Site 29 are covered with grass (south, east, and north of Building 310), concrete, or asphalt.
- The DRMO Impact Area is a military residential area covered with grass, houses, and roads.
- The OU2 shoreline is steeply sloped and is protected from erosion by a seawall, riprap, and other erosion control devices.
- Groundwater at the site is tidally influenced, is brackish or saline, and is not potable water.

Site Characteristics (continued)

- Soil contaminants identified at OU2 include antimony, copper, lead, nickel, dioxins/furans, PCBs, and PAHs.
- Lead defines the maximum extent of soil contamination.
- Soil contaminants were found at concentrations potentially presenting a risk predominately within the DRMO Storage Yard, capped area, and waste disposal area.
- Lead- and copper-contaminated soil was removed from the DRMO Impact Area as part of the 2010 removal action.

Scope and Role of Operable Unit

- OU2 is one of seven OUs at PNS.
- The offshore area adjacent to OU2 is part of OU4. Contaminated sediment in the Piscataqua River resulting from past releases from onshore OUs is being addressed as part of remedial activities for OU4.

Risk Assessments

- No onshore ecological risks are attributed to OU2.
 - Ecological communities in the onshore areas were healthy and viable.
 - There is little habitat for ecological receptors.
- Human health risks for soil at Site 6
 - Site 6 COCs identified include antimony, copper, lead, nickel, PAHs, and PCBs.
 - Potentially unacceptable non-carcinogenic risks exist for construction workers, occupational workers, child recreational users, and future adult and child residents.
 - Potentially unacceptable carcinogenic risks exist for future residents.
 - Lead risks exceed EPA benchmarks for all receptors.

Risk Assessments (continued)

- Human health risks for soil at Site 29
 - COCs identified include antimony, lead, nickel, PAHs, and PCBs.
 - Potentially unacceptable non-carcinogenic risks exist for construction workers.
 - No unacceptable carcinogenic risks exist.
 - Lead risks exceeded EPA benchmarks for construction workers and child residents.
- Human health risks for soil at the DRMO Impact Area are no longer unacceptable because copper and lead-contaminated soil was removed as part of the 2010 Removal Action.

Risk Assessments (continued)

- No unacceptable risks found from exposure to groundwater.
- Groundwater migration from the capped area to the offshore presents a potential future concern. Potential ecological risks result from lead, copper, and nickel contamination.
- There are concerns for future potential erosion of contaminated soil to the offshore area if shoreline controls were to fail in the future.

Remedial Action Objectives

- Prevent human exposure through ingestion, dust inhalation, and dermal contact to contaminated soil with COC concentrations that exceed cleanup levels.
- Protect the offshore environment from erosion of contaminated soil from the OU2 shoreline.
- Prevent unacceptable risk from future potential migration of contaminants from unsaturated zone soil to groundwater within the capped area.

Remedial Alternatives Development

- For the development of alternatives, Site 6 and the western portion of Site 29 are combined and evaluated under the DRMO area alternatives.
- The remainder of Site 29, consisting of the waste disposal area, was evaluated separately from the DRMO area.

Evaluation Criteria

- There are nine CERCLA-mandated criteria used to evaluate the remedial alternatives. The first two criteria are considered threshold criteria, and any alternative selected must meet them.
1. Overall Protection of Human Health and the Environment
 2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Evaluation Criteria (continued)

- The next five criteria are the balancing criteria. The last two criteria, state (MEDEP) and community acceptance, will be addressed after the public comment period on this Proposed Plan.
3. Long-Term Effectiveness and Permanence
 4. Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment
 5. Short-Term Effectiveness
 6. Implementability
 7. Cost
 8. State/Support Agency Acceptance
 9. Community Acceptance

Waste Disposal Area Alternatives

- Four alternatives were developed for the waste disposal area; except for the No Action alternative, the alternatives were developed to attain RAOs.
- WDA-1: No Action (required by CERCLA)
- WDA-2: Land Use Controls (LUCs) and Monitoring
- WDA-3: Surface Soil Removal and Soil Cover with LUCs and Monitoring
- WDA-4: Unsaturated Soil Removal and Soil Cover with LUCs and Monitoring

Evaluation of Waste Disposal Area Alternatives

- Alternative WDA-1 would not be protective of human health and the environment. Alternatives WDA-2, WDA-3, and WDA-4, would be protective.
- All alternatives would comply with Applicable Relevant and Appropriate Requirements (ARARs).
- No alternative provides treatment as a main component.
- Short-term concerns increase from Alternative WDA-1 to WDA-4. Short-term concerns during remedial action are greatest for Alternative WDA-4 because it requires removal and processing of contaminated material and takes the longest to implement.
- Long-term concerns decrease from Alternative WDA-1 through WDA-4.
- Implementability concerns and costs increase from Alternative WDA-1 through WDA-4.

