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MINUTES FROM RESTORATION ADVISORY BOARD MEETING ON 4 DECEMBER 2012
NSY PORTSMOUTH ME
12/4/2012
RESOLUTION CONSULTANTS

Portsmouth Naval Shipyard
Restoration Advisory Board Meeting
Kittery Town Hall, Kittery, Maine
December 4, 2012

Attendees

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

- RAB Community Members:
  - Doug Bogen
  - Peter Britz
- Navy Representatives:
  - Lisa Joy, Portsmouth Naval Shipyard (PNS)
  - Elizabeth Middleton, Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Remedial Project Manager (RPM)
  - Bryan Peed, NAVFAC Mid-Atlantic RPM
  - Matt Thyng, NAVFAC, Public Works Department – Maine Environmental Division
- Regulatory Representatives:
  - Matt Audet, United States Environmental Protection Agency (USEPA)
  - David Wright, Maine Department of Environmental Protection (MEDEP)
- Other Participants:
  - Carolyn Lepage, Technical Assistance Grant (TAG) technical advisor to Seacoast Anti-Pollution League (SAPL)
  - Paul Dombrowski (Resolution Consultants)
  - Deborah Cohen (Tetra Tech)
  - Matthew Kraus (Tetra Tech)

The following RAB members were not in attendance:

- RAB Community Members:
  - Mary Marshall
  - Jack McKenna
  - Diana McNabb
  - Roger Wells
- Regulatory Representatives:
  - Iver McLeod, MEDEP
- Natural Resource Trustees:
  - Doug Grout, New Hampshire Fish and Game Department;
  - Denis-Marc Nault, Maine Department of Marine Resources
  - Ken Finkelstein, National Oceanic and Atmospheric Administration
  - Ken Munney, United States Fish and Wildlife Service

Opening Statements:

Lisa Joy, Navy RAB Co-Chair, opened the meeting by welcoming all attendees and led introductions of all attendees. Ms. Joy invited community members to raise questions and provide feedback and noted the Navy looks forward to the open dialogue of previous meetings. Additionally, Ms. Joy indicated that she received a message from Linda Cole, former NAVFAC RPM for the Shipyard, who is doing well and is very busy in her new Navy role in Djibouti.

Doug Bogen, Community Co-Chair, had no further opening comments.

Environmental Restoration Program Status and Updates:

Liz Middleton, Navy RPM, presented the status and updates on the Environmental Restoration (ER) program at the Shipyard. Distribution of RPM activities was presented with Ms. Middleton focusing on activities through the Record of Decision stage and with Bryan Peed focusing on construction activities. Both RPMs will be available to assist on all aspects of the ER program for the Shipyard.

Status updates were presented for the ER Program for each Operable Unit (OU) or Site, with the following update highlights:

- OU1 (Site 10: Former Battery Acid Tank No. 24). The Remedial Action (RA) is complete, and the Navy anticipates submitting the draft Construction Completion Report (CCR) for regulatory review in December 2012. The second round of post-RA groundwater sampling was completed in early November, and the results will be presented in a groundwater sampling report anticipated in March 2013.

- OU2 (Site 6: Defense Reutilization and Marketing Office (DRMO) Storage Yard, Site 29: Former Teepee Incinerator Site, and DRMO Impact Area). For this OU, Land Use Controls (LUCs) are in place, and the final Remedial Design (RD) document was submitted in November 2012. The Navy is preparing the RA Work Plan and anticipates starting construction in Spring 2013.

  For the DRMO Impact Area, a removal action was completed in 2010, and the Navy anticipates submitting the draft final CCR in December 2012.

- OU3 (Site 8: Jamaica Island Landfill (JILF), Site 9: Former Mercury Burial Sites, and Site 11: Former Waste Oil Tanks Nos. 6 and 7). The Navy is recommending that the next round of groundwater sampling will be completed in five years to be completed for the third Five-Year Review report. The Navy is also looking to optimize landfill gas monitoring outside of the landfill.

  The existing Operation, Maintenance, and Monitoring (OM&M) plan for OU3 includes criteria for episodic inspection. The October 2012 earthquake and Storm Sandy did not meet the requirements for an episodic inspection; however, and no observable damage

was noted by the Shipyard. The next annual inspection will be conducted during Spring 2013.

- OU4 (Site 5: Former Industrial Waste Outfalls and Off-shore Areas Potentially Impacted by PNS Onshore ER Program Sites). The final Feasibility Study (FS) report was submitted in September 2012, and currently the draft Proposed Remedial Action Plan (PRAP) is undergoing regulatory review and comment resolution. The Navy is preparing for an information session and comment period review in January 2013 and anticipates the Record of Decision (ROD) in June 2013. Following the ROD, the Navy will proceed with the RD and RA for sediment removal. Under the Interim ROD, one final round (Round 12) of sediment sampling will be conducted in Spring 2013. The Navy is evaluating how to best implement this sampling to collect data useful to the RD and RA.

- OU7 (Site 32: Topeka Pier Site): The draft FS, submitted in May 2012, is undergoing regulatory review and comment resolution, and the Navy is preparing the draft final document. The Navy is also preparing the draft PRAP for OU7 to meet the Federal Facilities Agreement (FFA) requirement of to submit this document 90 days after the draft final FS.

- OU9 (Site 34: Former Oil Gasification Plant, Building 62). The Remedial Investigation was finalized in June 2012. The draft FS was submitted in October 2012 and is undergoing regulatory review, and the Navy has started preparing the draft PRAP.

- Site 30: (Former Galvanizing Plant, Building 184). The Removal Action was completed in 2011. The draft CCR was delayed for further evaluation of crystalline growth conducted in 2012, and the Navy anticipates submittal in January 2013. In addition, the Navy is preparing a Decision Document for this Site.

Regulator Updates:

Matthew Audet, USEPA RPM, noted that regulators are currently reviewing two FS reports for OU7 and OU9 and the draft PRAP for OU4. It was noted that USEPA has assigned a new attorney for the Shipyard which has caused some delays in reviewing the draft PRAP. USEPA will have no comments related to the remedy in the draft PRAP, and therefore USEPA should not delay the Navy and Tetra Tech in preparing the ROD.

David Wright spoke on behalf of MEDEP and Iver McLeod who could not be present. It was indicated that MEDEP received the final OU2 RD. Additionally, MEDEP is working with the Navy to confirm that the sediment removal being conducted for the Building 178 renovation (not conducted by the ER program) meets all standards of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Following a site walk on November 6 attended by Mr. McLeod, MEDEP is confident that removal will meet CERCLA standards. For OU7, MEDEP has been reviewing the Response to Comments for the draft FS and anticipates a response this week (week of December 3). MEDEP anticipates providing comments on the draft FS for OU9 next week (week of December 10). Lastly, MEDEP is supportive of the letter from

Seacoast Anti-Pollution League (SAPL) to the Navy on increased participation for the TAG technical advisor.

Proposed Remedial Action Plan OU4 (Off-Shore Areas, Site 5)

Deborah Cohen, Tetra Tech, presented the draft PRAP for OU4 to the RAB. An introduction to the PRAP included background, options considered and selection process, and how the public can participate in the process. A map was presented showing the off-shore Areas of Concern (AOCs), the historic outfalls (Site 5) which were discontinued in the 1970s, and the on-shore sites that have impacted off-shore areas. OU4 consists of boat docks, piers, and various habitats including wetlands, mudflats, rocky bottoms, eelgrass, and salt marsh. The interim off-shore monitoring programs divided the area into 14 monitoring stations (MS) and evaluation within the FS and PRAP focus on the different monitoring stations. Chemicals of concern in sediment include polycyclic aromatic hydrocarbons (PAHs) and metals.

Sediment sampling results from Rounds 1 through 10 were provided in the FS, and sampling from nine stations indicated acceptable concentrations (MS-02, -05, -06, -07, -08, -09, -10, -13, and -14). No further action is proposed for these nine stations. Various removals conducted by the Navy at different on-shore sites have contributed to decreases in chemical concentrations in sediment. The five MS where unacceptable concentrations include the following:

- MS-01 is located off-shore of OU9 (former oil gasification plant), where ash in soil was mostly removed, and residual PAHs remain in off-shore sediment.
- MS-03 and MS-04 are located off-shore of OU7 (Topeka Pier), where shoreline controls were implemented to mitigate erosion, and residual copper and PAH concentrations remain in sediment.
- MS-11 is located off-shore of OU2 where controls have been put in place, and exceedances of Interim Remedial Goals (IRGs) exist only in a small area. However, no further action is proposed for MS-11 as there is not sufficient sediment in this area.
- MS-12 is associated with a former Site 5 outfall and is off-shore of a former tank that is likely the source of lead and PAHs in sediment. Contaminated sediment is in the intertidal area within Building 178 and adjacent (MS-12A) and in the subtidal area adjacent to Site 10 (MS-12B).

