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RESTORATION ADVISORY BOARD (RAB) MEETING MINUTES AND SLIDES 29 MAY 2012
NSY PORTSMOUTH ME
5/29/2012
RESTORATION ADVISORY BOARD

Portsmouth Naval Shipyard
Restoration Advisory Board Meeting
Kittery Town Hall, Kittery, Maine
May 29, 2012

Attendees

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

- RAB Community Members:
  - Doug Bogen
  - Peter Britz
  - Diana McNabb
- Navy RAB Members:
  - Lisa Joy, Portsmouth Naval Shipyard (PNS)
  - Linda Cole, Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Remedial Project Manager (RPM)
- Regulatory Representatives:
  - Matt Audet, United States Environmental Protection Agency (USEPA)
  - Iver McLeod, Maine Department of Environmental Protection (MEDEP)
- Other Participants:
  - Matt Thyng (PNS)
  - Carl Baxter, New Hampshire Department of Environmental Services (NHDES)
  - Carolyn Lepage, Technical Assistance Grant (TAG) technical advisor to Seacoast Anti-Pollution League (SAPL)
  - Paul Dombrowski (Resolution Consultants)
  - Heather Bell (Resolution Consultants)
  - Deborah Cohen (Tetra Tech)
  - Matthew Kraus (Tetra Tech)

The following RAB members were not in attendance:

- RAB Community Members:
  - Michele Dionne
  - Mary Marshall
  - Jack McKenna
  - Roger Wells
- 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 and announced that the Portsmouth Naval Shipyard Environmental Program was awarded the Secretary of Navy Environmental Award. The Shipyard was previously selected for a Chief of Naval Operations (CNO) Environmental Restoration Award. Winners of the CNO level award advance to the Secretary of Navy level competition, and winners of the Secretary of Navy level award advance to the Secretary of Defense level competition. Ms. Joy credited the RAB partnership as important to receiving the award.

Doug Bogen, Community Co-Chair, congratulated the Shipyard on the awards and had no further opening statements.

Installation Restoration Program Status and Updates:

Linda Cole, Navy RPM, introduced the new CLEAN contractor, Resolution Consultants, a joint venture of AECOM and EnSafe. Resolution Consultants will be now be providing RAB support. Tetra Tech will continue to provide technical support.

Several Community RAB Members asked questions about the submarine fire. Ms. Joy responded that an investigation is underway and that specific questions should be directed to the PNS Public Affairs Office.

Ms. Cole outlined the Fiscal Year (FY) 2013 spending plan, which has a budget of $5.0 million. It was indicated that much of this amount may not be able to be spent in FY 2013, but that unused funds can be moved to FY 2014. It is anticipated that RODs or decision documents should be completed on all sites and/or Operable Units (OU) in FY 2013, except Operable Unit 8 (OU8). The total estimated cost to complete restoration activities remains at $22.8 million and this value incorporates escalation costs.

Ms. Cole reviewed the status updates for Installation Restoration Program (IRP) work at each OU and Site 30. The status update presentation is attached to the minutes.

The following are update highlights on the OUs:

- OU1 (Site 10: Former Battery Acid Tank No. 24). The Remedial Action (RA) is complete and asphalt repairs are scheduled for the week of June 4th. The data package for the first round of groundwater sampling in February 2011 will be available soon. In response to a question, it was noted that the floor material in the excavation areas within the building crawl space consists of crushed rocks.
- OU2 (Site 6: Defense Reutilization and Marketing Office (DRMO) Storage Yard, Site 29: Former Teepee Incinerator Site, and DRMO Impact Area). The draft Remedial Design (60%) document was submitted in April 2012, and the Pre-Design Technical Memorandum summarizing the delineation of site contamination within the pre-design investigation area was included. The Land Use Control Remedial Design (LUC RD) was finalized in March 2012. Ms. Cole and Deborah Cohen (Tetra Tech) presented a paper at

the May 2012 International Conference on Remediation of Chlorinated and Recalcitrant Compounds on incorporating sustainability in the remedial design to minimize the environmental footprint. The presentation will be forwarded to the RAB members, and all attendees agreed that this be a presentation topic for a future RAB meeting. The Construction Completion Report for the DRMO Impact Area is being revised in response to regulator comments.

- 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 and 7). Round 11 monitoring and inspection was performed by Tetra Tech in May 2012, and included groundwater sampling for arsenic, landfill gas monitoring, and minor maintenance. The second Five Year Review is being finalized and is scheduled to be signed on May 31, 2012.
- OU4 (Site 5: Former Industrial Waste Outfalls and Offshore Areas Potentially Impacted by PNS Onshore IRP Sites). The FS is being revised in response to regulator comments, and PRAP and ROD are the next steps.
- OU7 (Site 32: Topeka Pier Site): The draft FS report was issued in May 2012 and is now undergoing regulatory review.
- OU9 (Site 34: Former Oil Gasification Plant, Building 62). The RI will be finalized in June 2012, and a draft FS is anticipated to be submitted in June 2012.
- Site 30: Former Galvanizing Plant, Building 184). The Construction Completion Report is anticipated to be submitted in June 2012, and a Decision Document is in preparation. Laboratory analysis was performed on the crystals found on the inside walls of the building, and the laboratory concluded that the crystals are comprised of salts of sulfate and silicates and that the crystalline structure is essentially the same for both white and yellow crystals. Based on the laboratory report, the conclusion is that the crystals are naturally occurring salt precipitants forming on the walls due to water infiltration into the building. It is unclear whether this is from the mortar or the concrete. Additional laboratory testing is being performed on the crystal pH.
- Community Involvement Plan. The Community Involvement Plan should be finalized in June 2012.