TABLE 2: WASTE DISPOSAL AREA DESCRIPTION OF REMEDIAL ALTERNATIVES

ALTERNATIVE	WDA-1	WDA-2	WDA-3	WDA-4
Estimated Time Frame (months)				
Designing and Constructing the Alternative	N/A	12	14	16
Achieving the Cleanup Objectives	N/A	12	14	16
Criteria Analysis				
Threshold Criteria				
Protects Human Health and the Environment ➤ Will it protect you and the animal life on and near the site?	○	●	●	●
Meets federal and state regulations ➤ Does the alternative meet federal and state environmental statutes, regulations and requirements?	N/A	●	●	●
Primary Balancing Criteria				
Provides long-term effectiveness and is permanent ➤ Will the effects of the cleanup last?	○	●	●	●
Reduces mobility, toxicity, and volume of contaminants through treatment ➤ Are the harmful effects of the contaminants, their ability to spread, and the amount of contaminated material present reduced?	○	○	○	○
Provides short-term protection ➤ How soon will the site risks be reduced? ➤ Are there hazards to workers, residents, or the environment that could occur during cleanup?	N/A	●	●	●
Can it be implemented ➤ Is the alternative technically feasible? ➤ Are the goods and services necessary to implement the alternative readily available?	N/A	●	●	○
Cost (\$) ➤ Upfront costs to design and construct the alternative (capital costs) ➤ Operating and maintaining any system associated with the alternative (O&M costs) ➤ Periodic costs associated with the alternative (periodic costs) ➤ Total cost in today's dollars (30-year NPW cost)	\$0	\$27,000 capital 30-year NPW: \$382,000	\$1,211,000 capital 30-year NPW: \$1,566,000	\$2,619,000 capital 30-year NPW: \$2,974,000
Modifying Criteria				
State Agency Acceptance ➤ Does MEDEP agree with the Navy's recommendation?	To be determined after the public comment period.			
Community Acceptance ➤ What objections, suggestions, or modifications does the public offer during the comment period?	To be determined after the public comment period.			
Relative comparison of the nine balancing criteria and each alternative: ● – Good , ● – Average, ○ – Poor; N/A – not applicable;				

DRMO Alternatives

- Five alternatives were developed for the DRMO area; except No Action, the alternatives were developed to attain RAOs.
- DRMO-1: No Action (required by CERCLA)
- DRMO-2: LUCs and Monitoring
- DRMO-3: Residential Excavation with Off-Yard Disposal, LUCs, and Monitoring
- DRMO-4: Construction Worker Excavation with Off-Yard Disposal, LUCs, and Monitoring
- DRMO-5: Construction Worker Excavation and RCRA C Cap with Off-Yard Disposal, LUCs, and Monitoring

Evaluation of DRMO Alternatives

- Alternative DRMO-1 would not be protective of human health and the environment. The remaining alternatives would be protective.
- All alternatives would comply with ARARs.
- No alternative provides treatment as a main component.
- Short-term concerns are least for Alternatives DRMO-1 and -2 (no excavation). Alternatives DRMO-4 and DRMO-5 have moderate short-term concerns. Alternative DRMO-3 has the longest construction period and the most short-term concerns.
- Alternative rank for providing the most to least long-term effectiveness, are DRMO-3, DRMO-4, DRMO-5, DRMO-2, and DRMO-1.
- Alternative rank for being the least to most difficult to implement, are DRMO-1, DRMO-2, DRMO-5, DRMO-4, and DRMO-3.

TABLE 3: DRMO AREA DESCRIPTION OF REMEDIAL ALTERNATIVES

ALTERNATIVE	DRMO -1	DRMO-2	DRMO-3	DRMO-4	DRMO-5
Estimated Time Frame (months)					
Designing and Constructing the Alternative	N/A	12	24	18	18
Achieving the Cleanup Objectives	N/A	12	24	18	18
Criteria Analysis					
Threshold Criteria					
Protects Human Health and the Environment ➤ Will it protect you and the animal life on and near the site?	○	●	●	●	●
Meets federal and state regulations ➤ Does the alternative meet federal and state environmental statutes, regulations and requirements?	N/A	●	●	●	●
Primary Balancing Criteria					
Provides long-term effectiveness and is permanent ➤ Will the effects of the cleanup last?	○	●	●	●	●
Reduces mobility, toxicity, and volume of contaminants through treatment ➤ Are the harmful effects of the contaminants, their ability to spread, and the amount of contaminated material present reduced?	○	○	○	○	○
Provides short-term protection ➤ How soon will the site risks be reduced? ➤ Are there hazards to workers, residents, or the environment that could occur during cleanup?	N/A	●	●	●	●
Can it be implemented ➤ Is the alternative technically feasible? ➤ Are the goods and services necessary to implement the alternative readily available?	N/A	●	○	●	●
Cost (\$) ➤ Upfront costs to design and construct the alternative (capital costs) ➤ Operating and maintaining any system associated with the alternative (O&M costs) ➤ Periodic costs associated with the alternative (periodic costs) ➤ Total cost in today's dollars (30-year NPW cost)	\$0	\$29,000 capital 30-year NPW: \$874,000	\$16,082,000 capital 30-year NPW: \$16,829,000	\$6,366,000 capital 30-year NPW: \$7,195,000	\$4,467,000 Capital 30-year NPW: \$5,312,000
Modifying Criteria					
State Agency Acceptance ➤ Does MEDEP agree with the Navy's recommendation?	To be determined after the public comment period.				
Community Acceptance ➤ What objections, suggestions, or modifications does the public offer during the comment period?	To be determined after the public comment period.				
Relative comparison of the Nine Balancing Criteria and each alternative: ● – Good , ● – Average, ○ – Poor; N/A – not applicable;					