Additionally, non-Navy sources of contamination to sediment exist to the monitoring stations from the considerable amount of industry, urbanization, and boat traffic around the Piscataqua River near the Shipyard.

A question was raised about the off-shore of OU2 (MS-11), which had sediment concentrations above the action level in past sampling. The Navy has taken actions to eliminate on-shore sources and implement erosion controls, which have reduced contaminant loading to sediment. In the area off-shore of OU2, the sediment is among the rocks and not very much sediment has accumulated. The upcoming OU2 on-shore remedy will remove contaminated material and greatly reduce future risk of erosion of contaminants off-shore. The Piscataqua River has a strong current that has carried much of the sediment away in the rocky areas over a period of many years. The trace sediment that remain are not sufficient to support benthic organisms. A

depositional study was performed during the Estuarine Ecological Risk Assessment. It was noted that groundwater entering the Piscataqua River from the Shipyard has been demonstrated to be clean. USEPA suggested that attenuation of concentrations in areas where concentrations were previously unacceptable should be further discussed in the PRAP.

Human health risks from concentrations in sediment are acceptable (direct contact, ingestion of surface water and sediment, seafood consumption). Therefore, the RA will focus on mitigating ecological risk to benthic invertebrates exposed to chemicals in sediment, and proposed cleanup levels were determined by ecological exposure risks. Additionally, the initial Interim Remedial Goals (IRGs) did not include lead, but a preliminary remediation goal was developed in FS for lead.

The FS for OU4 evaluated three alternatives for contaminated sediment: No Action, Monitored Natural Recovery, and Removal with Off-yard Disposal. In addition, containment was also evaluated for sediment inside Building 178 (MS-12A). Based on the relatively small volumes of sediment, options for on-site treatment were not considered. No Action alternatives would not be protective of the environment or meet remedial action objectives. Removal alternatives include higher cost but are anticipated to meet remedial goals in a shorter period of time (slightly more than one year) and have higher long term effectiveness. In comparison, it was assumed that concentration reductions would meet remedial goals in two to four years or more with natural recovery alternatives.

USEPA raised a question about wetland restoration requirements as a result of dredging. The Navy and Tetra Tech responded that restoration is not likely required due to the small dredge areas and that the target areas do not contain threshold species (i.e., no dredging in areas with eel grass). ARAR requirements including Maine wetland regulations will be evaluated in the ROD and RA work plan, including identifying if there are/are not requirements for wetland restoration. MEDEP did not provide any specific comments on wetland restoration at the RAB meeting.

The Navy's preferred alternative as summarized in the draft PRAP is contaminated sediment removal with off-yard disposal for MS-01, MS-03, MS-04, and MS-12. The benefits of removal include greater long term protection, no requirements for LUCs or five year review or long term management, and cleanup goals would be met sooner. Slides were presented with the approximate extents of removal for each monitoring station area, and sediment removal depth at each area would be specific to the data for each. Methods of dredging and removal would be determined during the RD/RA phase in addition to considerations for high river flow and downstream migration of sediment particles. It is anticipated that the RA would be conducted over a period of 12 to 18 months with Shipyard coordination and seasonal work windows, and this time estimate includes planning documents assuming standard review periods and dredging. A more specific schedule will be prepared by the Navy for the ROD, and RA will need to commence within 15 months of the ROD. Completion of the RA would allow unlimited use and unrestricted exposure. A brief discussion was conducted on source and logistical issues for each of the removal areas.

- MS-01. This area consists of a very rocky bottom and is subject to fast flow especially as tide goes out. Additionally riprap in this area has a fairly steep slope.
- MS-03 and MS-04. A wetlands functions and values assessment was done on this area, and the value of these mudflats has been evaluated. In this area, copper concentrations have been determined to be a result primarily of erosion of copper slag and not from copper bottom paint. Chunks of slag were found at the mid-tide area, and copper concentrations are higher near the slag and decrease moving away from the slag.
- MS-12B. Residual lead concentrations have been measured near the sea wall, but this lead is not well-defined horizontally. Water in this area is 30 to 40 feet deep. Removal work in this area would require coordination with the Shipyard as it is near security-controlled areas. The Shipyard performs dredging in off-shore areas periodically, so dredging is possible for this area and depths.
- MS-12A. The eel grass bed near this station has been delineated. Sediment in the eel grass area does not require removal based on low concentrations measured. Some removal would be required in the intertidal area in the building notably on the ramps. This bottom substrate in this area consists of small amounts of sediment over blast rock.

Following completion of the ROD, the interim off-shore monitoring will be discontinued. Confirmation samples would be collected after removal or as part of RD. Sediment sampling has already been performed at each of these locations.

Community Participation for the PRAP will consist of a 30 day public comment period and an informational open house for the Navy and community members to discuss the plan and answer questions. A public hearing will be conducted the same time as the open house where both written and oral comments can be submitted. The final PRAP will provide additional information on the comment period, and the public website will have all relevant documents available for public access.

The participants acknowledged excitement with the progress of OU4. In particular, USEPA stated that it was always assumed this would be last OU remediated and that the agency is happy to be this stage at this time. Additionally, it was acknowledged that the late community RAB member Michele Dionne would be happy with the progress.

OU9 Feasibility Study

Matthew Kraus, Tetra Tech, presented a summary of the draft FS for OU9 (Site 34: Former Oil Gasification Plant, Building 62). Historically operations in this area included oil gasification and blacksmithing in the early 1900s. Most of the ash identified in soil was removed in 2007, and only a few small pockets of residual ash were observed during the RI. Pesticides were stored in this area in the 1930s to the 1950s, but no pesticides were identified as contaminants for the site. Ash may be present under the floor of Building 62 Annex, and if present, it may pose an unacceptable human health risk if the floor of the building was removed exposing the ash. When Building 63 was removed a thin layer of ash was observed underneath, and based on chronology of development and building construction it is hypothesized that ash will be found

underneath the Building 62 Annex. A vapor intrusion study concluded that there is no risk to vapor into buildings. For OU9 unacceptable risk from carcinogenic PAHs in subsurface soil was identified for the future hypothetical resident, but no unacceptable risks were concluded for construction, recreational, or other typical receptors.

Based on residual concentrations measured in the RI, the FS focuses on two target areas: a small area in the northern portion of OU9 and below Building 62 Annex. The smaller area in the north contains layers of elevated PAHs in subsurface soil that are two to eight feet below grade, and a water main is located in the middle of this area where residual ash is located. The Remedial Action Objectives for the OU9 FS include preventing hypothetical future residential exposure to subsurface soil containing PAHs concentrations that exceed the carcinogenic PAH residential Preliminary Remediation Goal (PRG) and to prevent potential future exposure to carcinogenic PAHs in ash that may be present under the floor of Building 62 Annex.

Four alternatives were evaluated in the draft FS: No Action, LUCs for both areas, Excavation for the northern area and LUCs below Building 62 Annex, and In-Situ Chemical Oxidation for the northern area and LUCs below Building 62 Annex. Containment was not evaluated for OU9 based on site risks identified in subsurface soil, and excavation was not evaluated for Building 62 Annex because the Shipyard does not have plan to remove this building in the near future. Fencing would not be required for any alternative because the risks are associated with subsurface soil. Except for the No Action alternatives, the alternatives would require five year reviews and requirements for managing contamination left in place. The excavation alternative assumes removal to eight feet and inclusion of a shore rail system to protect the integrity of the water main, which would make the implementation more expensive than a standard excavation. The chemical oxidation alternative assumes application of ozone gas using an on-site ozone generator. The alternative with LUCs for both areas can be implemented in the shortest period of time and at the lowest remediation cost. The next steps for OU9 include a PRAP and ROD.

RAB Membership Update and Charter Revisions

Ms. Joy led a discussion about updating the RAB Charter. The initial RAB Charter was established in August 1995. Since that time, and especially in the last three years, significant progress has been made by the ER program. With three additional RODs anticipated for calendar year 2013, the Navy believes it is an appropriate time to re-evaluate the Charter which has not been updated in several years. The RAB Co-chairs (Lisa Joy and Doug Bogen) and the former RPM (Linda Cole) met in April 2012 to discuss changes to the Charter/Mission Statement. Ms. Cole distributed proposed changes (red-line strikeout) in September 2012 shortly after the last RAB meeting.