Proposed Changes to the RAB Charter and Community Involvement:

Preparation of the Community Involvement Plan, as noted during the Status Update, prompted further review and discussion about the contents of the RAB Charter. Lisa Joy, Doug Bogen, and Linda Cole had a meeting in April 2012 to discuss proposed changes to the RAB charter. Ms. Cole discussed that the charter was created in 1994, and the charter does not include a process for disestablishment of the RAB. It was noted that based on significant progress in environmental restoration at the Shipyard, the PNS RAB could be disestablished in the near future. Ms. Cole noted that there are several points at which disestablishment can happen, including when all RODs are in place, when all remedies are in place, or when response is complete on sites, and that the RABs can be re-established in the future. Proposed changes to the RAB charter will be distributed to the RAB members.

Discussions were also conducted on increasing community involvement in the RAB, including increasing membership, and evaluating other communities who may want to have representation.

Regulator Updates (USEPA and MEDEP):

Representatives from USEPA and MEDEP indicated that the OU7 FS, OU2 Remedial Design, and OU4 FS Response to Comments are in review.

Feasibility Studies:

Matthew Kraus of Tetra Tech presented on the draft FS for OU7. The presentation is attached to the minutes. A summary of critical components of the presentation and discussion generated by the presentation is provided below:

- Contamination at OU7 is associated with activities in the former East Timber Basin and from historic filling. The former timber basin contains a hot spot of elevated concentrations of dioxins and polychlorinated biphenyls (PCBs). Overall, OU7 is characterized by low levels of contamination over a large area.
- Potentially unacceptable risks associated with surface soil were only identified for future hypothetical residents.
- Potentially unacceptable risks from exposure to subsurface soil were identified for industrial workers and future hypothetical residents.
- The group discussed that the reported Exposure Point Concentration (EPC) for dioxins and PCBs are less than the Preliminary Remediation Goals (PRGs). The large area with many low-level samples is the reason for this difference; however, select areas (i.e., in the hotspot) contain concentrations greater than the PRGs.
- Three remedial alternatives were evaluated in the FS.
    1. No Action (required alternative as a basis for comparison).
    2. Land Use Controls (LUCs) and Long-term Management. LUCs would prevent residential exposure to surface and subsurface soils and industrial receptor exposure to subsurface soil and maintain shoreline stabilization measures.
    3. Hot Spot Removal, LUCs, and Long-term Management. Targeted excavation would be approximately 200 cubic yards. LUCs would prevent residential exposure to subsurface soil and maintain shoreline stabilization measures. No restriction would be required for industrial receptors.
- The estimated 30-year Net Present Value cost difference between Remedial Alternatives 2 and 3 was approximately $800,000, and the group had a discussion on the cost/benefit and permanence of the two alternatives. The elevated cost for excavation was attributed to the many subsurface utilities and building stabilization. The group identified a need to further evaluate the costs for excavation and determine what the primary cost elements are.
- Matt Audet of USEPA commented on the difficulty of leaving a hotspot in place with only LUCs and asked about the Shipyard's ability to enforce LUCs without a surface soil buffer. Tetra Tech responded that the industrial contamination in the hotspot is in the

subsurface, surface soil does not have unacceptable concentration for industrial exposure

- A question was asked about the impact of rising sea level on contaminants in OU7. Tetra Tech responded that the contaminants of concern in the hotspot, which is not near the shoreline, are not mobile and modeling was performed during the Remedial Investigation regarding mobility which concluded no future issue for contaminant migration in groundwater. Shoreline controls are in place to prevent erosion of contaminated material along the shoreline, and shoreline inspections are part of the LUCs.
- An environmental footprint analysis was done in this FS. The analysis looks at greenhouse gas emissions, energy use, water consumption, and worker safety. Remedial Alternative 2 has a lower footprint than Remedial Alternative 3 because there are no hotspot excavation activities.

Community Remarks:

In accordance with the RAB Charter, a period of 15 minutes was allocated for community remarks. A member informed the group that an informal public hearing will be held in Stratham, New Hampshire on Thursday May 31st at 7pm on the proposed USEPA carbon rule and effects on climate and the Seacoast area.

Additional discussions included how to engage RAB members who have not been participating in meetings and altering meeting times, day of the week, and location to maximize attendance. It was agreed that the RAB meeting times should be at the convenience of RAB community members and that the day of the week and the time of day for the RAB meetings is flexible. The group agreed that a survey for members of the best times for meetings would be helpful, and that the input of RAB members not in attendance should also be sought. Iver McLeod of MEDEP commented that he was restricted on attending meetings outside of Maine.

Future Meetings:

September 11, 2012 was proposed for the next RAB meeting.

Portsmouth Naval Shipyard
Restoration Advisory Board Meeting
May 29, 2012

Agenda

- Introductions
- Opening Statements
  - Navy Co-Chair
  - Community Co-Chair
- Installation Restoration Program Status and Updates
- Regulator Updates (USEPA and MEDEP)
- Feasibility Studies
- Proposed Updates to the RAB Charter
- Community Remarks
- Open Discussion and Questions

Installation Restoration Funding History

- **Approximately $60 Million spent to date**
- **FY 2011 spent $1.9M**
- **FY 2012 spending plan $4.9M**
- **FY 2013 spending plan $5.0M**
- **Estimated $22.8M for Cost-to-Complete**

OPERABLE UNIT 1 (Site 10)