Preferred Alternative – WDA-3

- Excavate soil and waste material from 0 to 2 feet bgs within and around the proposed soil cover limits and dispose of excavated material in an off-yard landfill.
- Construct a 2-foot-thick soil cover.
- Implement LUCs to specify long-term management of the soil cover and identify critical existing site features.
- Conduct groundwater monitoring and sediment accumulation monitoring to provide confidence that contaminated soil is not migrating to groundwater or eroding to the offshore area.
- Conduct five-year site reviews to ensure that the remedy remains protective of human health and the environment.

Preferred Alternative – DRMO-4

- Excavate soil associated with unacceptable risks to construction workers. The western boundary of contamination would be determined during the Pre-Design Investigation.
- Restore excavated areas to preconstruction grades, elevations, and surface types.
- Implement LUCs to specify long-term management of site features.
- Conduct groundwater monitoring and sediment accumulation monitoring to provide confidence that contaminated soil is not migrating to groundwater or eroding to the offshore area.
- Conduct five-year site reviews to ensure that the remedy remains protective of human health and the environment.

Alternative WDA-3

Legend	
	Ancillary Debris Area (See Note 1)
	Approximate Limits of 2-foot Excavation and Proposed Cover System
	Asphalt Surface (See Figure 4-3)
	Vegetation Surface (See Figure 4-3)
	Fence Line
	Former Building / Tank
	Shoreline Protection Area



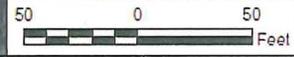
Map Photo Source:
 Imagery from the Maine Office of Geographic Information Systems, Photo taken September 2008.

- Notes:
- 1.) Remove and dispose off yard material within ancillary debris area.
 - 2.) Re-establish surface conditions.
 - 3.) Install perimeter signs.
 - 4.) All excavated material to be transported and disposed in an approved off yard facility.

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CHECKED BY J. SPEAKMAN	DATE 2/1/11
COST/SCHEDULE AREA	
SCALE AS NOTED	