Amendments may be proposed by any RAB member at any time on Charter/Mission Statement, and a majority vote would be held on the proposed amendment at the next RAB meeting. Several aspects of the Charter recommended for consideration and potential revision include number of RAB Members, term length for community members, frequency of meetings, alternative meeting times or places, RAB member recruitment, and attendance requirements. Additionally it was noted that the Charter does not include a process for disestablishment of the

RAB or for how to re-establish the RAB. Based on RAB guidance documents there are generally three times when a RAB could be disestablished: when all sites have a ROD, when all sites have Remedy in Place, or when all sites have Response Complete. Following the introduction by Ms. Joy, the topic was opened to discussion for all present.

Peter Britz (Community RAB member and Environmental Planner/Sustainability Coordinator at City of Portsmouth) stated his opinion that the RAB is really important and helpful for getting updates for the City of Portsmouth on a complicated series of sites. He added that it would be difficult for the City of Portsmouth to stay informed by itself. The group discussed a period of approximately three more years for maintaining an active RAB. During this period of time RA for three OUs is anticipated and there will be a better understanding for OU8 (Former West Timber Basin), which is the only OU where investigation has not been completed. Mr. Britz stated that Remedy in Place seems an appropriate time to disestablish a RAB, and that once the remedies are in place it would be up to the regulators to ensure sites remain protective.

Representatives from the Navy and USEPA added that other sites have less frequent RAB meetings (than quarterly), for example annual or as needed basis. However, it was noted that for the Shipyard there is enough active work to maintain the frequency of meetings. It was suggested to coordinate the RAB meetings with proposed plan meetings.

Doug Bogen, Community Co-chair, stated that membership is the primary issue, particularly how the December 2012 meeting had the least number of community members in attendance. It has been at least six years since the last round of recruitment. Mr. Bogen could not remember the last time someone from the media attended a RAB meeting and added that the RAB is intended to benefit the public. Mr. Bogen wants to get opinions of RAB members not present. It was suggested to send an affirmation email or letter, and that community members would be more likely to respond to this than a document notification. Previously there were four to five community RAB members who attended on a regular basis, and it seems reasonable to make efforts to increase that number to seven or eight individuals. Additionally, it was suggested to consult the Community Involvement Plan to see who was interviewed.

Discussions also included sharing documents with the public and the public repository. Ms. Cohen of Tetra Tech shared that hard copies of documents or CD-ROMs are not wanted at either library (Kittery or Portsmouth). Participants agreed that encouraging electronic downloading of the upcoming proposed plans from the public website would be an easy way to distribute the document as well as save costs on paper and postage. One idea was to mail out a postcard with a web link to the document instead of mailing out the entire plan. USEPA reminded that there are requirements for maintaining a public document repository. Although USEPA is updating agency-wide guidance on public involvement with more emphasis on electronic documents, the existing guidelines need to be maintained. It was suggested that at a minimum an index of documents that are available online needs to be maintained and should be updated regularly. It was noted that for the Brunswick Navy site, the members of the public do use the library to view documents, and that the Shipyard needs to maintain the public repository for when a member of the public does want to review documents. Additionally, it

was pointed out that the repository does not have to be located in a library but just needs to be a public location.

Action items from the discussion on RAB Membership Update and Charter Revisions were to

- contact all current members to gauge interest in being a RAB member;
- check the Community Involvement Plan (2012) on public feedback on RAB membership;
- create a survey/questionnaire on availability, location, time, interest in being member and participation, and preference on receiving information (email, website, etc);
- based on the above items, determine how much recruitment may be needed.

Community Remarks:

The TAG advisor to SAPL asked a question on emerging contaminants and if the Shipyard was evaluating these, including perfluorinated compounds (PFCs) used in fire fighting foams which have been detected at the Brunswick Navy site. The Navy responded that its makes decisions on investigation based on site-specific conditions; for example the Navy would not analyze for PFCs in groundwater at every site but only in fire fighting areas. The USEPA agrees, that similar to 1,4-dioxane, it should be determined if there is a reason to look for a specific emerging contaminant. At the Shipyard historical filling and contamination with metals and PAHs and the primary issues, and there is not a historical basis for pursuing PFCs.

Future Meetings:

No specific date was proposed for the next RAB meeting. Efforts will be made to coordinate with a PRAP public open house.

Portsmouth Naval Shipyard
Restoration Advisory Board Meeting
December 4, 2012

Agenda

- Introductions
- Opening Statements
  - Navy Co-Chair (Lisa Joy, NAVFAC)
  - Community Co-Chair (Doug Bogen)
- Environmental Restoration Program Status and Updates (Liz Middleton, NAVFAC)
- Regulator Updates (USEPA and MEDEP)
- Proposed Remedial Action Plan OU4 (Off-Shore Areas, Site 5) (Deborah Cohen, Tetra Tech)
- Feasibility Study for OU9 (Former Oil Gasification Plant, Site 34) (Matthew Kraus, Tetra Tech)
- RAB Membership Update and Charter Revisions (Lisa Joy, NAVFAC)
- Community Remarks
- Open Discussion and Questions

NAVFAC Naval Facilities Engineering Command

NAVFAC MID-ATLANTIC

Portsmouth Naval Shipyard
Environmental Restoration
Program Status and Updates

December 2012

Remedial Project Managers

- **Liz Middleton – primarily focus on activities through RODs (OU4, OU7, OU8, OU9) and long term management (OU3, LUCs)**
- **Bryan Peed – focus on RD/RA activities (OU2, OU4) and Construction Completion Reports (OU1, DRMO Impact Area, Site 30)**

OPERABLE UNIT 1
Site 10 (Former Battery Acid Tank No. 24)

- **Remedial Action (RA)**
  - **RA completed**
- **Construction Completion Report**
  - **Draft under preparation (anticipated December 2012)**

- **Groundwater Monitoring Plan Component of Long Term Management Plan**
  - **First round of groundwater collected on 16 February 2012**
  - **Second round of groundwater collected 6-7 November 2012**
  - **Summary Report – March 2013**

OPERABLE UNIT 2
Site 6 (DRMO Storage Yard) & Site 29 (Former Teepee Incinerator Site)

- **LUC RD**
  - **Submitted Final 19 March 2012**
- **Remedial Action**
  - **Remedial Design (60%) submitted 30 April 2012**
  - **Final Remedial Design submitted November 2012**
  - **Remedial Action Work Plans under preparation**
  - **Construction start anticipated Spring 2013**

DRMO Impact Area

- **Removal Action conducted in 2010**
  - **–Soil excavation and off-site disposal**
  - **–No Further Action required**

- **Construction Completion Report**
  - **–Draft Final to be submitted in December 2012**

OPERABLE UNIT 3
Site 8 (Jamaica Island Landfill)

- **OM&M field work - Round 11**
  - **–Monitoring and inspection completed week of 7 May 2012**
  - **– Data package finalized 27 Sept 2012**

- **October Earthquake and Storm Sandy**
  - **–Neither met requirements for episodic inspection**
  - **–No damage observed at landfill**

- **Long Term Management**
  - **–Next groundwater sampling for Five Year Review**
  - **–No further gas monitoring outside of landfill**

OPERABLE UNIT 4
Site 5 (Former Industrial Waste Outfalls) and Offshore Areas of Concern

- **FS Report**
  - **Final Report submitted 24 September 2012**
- **Proposed Remedial Action Plan**
  - **Draft submitted 25 September 2012**
  - **Regulatory review/comment resolution**
  - **Public meeting and public comment period in January 2013**
- **Record of Decision**
  - **Final anticipated Summer 2013**
- **Interim Offshore Monitoring Plan (IOMP) Update**
  - **Round 12 field work anticipated for Spring 2013**

OPERABLE UNIT 7
Site 32 (Topeka Pier Site)

- **FS Report**
  - **Draft submitted 18 May 2012**
  - **Regulatory comments received in July/August 2012**
  - **Resolving regulatory comments/preparing Draft Final**
- **Proposed Remedial Action Plan**
  - **Draft to be submitted 90 days after Draft Final FS (Spring 2013)**

OPERABLE UNIT 9
Site 34 (Former Oil Gasification Plant, Building 62)

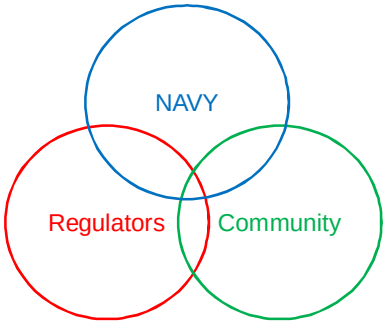
- **RI Report**
  - **Report finalized 8 June 2012**
- **FS Report**
  - **Draft submitted 26 October 2012**
  - **Under regulatory review**
- **Proposed Remedial Action Plan**
  - **Draft to be submitted 90 days after Draft Final FS**

SITE 30 (Former Galvanizing Plant, Building 184)