- **Remedial Action (RA)**
  - **–RA is completed**
  - **–Asphalt repairs**
- **Construction Completion Report**
  - **–Draft to be submitted in June 2012**
- **Groundwater Monitoring Plan Component of Long Term Management Plan**
  - **–First round of groundwater collected on 16 Feb 2012**
  - **–Second round of groundwater to be collected in Nov 2012**

OPERABLE UNIT 2 (Sites 6 and 29)

- **OU2 Pre-design Investigation Tech Memo**
  - **–Under regulatory review**
- **Remedial Action**
  - **–Remedial Design (60%) submitted 30 April 2012**
  - **–Pre-Design Tech Memo finalized and included in RD**
- **LUC RD**
  - **–Submitted Final 19 March 2012**

OPERABLE UNIT 2 (Removal Action - DRMO Impact Area)

- **Construction Completion Report**
  - **–Under Regulatory Review**

OPERABLE UNIT 3 (Site 8)

- **OM&M field work - Round 11**
  - **–Monitoring and inspection completed week of 7 May 2012**
- **Second Five Year Review**
  - **–Under Regulatory Review**
  - **–Final Due Jun 2012**

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

- **FS Report**
  - **–Draft Report issued 9 Jul 2010**
  - **–Resolving regulatory comments**

- **Interim Offshore Monitoring Plan (IOMP) Update**
  - **–Round 12 field work anticipated for Spring 2013**

OPERABLE UNIT 7 (Site 32)

- **FS Report**
  - **–Draft submitted 18 May 2012**

OPERABLE UNIT 9 (Site 34)

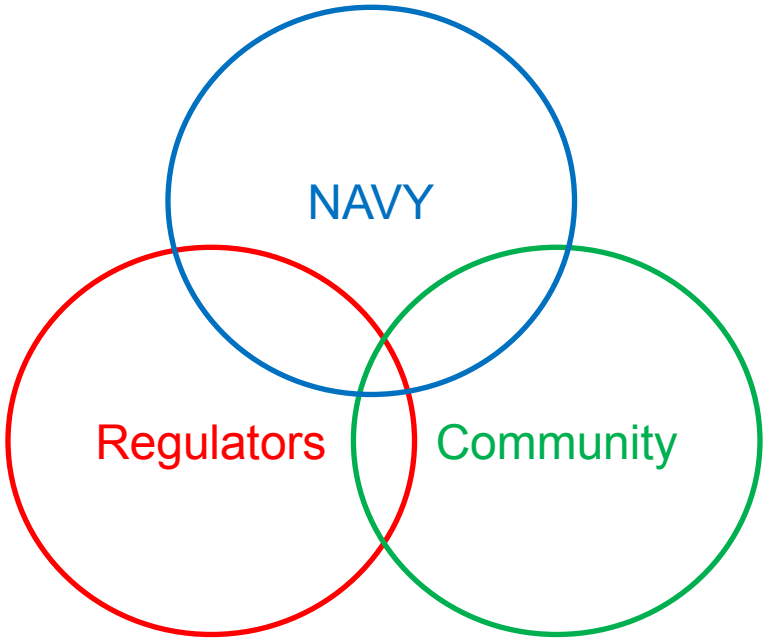
- **RI Report**
  - **–Final to be submitted June 2012**
- **FS Report**
  - **–Draft to be submitted June 2012**

SITE 30 (Former Galvanizing Plant – Building 184)

- **Removal Activities completed**
  - **–Construction Completion Report to be submitted in June 2012**
  - **–Decision Document in preparation**

