DON Portfolio Optimization Initiative for Installation Restoration Program Sites

Presented to FRTR
Rockville, MD

NAVFAC HEADQUARTERS

November 6, 2014
OUTLINE

- Background
- Objectives and Teams
- Approach
- Progress
- Questions
As of June 2013 under IRP:

• 437 sites are in or started the RAO stage (Phase 6) or LTM stage (Phase 7)
• Of 437 sites, 278 sites are projected not meeting the RC goal of 09/30/2021
• Projected RC dates are between 2021 and 2061; CTC FY13-25 in present $ = $746million (M) ~ average annual cost of $57.4M
Objectives

• Improve compliance with FY 21 RC goal within IRP
• Improve resource utilization efficiency
  - Better and more appropriate use of innovative approach and/or technologies
  - Cost efficiency
  - Lower residual risks
  - Acceptable by regulatory and state stakeholders
  - Better handle of CTC

Teams

CORE TEAM
- NAVFAC HQ, LANT, PAC, and EXWC

FOCUSED/FUNCTIONAL TEAMS
- In house and external experts
- Led by NAVFAC; leads are determined by Core Team
- To simplify and focus the optimization effort
• Milestone 1 - Preliminary Data Evaluation
• Milestone 2 - Create Focused Optimization Categories and Preliminary Prioritization Strategy for Each Category
• Milestone 3 - Form the Team of Experts for Each Focused Category
• Milestone 4 - Detailed Optimization
• Milestone 5 - Implementation Phase
MILESTONE 1 – PRELIMINARY DATA EVALUATION

• Objective: Develop category and preliminary list of sites targeted for the IRP Optimization Effort based on the NORM data query and the additional information and verification provided by the RPMs.
Step 1 - Create Preliminary Sites List

Criteria:

1. Site population: IRP sites from EOY13 NORM data submit that are on or started Phase (P) 4, 5, 6, or 7 in FY13
2. Compliance with 09/30/21 RC Date
3. Annual and total costs and duration of P 4-7
4. Ratio of (P4&5)/(P6&7) costs

Results:

- 80 Candidate Sites: 7 in Hawaii, 1 in LANT, 39 in MIDLANT, 17 in NW, 8 in SE, 2 in SW, and 4 in WASH
Step 2 - Refine Step 1 Using Inputs from ER Managers and RPMs

Analysis Criteria:
1. Technologies
2. Contaminants
3. Presence of RODs

Results:

• Preliminary focus sites categories
  • Category 1: Containment and P&T Sites
  • Category 2: ISB, MNA/MNR Sites
  • Category 3: Capping, LTM, LUC Sites
  • Category 4: Non-bio Treatment Sites
  • Category 5: Future Remedy Sites (to be tie in with the Revamped RAA process)
Sites Grouping Analysis

IRP Sites Optimization - Consolidated Grouping By Technology

- Number of Sites
- Cost to Complete ($M)

<table>
<thead>
<tr>
<th>Technology</th>
<th>OOI</th>
<th># Sites</th>
<th>OOE</th>
<th>P4+5TC ($M)</th>
<th>P6+7TC ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P&amp;T/Containment</td>
<td>14</td>
<td>$225</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISB, MNA/MNR</td>
<td>$12</td>
<td>21</td>
<td>$98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capping, LTM/LUC</td>
<td>$1</td>
<td>20</td>
<td>$62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Bio Treatment</td>
<td>$3</td>
<td>14</td>
<td>$49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Remedy TBD</td>
<td>$39</td>
<td>10</td>
<td>$285</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### MILESTONE 1 – PRELIMINARY DATA EVALUATION

**Site Grouping Analysis - By Technology & Presence of ROD**

<table>
<thead>
<tr>
<th>Category by Technology</th>
<th>Total # Sites</th>
<th># No ROD Sites</th>
<th>P4+5 TC ($M)</th>
<th>No ROD P4+5 TC ($M)</th>
<th>P6+7 TC ($M)</th>
<th>No ROD P6+7 ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P&amp;T/Containment</td>
<td>14</td>
<td>1</td>
<td></td>
<td></td>
<td>$225</td>
<td>$23</td>
</tr>
<tr>
<td>ISB, MNA/MNR</td>
<td>21</td>
<td>2</td>
<td>$12</td>
<td>$3</td>
<td>$98</td>
<td>$14</td>
</tr>
<tr>
<td>Capping, LTM/LUC</td>
<td>20</td>
<td>4</td>
<td>$21</td>
<td>$12</td>
<td>$92</td>
<td>$18</td>
</tr>
<tr>
<td>Non Bio Treatment</td>
<td>14</td>
<td>4</td>
<td>$3</td>
<td>$2</td>
<td>$49</td>
<td>$10</td>
</tr>
<tr>
<td>Future Remedy TBD</td>
<td>10</td>
<td>8</td>
<td>$39</td>
<td>$19</td>
<td>$280</td>
<td>$13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>79</strong></td>
<td><strong>19</strong></td>
<td><strong>$75</strong></td>
<td><strong>$35</strong></td>
<td><strong>$744</strong></td>
<td><strong>$77</strong></td>
</tr>
<tr>
<td><strong>% Total</strong></td>
<td><strong>24%</strong></td>
<td></td>
<td><strong>47%</strong></td>
<td></td>
<td><strong>10%</strong></td>
<td></td>
</tr>
</tbody>
</table>
IRP Sites Optimization - Grouping by Technology & Contaminant