- **Removal Activities completed**
  - **Draft Construction Completion Report anticipated January 2013**
  - **Decision Document in preparation**

Community Involvement

- **Community Involvement Plan**
  - **Final CIP issued 27 June 2012**
- **Updates to RAB Charter issued in September 2012**



TETRA TECH

Draft Proposed Plan for Operable Unit 4

Portsmouth Naval Shipyard

Date: December 4, 2012

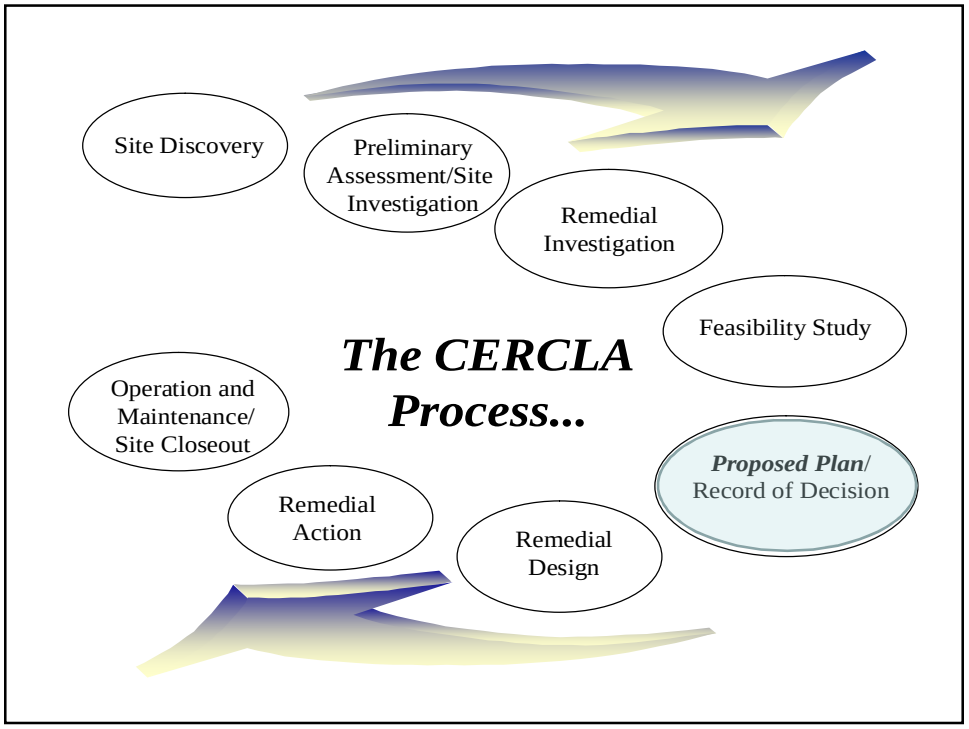
Presenter:

Deborah Cohen, Tetra Tech

Presentation Objectives

- Discuss the contents of the Navy's Proposed Plan for Operable Unit (OU) 4.
- Present the Navy's recommendations for remediation of OU4.
- Provide the rationale supporting the Navy's recommendations.

TETRA TECH



Proposed Plan

- Proposed Plans facilitate public involvement in the remedy selection process by:
  - Providing basic background information.
  - Describing cleanup options considered.
  - Explaining the reasons for the Navy's preliminary recommendations.
  - Providing information on how the public can be involved in the remedy selection process.
  - Soliciting and encouraging public review of the Proposed Plan.
- Major sections include:
  - Introduction
  - Site Background
  - Site Characteristics
  - Scope and Role
  - Summary of Risks
  - Remedial Action Objectives
  - Summary of Remedial Alternatives
  - Evaluation of Alternatives
  - Preferred Alternatives
  - Community Participation

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TETRA TECH

Site Background and Characteristics

- The Piscataqua River and Back Channel near PNS are also used for non-Navy activities including commercial and recreational boat traffic, and for discharge from municipal and industrial operations or treatment plants.
- The channel bottom/subtidal habitat is the bottom of the pelagic area and contains hard-bottom areas and fine-grained depositional areas.
- The Shipyard uses the offshore area for boat docks and piers and vessel transport as part of Shipyard operations.

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TETRA TECH

Site Background and Characteristics

- OU4 consists of
  - Site 5, Former Industrial Waste Outfalls: former discharge points along the Piscataqua River at the western end of PNS (in one of the AOCs).
  - Six areas of concern (AOCs): nearshore habitats adjacent to PNS that may have been affected by onshore Installation Restoration Program (IRP) sites.
- Fourteen monitoring stations, initially identified for interim monitoring, provide coverage of the offshore AOCs and the OU4 remedial alternatives were evaluated according to monitoring stations or groups of nearby monitoring stations.
  - In OU4, there are boat docks and piers, and various habitats including wetlands, mudflats, rocky bottoms, eelgrass, and salt marsh.
  - Based on the Interim Offshore Monitoring Program results, chemicals of concern (COCs) for offshore sediment include polycyclic aromatic hydrocarbons (PAHs) and metals

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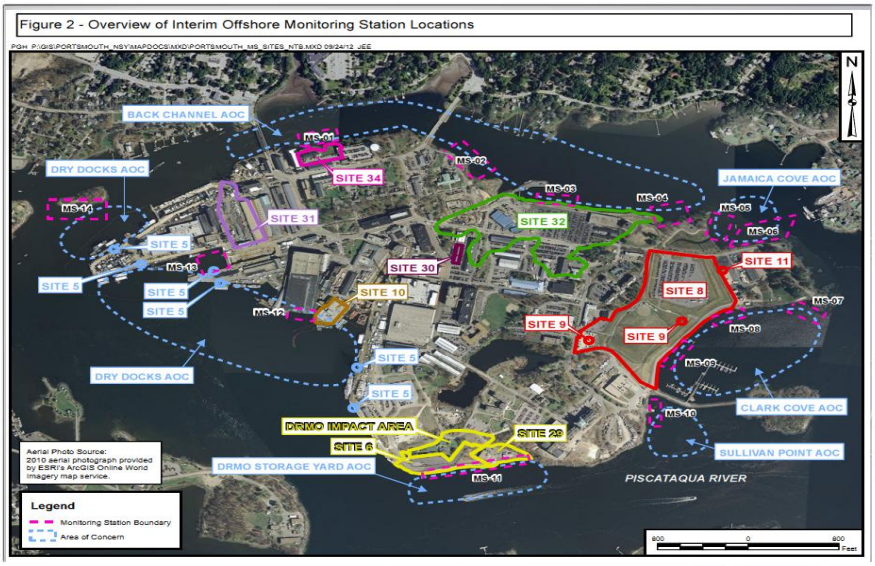
TETRA TECH

OU4 Layout



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TETRA TECH

Site Characteristics – Monitoring Stations

- The monitoring program showed acceptable COC concentrations at MS-02, MS-05, MS-06, MS-07, MS-08, MS-09, MS-10, MS-13, and MS-14.
- MS-01 - offshore of Site 34 (OU9)
  - COCs: PAHs.
  - Source (ash) at Site 34 removed in 2007.
- MS-03 and MS-04 - offshore of Site 32 (OU7)
  - COCs: copper and PAHs.
  - Shoreline stabilization in 2006 eliminated source (erosion of fill material at Site 32).

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TETRA TECH

Site Characteristics – Monitoring Stations

- MS-11 - offshore of OU2/Sites 6 and 29
  - COCs: copper, lead, and nickel.
  - Shoreline stabilization eliminated source (erosion from Sites 6 and 29) with placement of controls from 1999 to 2008.
  - The offshore area of OU2 is rocky and there is not sufficient sediment to provide a significant ecological habitat.
  - COC concentrations were greater than acceptable levels prior to placement of shoreline controls (Rounds 1 to 7), but were less than acceptable levels in the sampling round after placement of the controls (Round 11).

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Site Characteristics – Monitoring Stations

- MS-12 - offshore of Sites 5 and 10 and adjacent to Building 178
  - COCs: lead and PAHs.
  - Sources eliminated.
    - Use of outfalls (Site 5) discontinued in 1975.
    - Releases from underground storage tank (Site 10) discontinued in 1984.
  - There are other potential Navy sources, including discharges from barges/boats, from storm water outfalls located in the vicinity of the Shipyard, and dock-side activities.
  - Sediment removal from a portion of MS-12 as part of the Building 178 renovation project.
- There are also non-Navy sources to sediment in the monitoring stations
  - Includes metals and petroleum products, because this area has a large amount of industry, urbanization, and boat traffic.