Community Involvement Plan

- **Community Involvement Plan**
  - **–Final CIP to be issued June 2012**



TETRA TECH

Draft Feasibility Study Report for Operable Unit 7

Portsmouth Naval Shipyard
Restoration Advisory Board

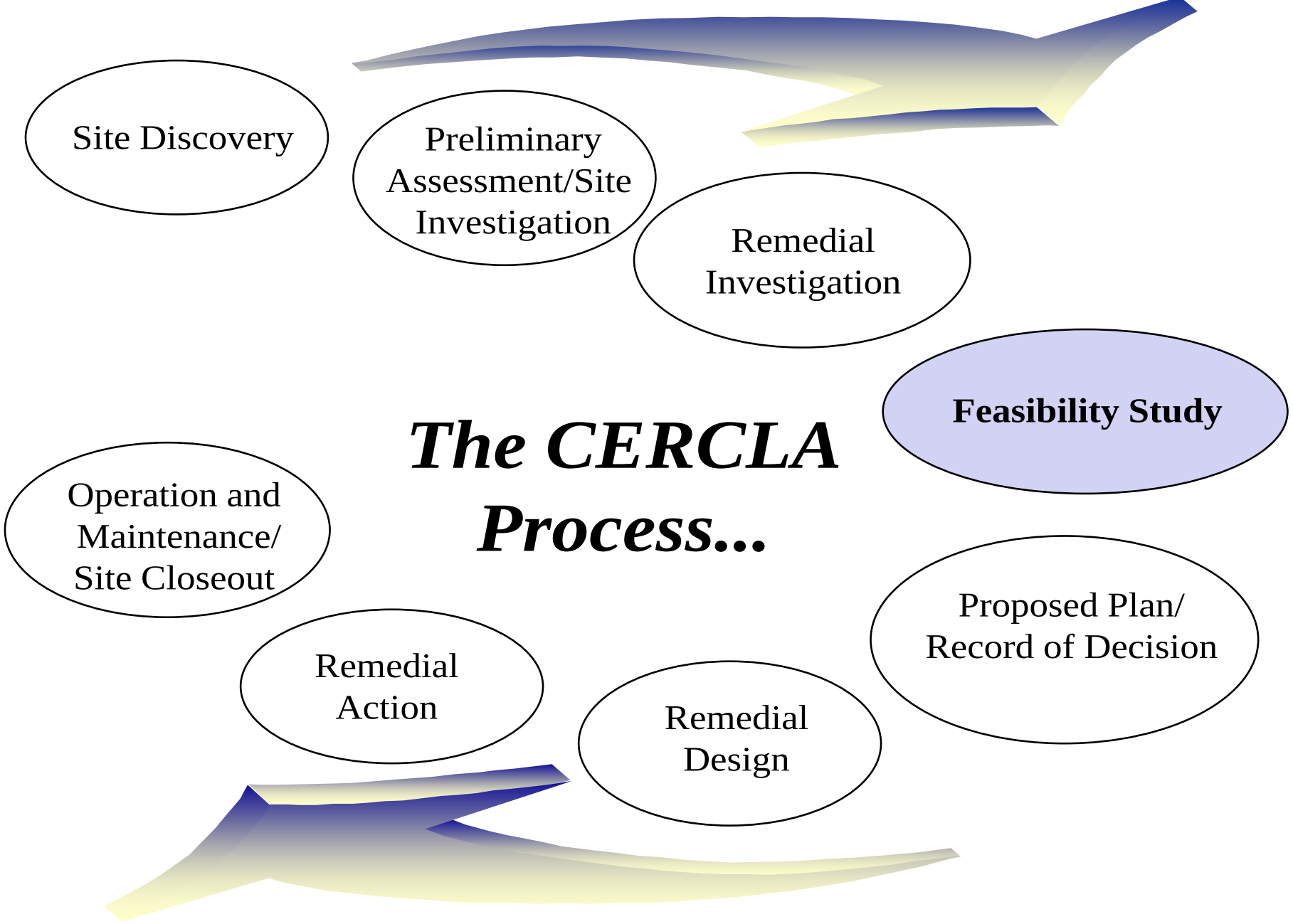
Date: May 29, 2012

Presenter:
Matthew Kraus, Tetra Tech Inc.

Purpose of Presentation

Provide information on the Draft OU7 Feasibility Study that is currently under regulatory review.

- Present OU7 background information and remedial action objectives.
- Discuss the assembly of remedial alternatives.
- Describe the evaluation of remedial alternatives.


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

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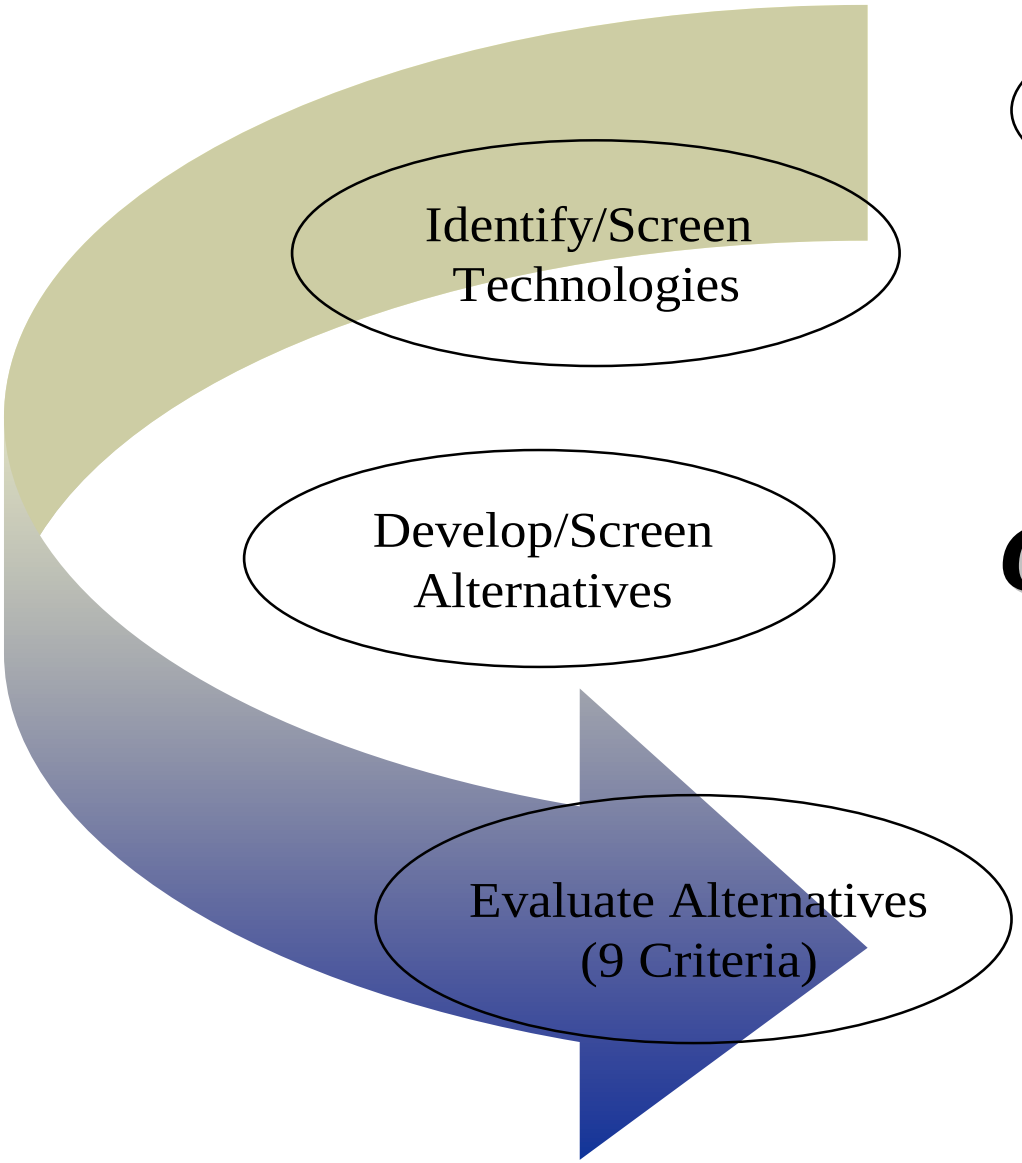