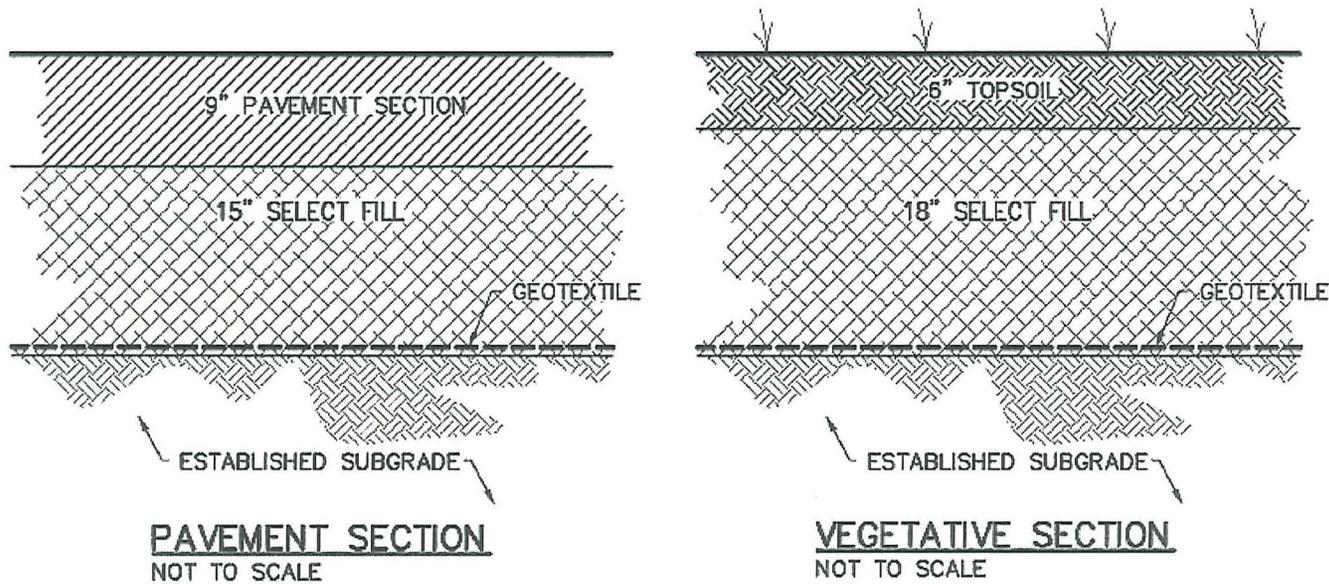


WASTE DISPOSAL AREA
 ALTERNATIVE WDA-3
 PORTSMOUTH NAVAL SHIPYARD
 KITTERY, MAINE



CONTRACT NUMBER 0924	OWNER NUMBER CTO 444
APPROVED BY	DATE
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FIGURE NO. FIGURE 2	REV 0

Cover System Details



DRAWN BY	DATE
BH	11/10/08
CHECKED BY	DATE
REVISD BY	DATE
SCALE AS NOTED	



Tetra Tech
NUS, Inc.

TYPICAL COVER SYSTEM DETAILS
OPERABLE UNIT 2

PORTSMOUTH NAVAL SHIPYARD
KITTEHY, MAINE

CONTRACT NO. 0924	
OWNER NO. CTO 444	
APPROVED BY	DATE
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3	0

Alternative DRMO-4



Preferred Alternatives

- The Navy believes the preliminary recommendation for OU2 satisfies the CERCLA statutory requirements
 - Protective of human health and the environment.
 - Complies with ARARs.
 - Cost-effective.
- Under Alternative WDA-3:
 - Excavation and a physical barrier would prevent exposure to underlying contamination rather than relying only on LUCs.
 - Excavation to a greater depth does not provide significant additional protection to human health and the environment and does not warrant higher costs.
- Under Alternative DRMO-4:
 - Excavation of contaminated soil based on construction worker exposure and asphalt barrier would prevent exposure to current users.
 - Long-term effectiveness is achieved without a permanent cap.
 - Excavation to meet residential goals is not warranted because current and future planned use of the site industrial.
- NFA for the DRMO Impact Area.

Community Participation

- A 30-day public comment period will be held after the Proposed Plan is finalized.
- During the public comment period, the following will be held
 - An informational meeting to discuss the PRAP and answer questions.
 - A public hearing to accept oral and written comments.
- Written formal comments can be provided at anytime (not only at the public hearing) during the public comment period.
- The final Proposed Plan and supporting documents will be available in the Information Repositories during the public comment period.

What's Next

- Comments on the draft Proposed Plan are due by 17 May 2011.
- The draft final Proposed Plan will be issued within 30 days after receipt of comments on the draft plan.
- After receipt of regulatory comments on the draft final Proposed Plan, the Navy will issue the Proposed Plan for public comment.
- The Navy will work with the regulators to accelerate the schedule to allow for public comment in June/July.

Aerial Photo Source:
Imagery is from the Maine Office of Geographic Information Systems, et al. Photos taken September of 2008.



Legend

- Interim Capped Area
- DRMO Impact Area
- Waste Disposal Area
- DRMO Area
- Limit of Existing Shoreline Stabilization
- OU2 Boundary
- Building / Structure



Community Involvement Plan Update

Portsmouth Naval Shipyard
Restoration Advisory Board Meeting
May 17, 2011

Presenter:
Amy Brand, CH2M Hill Inc.

What is a Community Involvement Plan?

- A site-specific plan for interacting with the community while conducting environmental cleanup at environmental sites owned by or formerly used by the DoD.
- Serves as the foundation for the community involvement program, specifying the outreach activities that will be used to address community concerns and describing opportunities for the public to be involved in decision-making processes.
- Sometimes known as a “Community Relations Plan.”

What is the Basis for a CIP?

- Community interviews with diverse group of stakeholders
 - Purpose of interviews: to determine peoples’ current understanding, concerns, information needs, and preferences
 - Can be conducted in-person or by telephone
- Other sources of information:
 - Public meetings
 - Public comments
 - Newspaper articles

Process for Updating the CIP

- Develop list of potential interviewees
- Develop interview questions
- Mail letter to potential interviewees
- Schedule and conduct interviews
- Analyze results
- Update CIP; submit Preliminary Draft to Navy
- Submit Draft CIP to regulators
- Submit Final CIP
- Summer 2010
- Summer 2010
- February 2011
- March 2011
- April-May 2011
- May 2011
- July 2011
- Sept 2011

Completed Community Interviews

Personal and telephone interviews with 39 people representing diverse range of stakeholders:

- State elected officials
- Local elected officials
- Town employees
- Business owners
- Civic organizations
- Environmental groups
- Local residents
- Fishing industry
- RAB members

Results – Overall Attitude Toward the Shipyard

- Tend to want more information about the Shipyard in general and clarification about points of contact
- Some would like a tour of open areas of the base or would like to attend a “community day” if offered; however, people also understand the need for base security
- Generally think the Shipyard is a good neighbor but is not visible in the community

-5

Results – Knowledge of Environmental Cleanup

- Generally aware that environmental restoration is occurring, but don't know details
- Most aware of restoration of the landfill and created wetlands
- Tend not to be concerned about Navy doing the environmental restoration – generally trust that they're doing what they should be doing (but would like to know more!)