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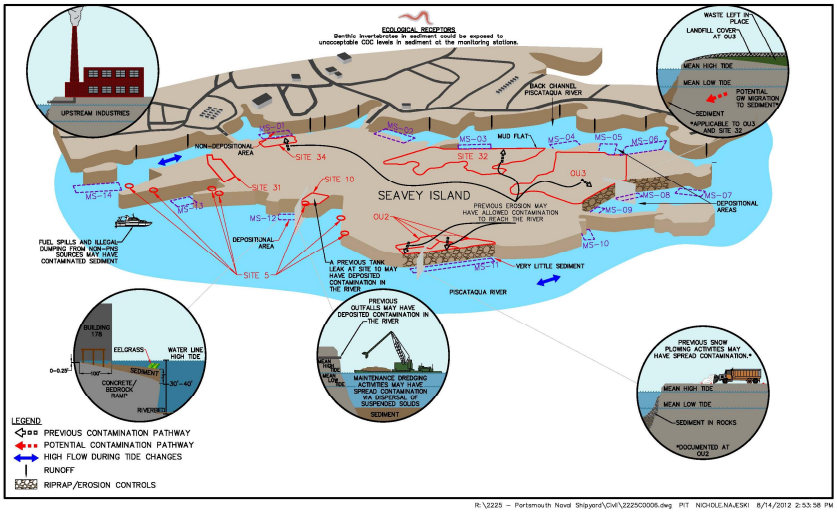
TETRA TECH

Conceptual Site Model



11

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Summary of Site Risks

- Human health risks acceptable; therefore no monitoring stations are being cleaned up based on human health risks.
  - Risks for direct contact and ingestion of surface water and sediment acceptable.
  - Risks for seafood consumption determined to be acceptable.
  - Agency for Toxic Substances and Disease Registry (ATSDR) Public Health Assessment for PNS concluded no adverse heath effects anticipated.
- Potentially unacceptable ecological risks to benthic invertebrates exposed to chemicals in sediment.
  - Most AOCs had either low or intermediate risk overall.
  - No assessment endpoints showed high risks.
  - Risks from chemicals in surface water were acceptable.

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Remedial Action Objective

- Reduce, to the extent possible, unacceptable risk to benthic receptors exposed to COCs in sediment at concentrations greater than cleanup levels.

COC	Proposed Cleanup Levels	MS-01	MS-03 & MS-04	MS-11	MS-12A	MS-12B
Copper	486 mg/kg		X	X		
Lead	436 mg/kg			X	X	X
Nickel	124 mg/kg			X		
Acenaphthylene	210 µg/kg	X	X		X	
Anthracene	1,236 µg/kg	X	X		X	
Fluorene	500 µg/kg	X	X		X	
HMW PAHs	13,057 µg/kg	X	X		X	

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Summary and Evaluation of Remedial Alternatives

- COC concentrations acceptable; therefore no alternatives evaluated and no further action required for MS-02, MS-05, MS-06, MS-07, MS-08, MS-09, MS-10, MS-13, and MS-14.
  - No further action required for MS-11 because not sufficient sediment to cause an unacceptable ecological risk.
  - The Proposed Plan recommends an approach for remediating MS-01, MS-03, MS-04, and MS-12.

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Summary and Evaluation of Remedial Alternatives (Continued)

- Evaluated three alternatives for MS-01, MS-03/MS-04, and MS-12B
  - No Action
  - Monitored Natural Recovery
  - Dredging with Off-yard Disposal
- Evaluated four alternatives for MS-12A
  - No Action
  - Containment, Land Use Controls (LUCs), and Monitoring
  - Partial Removal, Off-yard Disposal, Containment, and LUCs
  - Complete Removal with Off-yard Disposal
- FS assumed hydraulic dredging for sediment removal alternatives; however, other forms of sediment removal, such as mechanical dredging, may be utilized for sediment removal alternatives.

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Comparative Analysis MS-01

ALTERNATIVE	MS01-01	MS01-02	MS01-03
Estimated Time Frame (months)			
Designing and Constructing the Alternative	NA	12	15
Achieving the Cleanup Objectives	NA	24-48	15
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?	○	●	●
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?	NA	◘	◘
Can it be implemented ➢ Is the alternative technically feasible? ➢ Are the goods and services necessary to implement the alternative readily available?	NA	●	◘
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 ➢ Total cost in today's dollars (NPW cost)	$0	$17,094 capital 30-year NPW: $311,538	$917,661capital 30-year NPW: $917,661
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, NA – not applicable			

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Comparative Analysis MS-03/MS-04

Alternative	MS0304-01	MS0304-02	MS0304-03
Estimated Time Frame (months)			
Designing and Constructing the Alternative	NA	12	15
Achieving the Cleanup Objectives	NA	60-120	15
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?	○	●	●
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?	NA	◘	◘
Can it be implemented ➢ Is the alternative technically feasible? ➢ Are the goods and services necessary to implement the alternative readily available?	NA	●	◘
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 ➢ Total cost in today's dollars (NPW cost)	$0	$17,904 capital 30-year NPW: $323,481	$745,410 capital 30-year NPW: $745,410
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, NA – not applicable			

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TETRA TECH

Comparative Analysis MS-12A

Alternative	MS12A-01	MS12A-02	MS12A-03	MS12A-04
Estimated Time Frame (months)				
Designing and Constructing the Alternative	NA	13	15	15
Achieving the Cleanup Objectives	NA	60-120	15	15
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?	○	●	●	●
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?	NA	◘	●	●
Can it be implemented ➢ Is the alternative technically feasible? ➢ Are the goods and services necessary to implement the alternative readily available?	NA	●	◘	◘
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 ➢ Total cost in today's dollars (NPW cost)	$0	$369,626 capital 30-year NPW: $675,807	$1,305,682 capital 30-year NPW: $1,601,353	$1,134,478 capital 30-year NPW: $1,134,478
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, NA – not applicable				

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Comparative Analysis MS-12B

ALTERNATIVE	MS12B-01	MS12B-02	MS12B-03
Estimated Time Frame (months)			
Designing and Constructing the Alternative	NA	12	14
Achieving the Cleanup Objectives	NA	24-48	14
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?	○	●	●
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?	NA	◘	◘
Can it be implemented ➢ Is the alternative technically feasible? ➢ Are the goods and services necessary to implement the alternative readily available?	NA	●	◘
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 ➢ Total cost in today's dollars (NPW cost)	$0	$17,094 capital 30-year NPW: $309,149	$428,824 capital 30-year NPW: $428,824
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, NA – not applicable			

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Preferred Alternatives

- The Navy proposes removing contaminated sediment with off-yard disposal for MS-01, MS-03, MS-04, MS-12.
  - Excavation of sediment at each monitoring station to a depth defined for each area.
  - Dewatering and disposal in an off-yard landfill.
  - Remedial action documents would specify the requirements for dredging (including sampling), dewatering, and disposal.
- Sediment removal with off-yard disposal achieves:
  - Contaminant removal, rather than relying on natural attenuation to gradually decrease COC concentrations.
  - The greatest long-term protection.
  - No requirement for LUCs, O&M, LTM, or five-year reviews
  - Cleanup goals a year or more before the other alternatives.

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Figure 3 - Alternative MS01-03 - Dredging with Off-Yard Disposal

Figure 4 - Alternative MS0304-03 - Dredging with Off-Yard Disposal

Figure 6 - Alternative MS12B-03 - Dredging with Off-yard Disposal

Figure 5 - Alternative MS12A-04 - Complete Removal and Off-yard Disposal

Preferred Alternatives – End Result

- Interim offshore monitoring will be discontinued.
- Remedial action anticipated to take 1 to 1.5 years.
- Five-year reviews would not be required because concentrations at OU4 would be at levels that allow for unlimited use and unrestricted exposure.

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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 open house to discuss the Plan and answer questions.
  - A public hearing to accept oral comments.
- Written formal comments can be provided at anytime during the public comment period.
- The Proposed Plan and supporting documents will be available during the public comment period.

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Questions?

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Draft Feasibility Study Report for Operable Unit 9

Portsmouth Naval Shipyard
Restoration Advisory Board

Date: December 4, 2012

Presenter:
Matthew Kraus, Tetra Tech

Purpose of Presentation

Provide information on the Draft Feasibility Study Report for OU9 that is currently under regulatory review.

- Present OU9 background information and remedial action objectives.
- Discuss the assembly of remedial alternatives.
- Describe the evaluation of remedial alternatives.