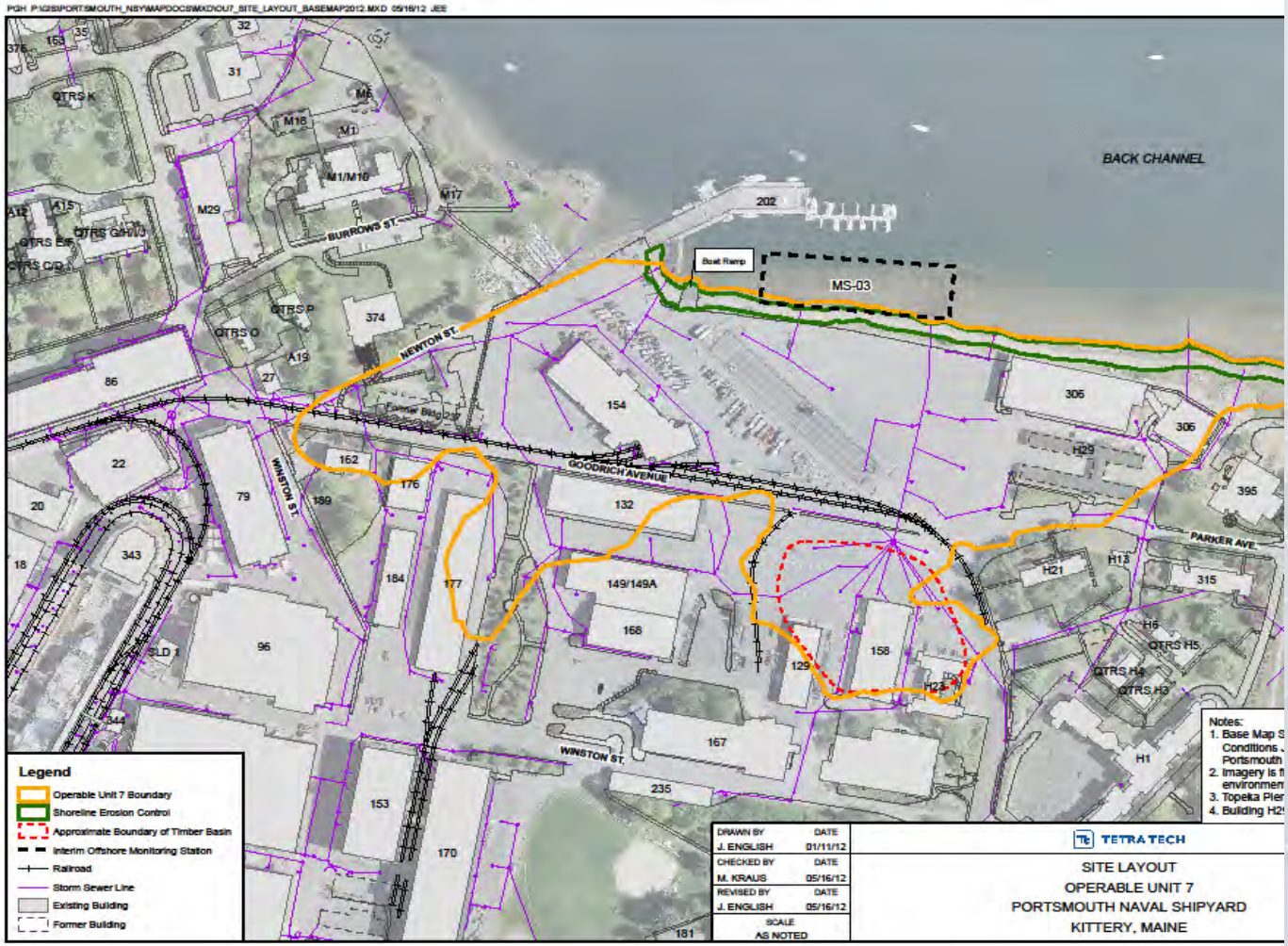
Getting there...

TETRA TECH

OU7 Background Information

- OU7 consists of Site 32 – Topeka Pier Site.
- Located along the northern portion of PNS, along the Back Channel of the Piscataqua River.
- Approximately 19 acres, including filled area and shoreline.
- Area filled from 1900 to 1945.
- Filling of site and past industrial uses (i.e., timber basin, saw mill) primary source of contamination.