-6

Results – Information Sources

- Read the *Portsmouth Herald* and *Foster's Daily Democrat*
- Used to read the *Periscope* but tend not to see it anymore – would like it again
- Listen to *National Public Radio* for local news
- Generally not aware of RAB meetings but not likely to attend – might watch if available on local access or Internet
- People would like informational updates by e-mail, Internet, or by subscribing to the appropriate link on a town listserve

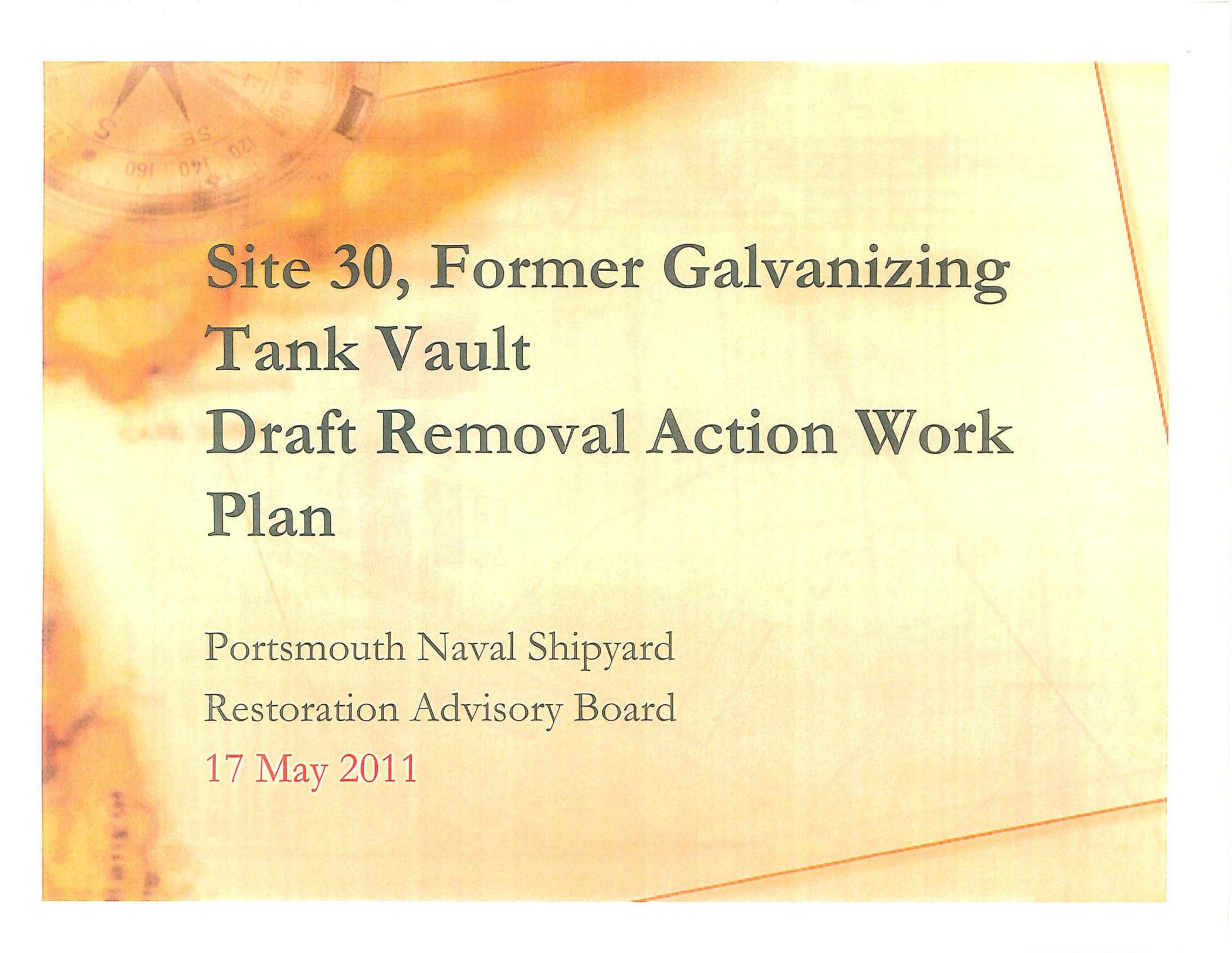
-7

Questions or Comments?