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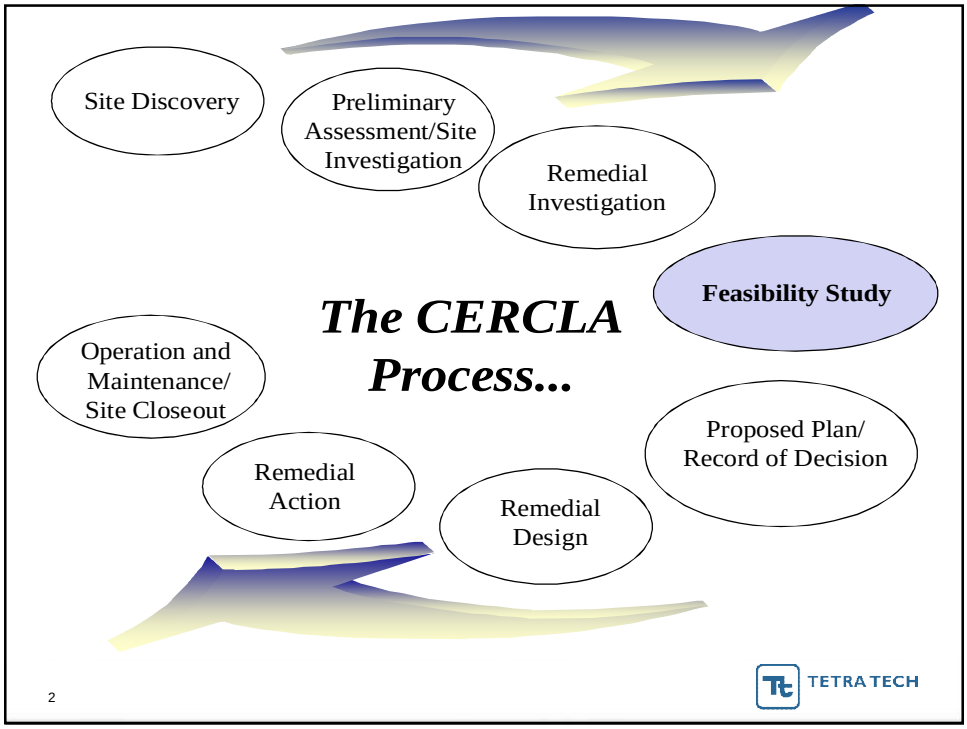
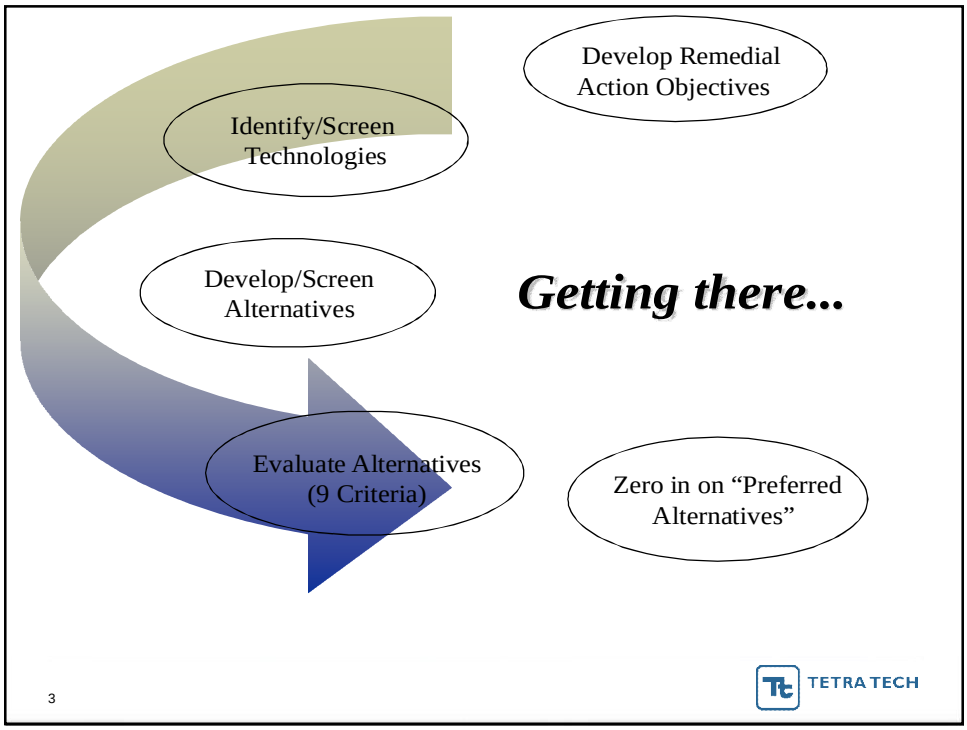

Site Discovery
Preliminary Assessment/Site Investigation
Remedial Investigation
Feasibility Study
The CERCLA Process...
Operation and Maintenance/ Site Closeout
Proposed Plan/ Record of Decision
Remedial Action
Remedial Design
2
TETRA TECH


Develop Remedial Action Objectives
Identify/Screen Technologies
Develop/Screen Alternatives
Getting there...
Evaluate Alternatives (9 Criteria)
Zero in on "Preferred Alternatives"
3
TETRA TECH

OU9 Background Information

- OU9 consists of Site 34 – Former Oil Gasification Plant (Building 62).
- Approximately 1 acre in size and located along in the northwestern portion of PNS.
- The primary source of contamination is ash from past industrial activities at Building 62.
  - The majority of ash was removed in 2007.
  - A few pockets of residual ash remain in subsurface.

4

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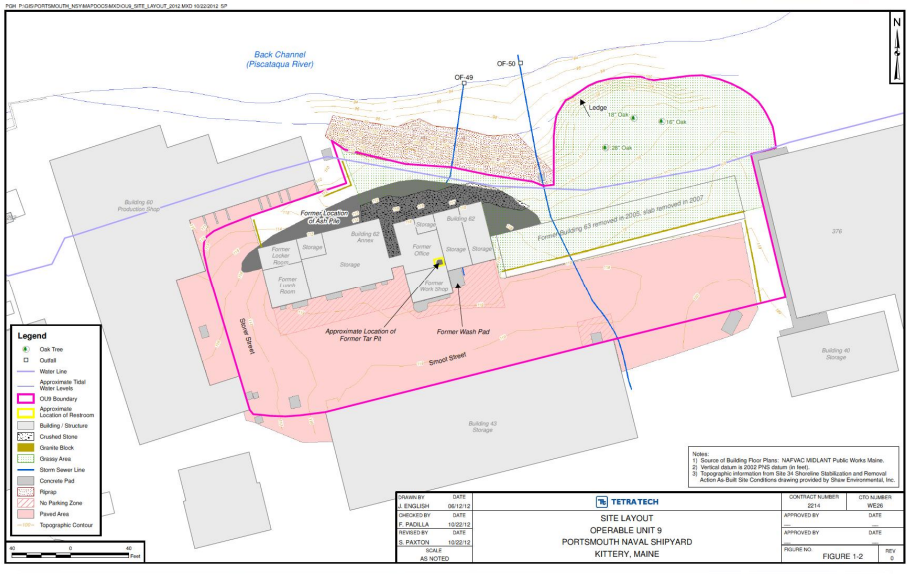
Site Layout



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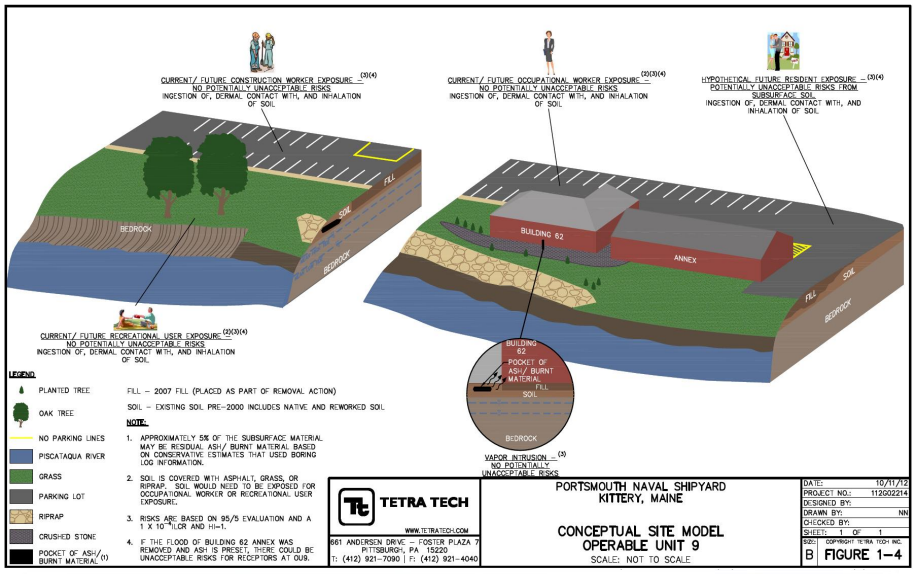
Conceptual Site Model



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Potentially Unacceptable Risks for OU9

- Potentially unacceptable risks for hypothetical future residential exposure to carcinogenic polycyclic aromatic hydrocarbons (PAHs) in subsurface soil.
  - The specific PAHs are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-CD)pyrene.
  - Carcinogenic PAHs evaluated as benzo(a)pyrene toxicity equivalency quotient (BAP TEQ).
- Ash may be present under the floor of Building 62 Annex. If present, ash may pose an unacceptable risk to people if the floor of the building was removed exposing the ash.