Site Layout



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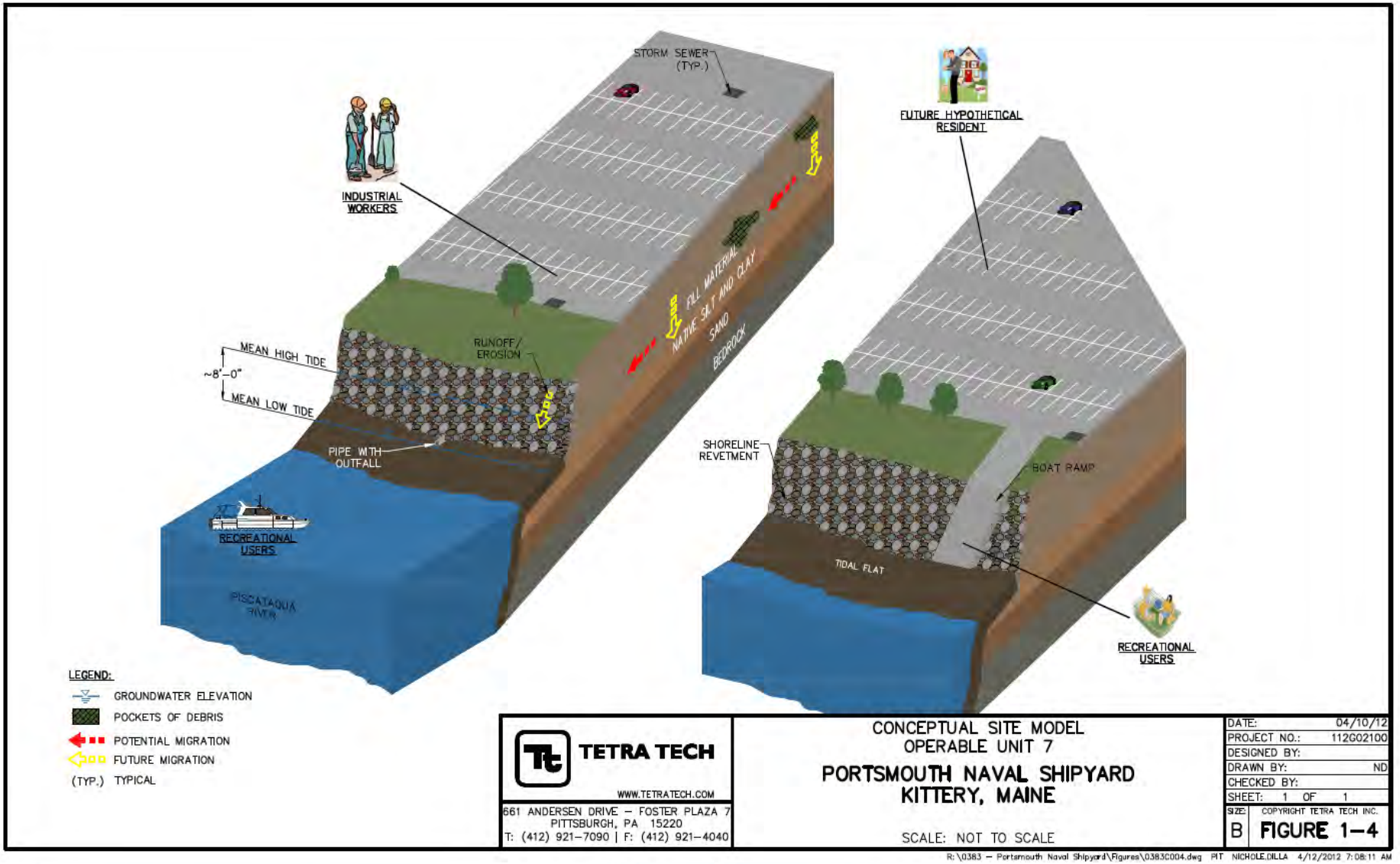
Conceptual Site Model



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OU7 Potentially Unacceptable Risks

CHEMICALS OF CONCERN SUMMARY TABLE			
Receptor	**Media**	**Chemical of Concern**	**Exposure Point Concentration (EPC) (mg/kg)**
Industrial Worker	Subsurface Soil	Dioxins/Furans	0.0013
		Total Polychlorinated Biphenyls	4.7
Hypothetical Future Resident	Surface Soil	Lead	510
	Subsurface Soil	cPAHs	1.1
		Dioxins/Furans	0.0013
		Total Polychlorinated Biphenyls	4.7
		Antimony	182
		Copper	6,020
		Iron	9,710
		Lead	1,600

cPAHs = carcinogenic Polycyclic Aromatic Hydrocarbons

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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.

Remedial Action Objectives for OU7

- Prevent residential exposure via ingestion, dust inhalation, and dermal contact of surface soil containing lead, and subsurface soil containing lead, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), polychlorinated biphenyls (PCBs), dioxins/furans, antimony, copper, and iron concentrations that exceed residential PRGs.

- Prevent industrial worker (construction and occupational) exposure via ingestion, dust inhalation, and dermal contact of subsurface soil with dioxins/furans and PCB concentrations that exceed industrial PRGs.

- Protect the offshore environment from erosion of contaminated soil from the OU7 shoreline.

OU7 Preliminary Remediation Goals

PRELIMINARY REMEDIATION GOAL SUMMARY TABLE			
Receptor	**Media**	**COC**	**Preliminary Remediation Goal (mg/kg)**
Industrial Worker	Subsurface Soil	Dioxins/Furans	0.02
		Total PCBs	7.4
Residential	Surface Soil	Lead	400
	Subsurface Soil	cPAHs	0.5
		Dioxins/Furans	0.001
		Total PCBs	2.2
		Antimony	31
		Copper	1500
		Iron	2700
		Lead	400

COC = Chemical of Concern; cPAHs = carcinogenic Polycyclic Aromatic Hydrocarbons; PCB = Polychlorinated Biphenyl

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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 and treatment technologies were not retained based on site risks and/or soil volumes.
- Alternatives for complete excavation of contamination and shoreline excavation were not retained after further evaluation.

Soil Remediation Alternatives

- Alternative 1 – No Action.
- Alternative 2 – Land Use Controls (LUCs) and Long-term Management (LTMgt).
- Alternative 3 – Hot Spot Removal, LUCs, and LTMgt.