For additional information, contact:

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Amy Brand
CH2M HILL Community Involvement Manager
757-549-2589
amy.brand@ch2m.com



**Site 30, Former Galvanizing
Tank Vault
Draft Removal Action Work
Plan**

Portsmouth Naval Shipyard
Restoration Advisory Board

17 May 2011

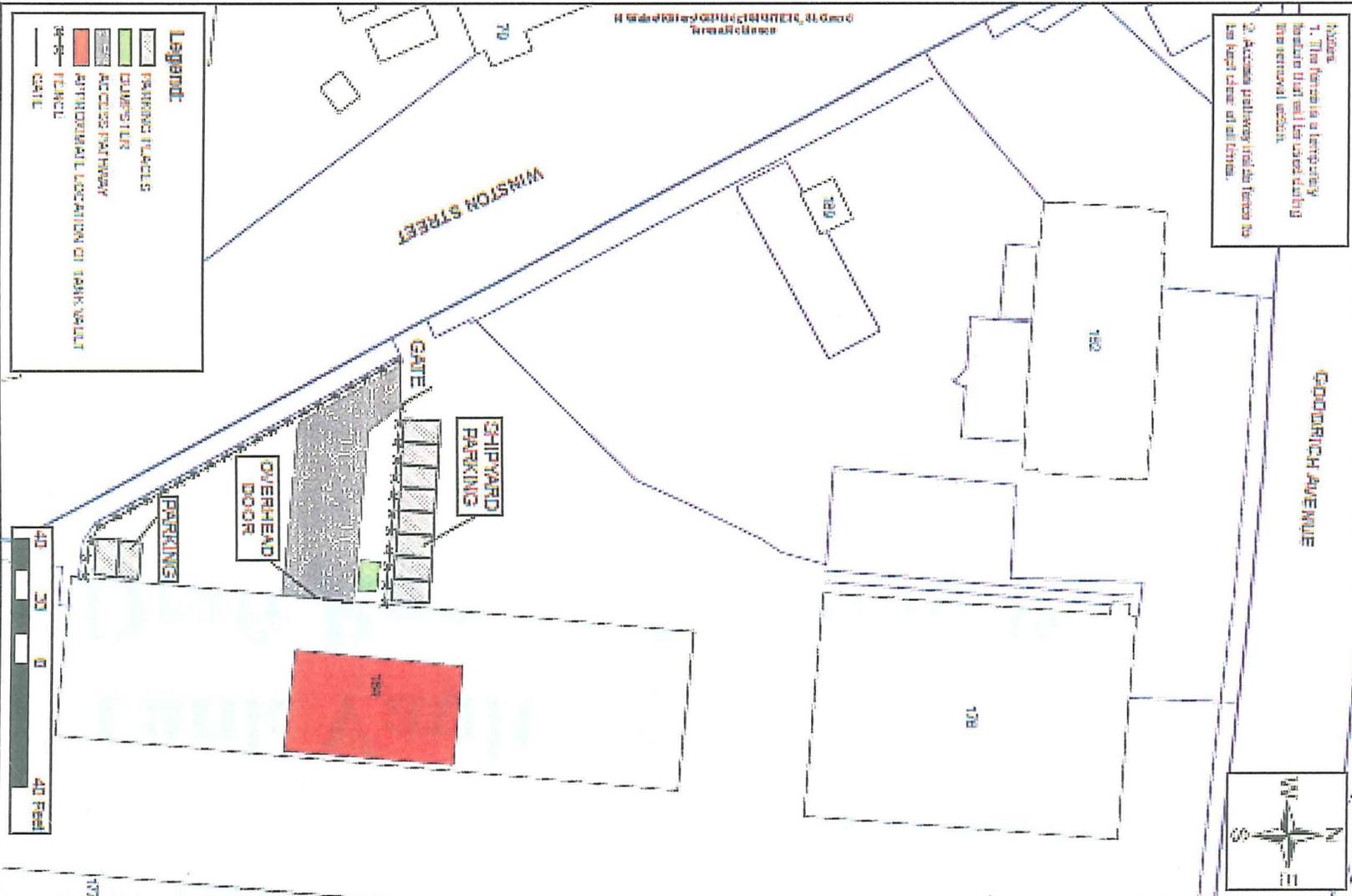


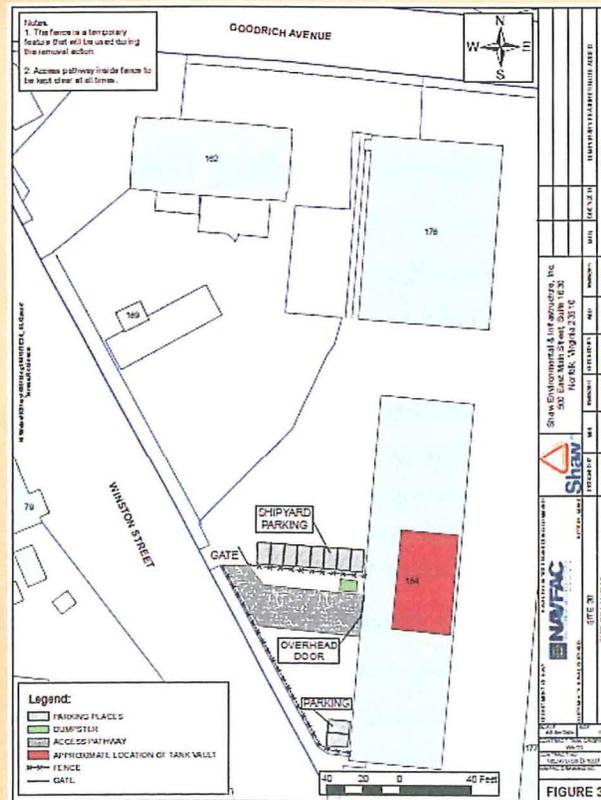
FIGURE 3 107 CONTRACT NO. 107-01 PROJECT: 107-01 DATE: 01/20/01	CONTRACTOR: NAVFAC PROJECT: 107-01 DATE: 01/20/01			Shaw Environmental & Infrastructure, Inc. 500 East Main Street, Suite 1000 Norfolk, Virginia 23510						
	SITE 00 SITE 00 LAYOUT	DESIGNED: MS DRAWN: TB	CHECKED: MS CHECKED: TB	APPROVED: MS APPROVED: TB	DATE: 01/20/01 DATE: 01/20/01	NO. 107-01 NO. 107-01	SHEET NO. 107-01 SHEET NO. 107-01	TITLE: 107-01 TITLE: 107-01	PROJECT: 107-01 PROJECT: 107-01	NO. 107-01 NO. 107-01

Presentation Goals

Provide an Overview of the Draft Removal Action Work Plan at Site 30, Former Galvanizing Tank Vault

- Site Background/Layout
- Work Plan Outline/Activities
- Confirmatory Sampling/Preliminary Remediation Goals
- Status and Schedule

Site Layout



Site Background

- Removal Action focuses on the former galvanizing tank vault located in Building 184.
- Activities at Building 184, Site 30
 - Constructed in 1943 as a Galvanizing Plant
 - The tank vault originally contained pickling tanks including a flux tank, a water tank, an acid tank, and a caustic tank.
 - In 1946, Building 184 was converted from a galvanizing plant to the shipyard's electrical testing laboratory.
 - The tank vault was partially filled with gravel, and the drain was covered with a piece of wood and burlap. Four cement foundations were laid over the tank vault to support large shock-testing and vibration-testing machines.

Site Background (cont'd)

- Activities at Building 184, Site 30 (cont'd)
 - Between 1954 and 1956, the building was converted into a Clean Room Facility and used for cleaning and assembling metal parts.
 - The pickling tanks were uncovered, and agitation pumps and heating coils were installed to be used for metal parts assembly.
 - The tanks were filled with various chemicals, including large amounts of sulfuric acid, trisodium phosphate, alcohol, and acetone. The acid tank was periodically used for cleaning carbon steel piping.