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Remedial Action Objectives - Overview

- Remedial Action Objectives (RAOs) are medium-specific goals for protecting human health and the environment.
- Required to specify the chemicals of concern (COCs), exposure routes and receptors of concern, and an acceptable contaminant level or range of levels for each exposure route.
- Acceptable contaminant levels are based on site-specific Preliminary Remediation Goals (PRGs) as a starting point, after which a final remediation goal is determined when a remedy is selected.

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Remedial Action Objectives for OU9

- Prevent hypothetical future residential exposure via ingestion, dust inhalation, and dermal contact of subsurface soil containing carcinogenic PAH concentrations that exceed the carcinogenic PAH residential PRG.
- Prevent potential future exposure to carcinogenic PAHs in ash that may be present under the floor of Building 62 Annex.

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OU9 Preliminary Remediation Goals

PRELIMINARY REMEDIATION GOAL SUMMARY TABLE				
Receptor	**Media**	**COC**	**PRG (mg/kg)**	**Basis**
Hypothetical Future Resident	Subsurface Soil	Carcinogenic PAHs	1.5	Site-Specific risk-based; carcinogenic based on ILCR = $1x10^{-4}$

COC = Chemical of Concern
PAHs = Polycyclic Aromatic Hydrocarbons
ILCR = Incremental Lifetime Cancer Risk

The PRG is based on the benzo(a)pyrene toxicity equivalency quotient (BAP TEQ).

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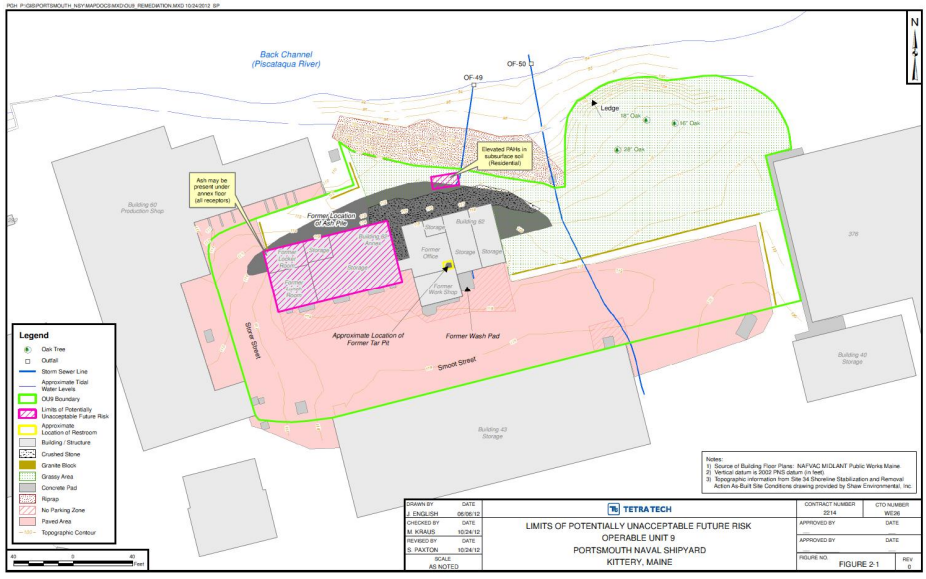
Soil Remediation Areas



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Screening of Technologies and Process Options

- A preliminary screening of available technologies was conducted and retained technologies were further evaluated considering effectiveness, implementability, and relative costs.
- Containment technologies were not retained based on site risks and land use.
- There are no plans for the Shipyard to remove Building 62 Annex; therefore, an excavation or treatment option for ash under the Annex was not evaluated.

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Soil Remediation Alternatives

- Alternative 1 – No Action.
- Alternative 2 – Land Use Controls (LUCs) for Elevated PAH Area and Building 62 Annex.
- Alternative 3 – Excavation of Elevated PAH Area and Building 62 Annex LUCs
- Alternative 4 – In-Situ Chemical Oxidation (ISCO) Treatment of Elevated PAH Area and Building 62 Annex LUCs

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Alternative 1 – No Action

- Required under CERCLA to establish a basis for comparison with other alternatives.
- Does not include controls, remediation, or other actions to mitigate risks.
- Does not include five-year reviews.

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Alternative 2 - LUCs for Elevated PAH Area and Building 62 Annex

- LUCs
  - Implement LUCs to prevent residential land use for the PAH-contaminated area north of Building 62 and Building 62 Annex and prevent unrestricted exposure to potential contaminants in the subsurface beneath the floor of Building 62 Annex.
  - Prepare a LUC Remedial Design (LUC RD) to document the LUCs and provide the requirements for inspection, responsible organizations, and management of excavated soil from potential future construction activities within the LUC boundaries (elevated PAH Area and beneath Building 62 Annex).
- Five-year reviews to evaluate the continued adequacy of the remedy (LUCs).

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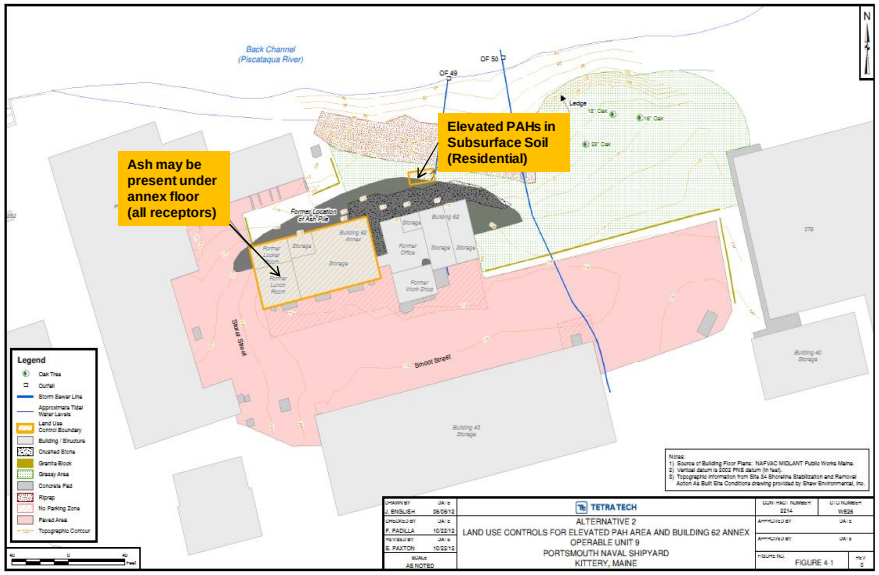
Alternative 2 LUCs Boundaries



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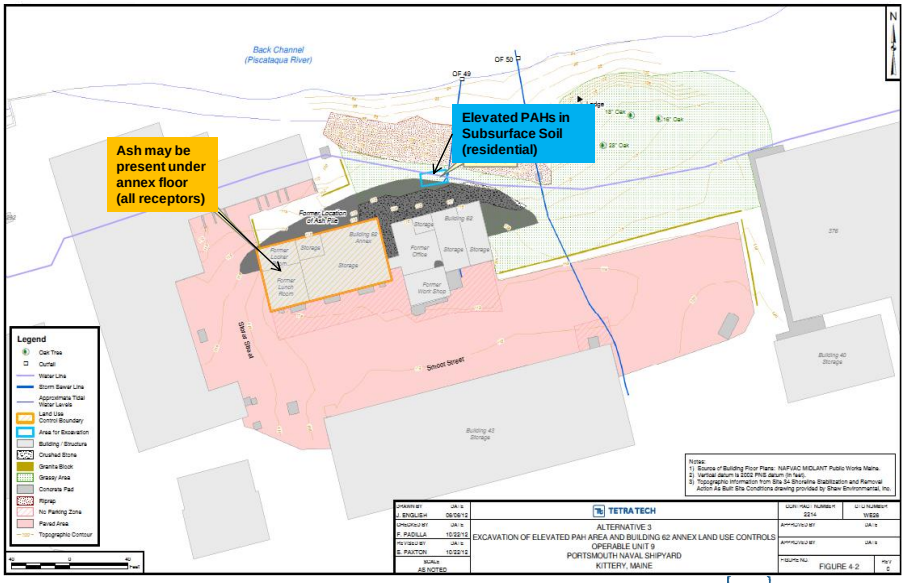
Alternative 3 – Excavation of Elevated PAH Area and Building 62 Annex LUCs

- Excavation, offsite disposal, and site restoration
  - Excavate soil in area north of Building 62 to a maximum of 8 feet below ground surface (bgs) taking precautious to prevent compromise the integrity of the main water line in that area .
  - Disposal of an estimated 52 cubic yards of soil
  - Backfill with clean soil and restore to pre-construction conditions.
- LUCs
  - Implement LUCs to prevent residential land use and unrestricted exposure to potential contamination in the subsurface beneath the floor of Building 62 Annex as long as contamination remains in this area.
  - Prepare the LUC RD to provide the requirements for inspection, responsible organizations, and management of excavated soil from potential future construction activities underneath of Building 62 Annex.
- Five-year reviews to evaluate the continued adequacy of the remedy (LUCs).