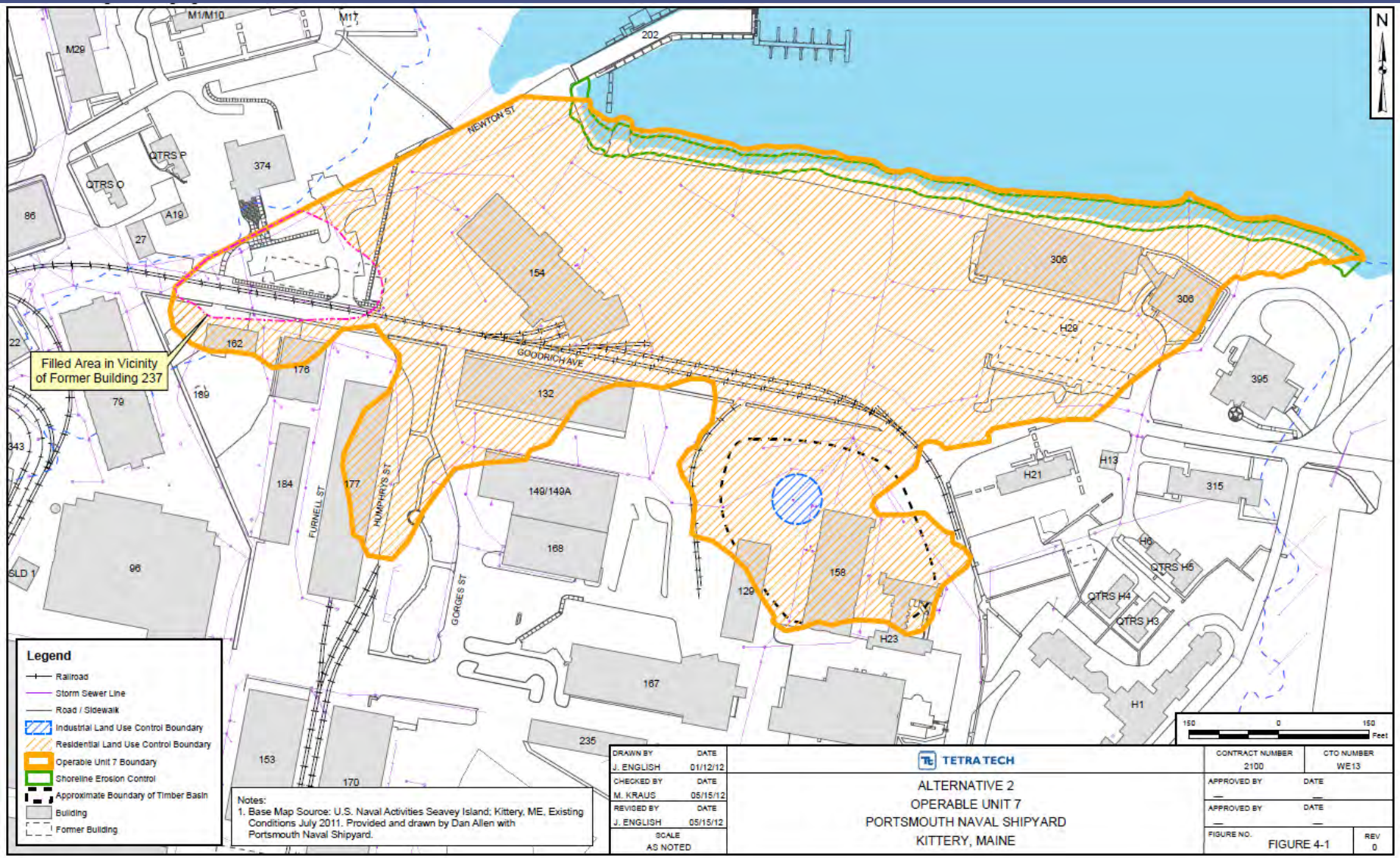
Alternative1 – No Action

- 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.

Alternative 2 – LUCs and LTMgt

- LUCs and LTMgt
  - Implement LUCs to prevent residential exposure to surface and subsurface soil, industrial receptor exposure to subsurface soil, and to maintain shoreline stabilization features to prevent erosion.
  - Prepare a LUC Remedial Design (LUC RD) to provide the requirements for inspection, maintenance, responsible organizations, and management of excavated soil as part of any future construction activities.
  - Prepare a LTMgt plan to specify inspection activities for LUCs and shoreline controls.
- Five-Year Reviews are required because contamination remains in excess of levels that allow for unlimited use and unrestricted exposure.