 - In the early 1960s, the building was converted into a welding school.
 - The tank vault was again covered over to accommodate the installation of electric welding machines and booths.

Site Background (cont'd)

- Activities at Building 184, Site 30 (cont'd)
 - Between 1973 and 1975, the building was renovated and an office was constructed over the tank vault area.
 - In 1982, an aluminum louver was installed along with 440-volt electrical service.
 - The welding school has since relocated, and the building is currently vacant.

Removal Action Objective

- Mitigate human health and environmental risks associated with the tank vault in a manner such that the property can be used for unrestricted use/unlimited exposure.

Removal Action Activities

- Mobilization and Site Preparation
- Concrete Slab Removal
- Water Removal (if necessary)
- Excavation
- Maine Historic Engineering Record Recordation
- Tank Vault Brick Liner Removal
- Tank Vault Concrete Liner Inspection, Wall Washing, and Removal
- Characterization Sampling
- Confirmatory Sampling
- Backfill
- Transportation and Disposal (T&D)
- Restoration

Concrete Slab Removal

- The concrete slab will be removed by saw-cutting the concrete slab into smaller manageable sections.
- Material will be stockpiled at the DRMO storage yard for characterization and disposal.
- Stockpile will be lined and contained within concrete barriers to prevent migration of contamination.

Water Removal

- It is anticipated that up to 10,000 gallons of water may be present in the tank vault area.
- The water will be removed utilizing either a submersible pump or truck mounted pump.
- The removed water will be pumped into portable frac tanks for characterization and offsite disposal.

Excavation

- Sandy material reportedly used to fill in the tank vault will be excavated.
- Excavated material will be stockpiled at DRMO storage yard for characterization and disposal.
- Stockpile will be lined and contained within concrete barriers to prevent migration of contamination.

Maine Historic Engineering Record Recordation

- Written, graphical and photographic documentation of the tank vault's features will be undertaken by a professional that meets the Maine Historic Preservation Commission standards for Historical Investigations.