TETRA TECH

Alternative 3 Excavation and LUC Boundaries



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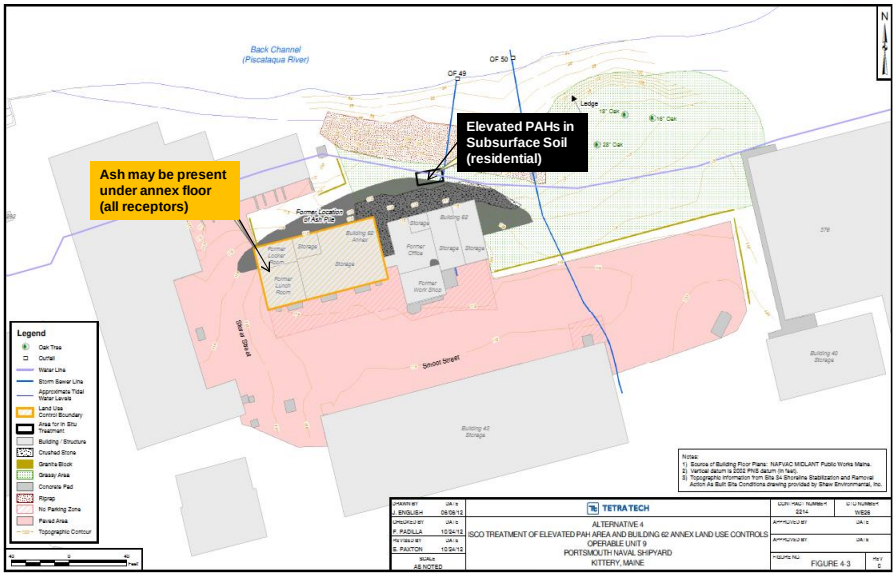
Alternative 4 – ISCO Treatment of Elevated PAH Area and Building 62 Annex LUCs

- Treatment using injection of ozone gas into soil north of Building 62 to destroy PAHs in soil.
  - Onsite ozone generator to produce ozone for injection.
  - Ozone injection system run for approximately one month.
  - Confirmation samples to confirm PAH concentrations are less than the PRG.
- LUCs
  - Implement LUCs to prevent residential land use and unrestricted exposure to potential contamination in the subsurface beneath the floor of Building 62 Annex as long as contamination remains in this area.
  - Prepare the LUC RD to provide the requirements for inspection, responsible organizations, and management of excavated soil from potential future construction activities underneath of Building 62 Annex
- Five-year reviews to evaluate the continued adequacy of the remedy (LUCs).

TETRA TECH

Alternative 4 Treatment and LUCs Boundaries



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Detailed Analysis Criteria

- Threshold Criteria… Must satisfy requirements
  - Overall protection of human health and the environment.
  - Compliance with Applicable or Relevant and Appropriate Requirements (ARARs).
- Balancing Criteria… Used to identify major tradeoffs
  - Reduction of toxicity, mobility, or volume through treatment.
  - Short-term effectiveness.
  - Long-term effectiveness and permanence.
  - Implementability.
  - Cost.

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Detailed Analysis Criteria (continued)

- Modifying Criteria… Assess after the public comment period as part of the Proposed Plan.
  - Regulatory Acceptance.
  - Community Acceptance.

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Comparative Analysis of Remedial Alternatives

TABLE ES-1: SUMMARY OF COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES

ALTERNATIVE	ALTERNATIVE 1 NO ACTION	ALTERNATIVE 2: LUCS FOR ELEVATED PAH AREA AND BUILDING 62 ANNEX	ALTERNATIVE 3: EXCAVATION OF ELEVATED PAH AREA AND BUILDING 62 ANNEX LUCS	ALTERNATIVE 4: ISCO TREATMENT OF ELEVATED PAH AREA AND BUILDING 62 ANNEX LUCS
Estimated Time Frame (months)				
Designing and Constructing the Alternative	N/A	12	12	12 to18
Achieving the Cleanup Objectives	N/A	12	13	13 to19
Criteria Analysis				
Threshold Criteria				
Protects Human Health and the Environment ➢ Will it protect you and plant and animal life on and near the site?	O	●	●	●
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?	O	◐	◐	◐
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?	O	O	O	●
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	$15,000 capital 30-year NPW: $197,000	$423,000 capital 30-year NPW: $605,000	$336,000 capital 30-year NPW: $518,000
Modifying Criteria				
State Agency Acceptance ➢ Does Maine Department of Environmental Protection (MEDEP) agree with the Navy's recommendation?	To be determined after the public comment period on the PRAP.			
Community Acceptance ➢ What objections, suggestions, or modifications does the public offer during the comment period?	To be determined after the public comment period on the PRAP.			
Relative comparison of the nine balancing criteria and each alternative: ● – Good , ◐ – Average, O – Poor; N/A – not applicable.				

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Next Steps

- Receive and resolve comments with regulators and finalize the FS.
- Focus in on a preferred remedial alternative for OU9 and prepare a Proposed Plan for public review.
- Develop and sign the Record of Decision (ROD).
- Implement the selected/approved Remedial Action.

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Questions

Questions?

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NAVFAC Naval Facilities Engineering Command

NAVFAC MID-ATLANTIC

Portsmouth Naval Shipyard
Restoration Advisory Board
Charter and Membership

December 2012

Environmental Restoration Progress

- **PNSY listed on NPL May 31, 1994**
- **RAB Charter established and signed in August 1995**
- **FFA became effective in February 2000**
- **36 Sites or AOCs investigated (9 Operable Units)**
  - **No Further Action for 23 sites and OU5**
  - **Record of Decision for OU1, OU2, OU3/OU6 (7 sites)**
  - **Anticipated Records of Decision**
    - **OU4 (Draft PRAP) June 2013**
    - **OU7 (Comment Resolution on Draft FS) September 2013**
    - **OU9 (Regulatory Review of Draft FS) October 2013**

RAB Charter

- **Signed and established August 1995**
- **April 2012 – Co-chairs met to discuss changes to Charter / Mission Statement**
- **September 2012 – Proposed changes distributed by the Navy**
- **Mission Statement and Procedures Guide may be amended by a majority vote**
  - **Amendments may be proposed by any RAB member at any time.**
  - **A vote on the proposed amendment shall be held at the next RAB meeting**

RAB Membership (Descriptions from Mission Statement)

- "RAB members are expected to attend all RAB meetings or send an appropriate alternate…If a member accumulates more than two (2) consecutive absences without notifying either the RAB Co-Chairs, the RAB Co-Chairs may ask the member to resign."
- "Applicants for RAB membership may apply at any time; new applicants will always be considered. Applications will be reviewed by a selection panel made up of RAB community members. Applicants will be placed into nomination by the selection panel. Open nominations will take place every two years or as needed. Nominations are approved by a majority vote of the RAB members present at the meeting designated for nominee approval."
- "RAB members will serve 2-year terms. Terms will be staggered to ensure that an essential core group of members is always participating on the RAB. Members may serve consecutive terms."
- "The RAB will make every effort to recruit members of the diverse community in terms of personal and/or professional expertise/experience, race ethnicity, and gender. Priority for membership will be given to local residents who are impacted/affected by the Portsmouth Naval Shipyard cleanup. Community members selected for RAB membership would reflect the unique mix of interests and concerns with the local community. It is envisioned that the RAB will be comprised of 15-20 members, with diverse representation of individuals from the local community."

RAB Items for Discussion

- **Ideal number of RAB Members**
- **Term Length**
- **Recruitment / Nomination Process**
- **Attendance / Alternate Attendee**
- **Frequency of Meetings**
- **Alternative meeting times/places**
- **Criteria to Disestablish the RAB**
  - **All sites have RODs?**
  - **All sites have a Remedy in Place?**
  - **All sites have Response Complete?**
- **Criteria to Re-Establish the RAB**

Discussion