Alternative 2 – LUCs and LTMgt



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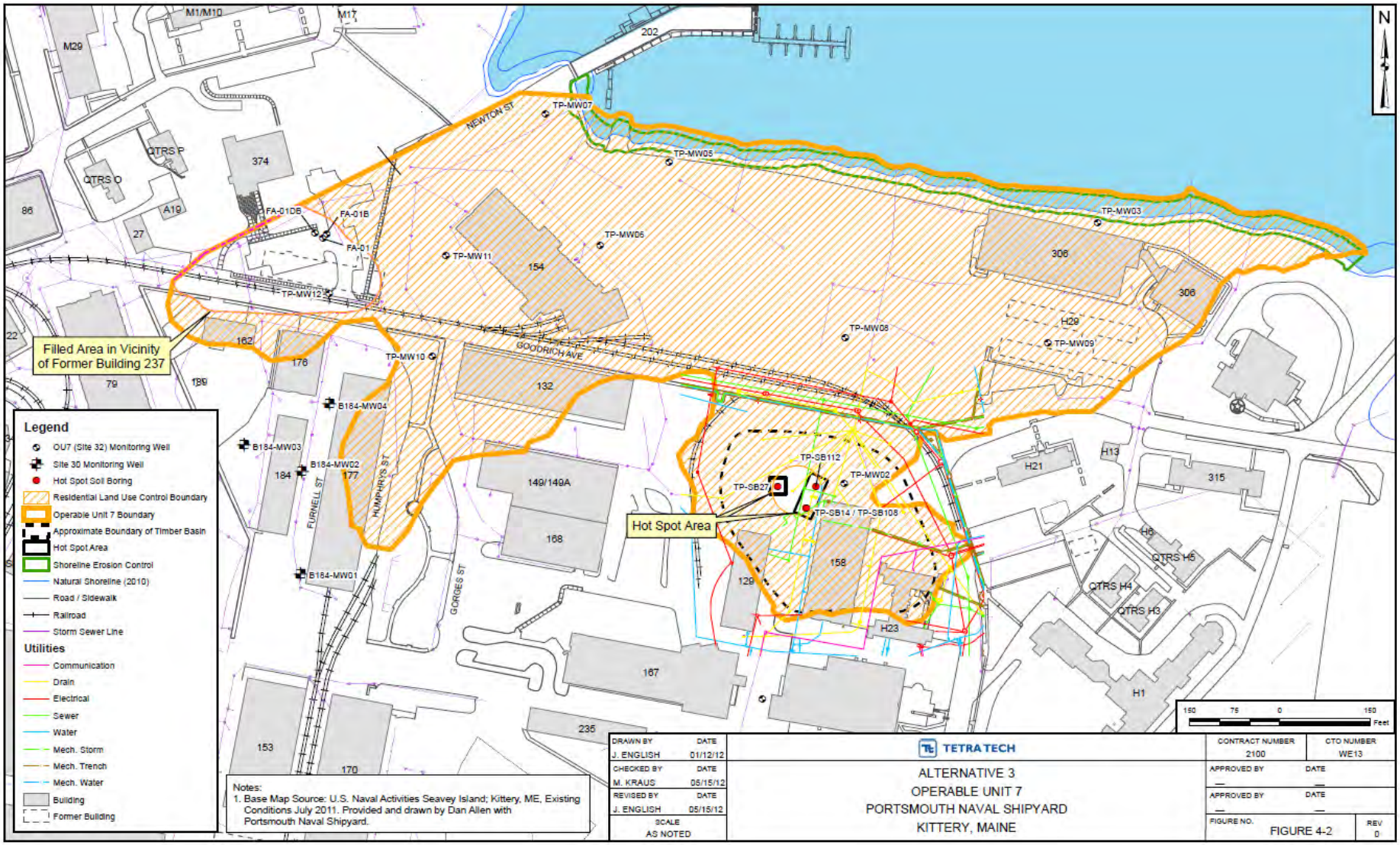
Alternative 3 – Hot Spot Removal, LUCs, and LTMgt

- Excavate soil in area surrounding TP-SB27, TP-SB112, and TP-SB14/108 with elevated levels of lead, PCBs, and dioxins/furans in the former timber basin.
- Off-site disposal of an estimated 200 cubic yards of soil, backfill excavation with clean soil, and restore excavated area to pre-construction conditions.
- LUCs and LTMgt
  - Implement LUCs to prevent residential exposure to subsurface soil, and maintain shoreline stabilization features to prevent erosion.
  - Prepare the LUC RD to provide the requirements for inspection, maintenance, responsible organizations, and management of excavated soil as part of any future construction activities.
  - Prepare a LTMgt plan to specify inspection activities for LUCs and shoreline controls.
- Five-Year Reviews are required because contamination remains in excess of levels that allow for unlimited use and unrestricted exposure.

Alternative 3 – Hot Spot Removal and LUCs



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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.

Detailed Analysis Criteria (continued)

- Balancing Criteria…Used to Identify major tradeoffs
  - Cost.
- Modifying Criteria… Assess after the public comment period as part of the proposed plan.
  - Regulatory Acceptance.
  - Community Acceptance.

Description of Remedial Alternatives			
Alternative	**Alternative 1 No Action**	**Alternative 2 LUCs and Long-Term Management**	**Alternative 3 Hotspot Removal, LUCs, and Long-Term Management**
Estimated Time Frame (months)			
Designing and Constructing the Alternative	N/A	12	12
Achieving the Cleanup Objectives	N/A	12	12
Criteria Analysis			
Threshold Criteria			
Protects Human Health and the Environment	○	●	●
Meets federal and state regulations	N/A	●	●
Primary Balancing Criteria			
Provides long-term effectiveness and is permanent	○	◐	●
Reduces mobility, toxicity, and volume of contaminants through treatment	○	○	○
Provides short-term protection	N/A	●	●
Can it be implemented	N/A	●	◐
Cost ($)	$0	$15,000 capital 30-year NPW: $381,000	$814,000 capital 30-year NPW: $1,179,000
Modifying Criteria			
State Agency Acceptance	To be determined after the public comment period on the Proposed Remedial Action Plan.		
Community Acceptance	To be determined after the public comment period on the Proposed Remedial Action Plan.		
Relative comparison of the nine balancing criteria and each alternative: ● – Good , ◐ – Average, ○ – Poor; N/A – not applicable;			

TETRA TECH

Next Steps

- Receive and resolve comments with regulators and finalize the FS.
- Focus in on a preferred remedial alternative for OU7.
- Prepare a Proposed Remedial Action Plan (PRAP) for public review.
- Develop and sign the Record of Decision (ROD).
- Implement the selected/approved Remedial Action.

Questions

Questions?