Number of Sites

- P&T/Containment: 3 BTEX, Petroleum, 3 Chlorinated Organics, 2 PAHs/PCBs, 2 Metals, 1 Pesticides, 2 Multiples
- ISB, MNA/MNR: 1 BTEX, Petroleum, 2 Chlorinated Organics, 1 PAHs/PCBs, 1 Metals, 1 Pesticides, 1 Multiples
- Capping, LTM/LUC: 2 BTEX, Petroleum, 1 Chlorinated Organics, 1 PAHs/PCBs, 1 Metals, 1 Pesticides, 1 Multiples
- Non Bio Treatment: 1 BTEX, Petroleum, 2 Chlorinated Organics, 1 PAHs/PCBs, 1 Metals, 1 Pesticides, 1 Multiples
- Future Remedy TBD: 1 BTEX, Petroleum, 1 Chlorinated Organics, 1 PAHs/PCBs, 1 Metals, 1 Pesticides, 1 Multiples

11/3/2014
MILESTONE 1 – PRELIMINARY DATA EVALUATION

• **Recommended Focused Categories:**
  - Considered based on technologies, contaminants and presence of ROD factors
    - Category 1: Containment and P&T Sites
    - Category 2: ISB, MNA/MNR Sites
    - Category 3: Capping, LTM, LUC Sites
    - Category 4: Non-bio Treatment Sites
    - Category 5: Future Remedy Sites (to be tied in with the Revamped RAA process)

• **Prioritization Strategy:**
  - Phase 1 (FY15/16): Proceed with Categories 1 and 2 and form the Focus Team for each category; within each category, emphasize the No-ROD sites
  - Phase 2 (FY16/17): Similar to Phase 1, proceed with Categories 3 and 4
  - Revamp the RAA process to capture Category 5 (FY15 and beyond)
Objective: Focus, simplify, and prioritize the tasks by categorizing the sites from Milestone 1.

- Common prioritization strategy across the focused categories includes cost efficiency (% reduction in CTC), schedule acceleration, site complexity (i.e., technical challenges, NPL vs. non-NPL), and regulatory challenges.
Focus Category 1: Pump and Treat/Containment

![Graph showing the costs of pump and treat/containment projects over time.]

- **P4-7 CTC ($M)**: Costs are represented on the y-axis, ranging from 0 to 40 million dollars.
- **RC Date**: The x-axis represents the years from 1990 to 2060.

Projects listed include:
- Cherry Point UST 22
- Norfolk NPS UST 1
- Norfolk NB Site 22
- ABL Site 1
- Bedford Site 10
- Calverton Site 3
- Bremerton Site 200
- Barstow Site 204
- McChord SWM 5

The graph illustrates the projected costs and RC dates for these projects.
Focus Category 2: In Situ Bio and MNA/MNR Sites

![Graph showing P4-7 CTC ($M) vs. RC Date for various sites.](image_url)
Milestone 3 and Milestone 4

**Milestone 3: Form Team of Experts for Each Focused Optimization Category**
Outcome:
- Final Focused Teams

**Milestone 4: Detailed Optimization**
Outcome:
- Final findings and recommendations that identify critical measures of success
- Identify approach for practical field implementation

**Step 6**
Recommend in-house and external experts as focused team members

**Step 7**
Procure external experts

**Step 8**
Develop detailed optimization strategy for each focused category

**Step 9**
Implement the detailed strategy

**Step 10**
Develop findings and recommendation

Obtain inputs and buy in from Core Team and ER Managers

Obtain buy in from Core Team and ER Managers
Milestone 5 - Implementation Phase

Objective: To implement the recommendations of the optimization effort and measure the field progress and accomplishments.

Step 11
Tailor and prioritize based on resource and FEC constraints

Step 12
Present progress periodically

Collaborate with Core Team, ER Managers, and RPMs

Milestone 5: Implementation Phase
Outcome:
• Measureable results at the FEC levels