Tank Vault Brick Liner Removal

- The acid proof bricks will be removed utilizing a combination of mechanized equipment and hand tools as the conditions warrant.
- Bricks will be stockpiled at DRMO storage yard for characterization and disposal.
- Stockpile will be lined and contained within concrete barriers to prevent migration of contamination.

Tank Vault Concrete Liner Inspection, Washing and Removal

- Inspection
 - the concrete walls and floor will be inspected for staining and cracking to identify if any breaches in the acid proof brick/concrete may have occurred.
- Wall Washing
 - the eastern wall (remaining wall) of the tank will be pressure washed to remove any potential remaining contamination.
 - The water generated from the pressure washing will be removed from the tank vault utilizing a submersible pump.

Tank Vault Concrete Liner Inspection, Washing and Removal (cont'd)

- Concrete Vault Removal
 - The removal method for the concrete walls will be finalized once the wall has been inspected and its construction verified.
 - It is anticipated that the wall will be removed utilizing one of the following methods:
 - 1) small pneumatic hammer,
 - 2) concrete saw cutting, and/or
 - 3) demolition utilizing an excavator.
 - The concrete floor will be removed in a manner similar to the slab removal.
 - Stockpiled at DRMO storage yard

Confirmatory Sampling

- Discrete concrete samples from exposed 52 foot foundation wall (to remain).
- Four (4) point composite samples will be collected from the soil on the sidewalls of the former tank vault.
- Five (5) point composite samples will be collected from the former tank floor.

Removal Goals

- To achieve the Removal Action Objective, based upon previous investigations, Table 1 indicates the Removal Goals that were developed.

TABLE 1 – Removal Goals

Analyte	EPA RSL ⁽¹⁾ (mg/kg)	PNS Background ⁽²⁾ (mg/kg)	Removal Goal (mg/kg)
Aluminum	77,000	-	77,000
Antimony	31	-	31
Arsenic	0.39	18	18
Barium	15,000	-	15,000
Beryllium	160	-	160
Cadmium	70	-	70
Chromium ⁽³⁾	120,000	-	120,000
Cobalt	23	-	23
Copper	3,100	-	3,100
Iron	55,000	-	55,000

Analyte	EPA RSL ⁽¹⁾ (mg/kg)	PNS Background ⁽²⁾ (mg/kg)	Removal Goal (mg/kg)
Lead	400	-	400
Manganese	1,800	-	1,800
Mercury	5.6	-	5.6
Nickel	1,500	-	1,500
Selenium	390	-	390
Silver	390	-	390
Vanadium	390	-	390
Zinc	23,000	-	23,000

Notes:

⁽¹⁾ USEPA Residential RSLs November 2010.

⁽²⁾ Facility Background is the 95% Upper Confidence Limit. Facility background numbers are only provided for the analytes with residual RSLs less than facility background.

⁽³⁾ The RSL for Chromium III was used as a surrogate for Total Chromium because hexavalent chromium was not detected in site soil samples.

Characterization Sampling

- At a minimum, Shaw will collect the following from the designated media stockpiled at DRMO:
 - One (1) five (5) point composite per 100 cubic yards will be collected from excavated soils.
 - The soil will be at a minimum analyzed for TCLP, PCBs, and RCI.
 - One (1) five (5) point composite per concrete source (i.e. one for the lid concrete, one for the brick, and one for the walls and floor) will be collected.
 - The Concrete sources will be at analyzed at a minimum for TCLP, PCBs, and RCI.

Characterization Sampling (cont'd)

- Two (2) samples will be collected from the collected water from the vault.
 - At a minimum the samples will be analyzed for TCLP, PCBs, and RCI.
- One (1) sample will be collected from the wash water generated from power washing of the remaining concrete wall.
 - At a minimum the samples will be analyzed for TCLP, PCBs, and RCI.

Backfilling and Site Restoration

- Backfilling
 - The excavation will be backfilled with a virgin, quarry produced crushed stone.
- Concrete Slab
 - Based upon as-built construction drawings for the surrounding floor, a 6 inch welded wire fabric reinforced concrete floor will be constructed.

Transportation and Disposal of Contaminated Soils

- Once characterized, all materials will be disposed of at a permitted, approved facility.

Project Closeout

- Prepare Construction Completion Report:
documents all field activities
 - Text with tables and figures
 - Copies of laboratory reports
 - Survey of Project areas
 - Photo documentation
 - Copies of disposal documentation
- Provide to Navy, USEPA, and MEDEP for review

Status and Schedule

- Draft Workplan
 - Submitted April 18th 2011
 - Awaiting MEDEP and USEPA Comments
- Final Work Plan
 - 30 Days from receipt of Regulatory Comments

Status and Schedule (cont'd)

- Mobilization – Summer 2011
- Construction Activities – Summer 2011
- Closure Report – Winter 2011

Questions or Comments?

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