Remediation of the RVSD Property at 2000 Larkspur Landing Circle:

Updated Work Plan, Cost Estimate, and Implementation Actions

(March 15th 2017)
Introduction

- Update on Project Activities
- Review of Initial Site Conceptual Model
- EPA Consultations
- Site Characterization and Refined Model
- Remediation Process Overview
- Opinion of Probable Construction Cost
- CEQA Update and Schedule for Completion
- Q&A, Discussion
Update on Project Activities

- **September 2016**: Develop Site Characterization Work Plan for EPA Approval
- **Oct-Dec 2016**: Implement the Site Characterization
- **December 2016**: Initiate the CEQA Process
- **Feb-Mar 2017**: Update EPA Application for Cleanup (i.e. the Remediation Work Plan)
Review of Initial Site Conceptual Model
(Former WWTP Demolition Limits)
Review of Initial Site Conceptual Model
(Backfill Limits)
This initial model of the Site has been refined based upon the results of the site characterization work performed in the Winter of 2016.
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Site characterization implemented with following key objectives:

- Determine limits of debris and soil removal
- Collect in-place verification samples to confirm those limits to the satisfaction of EPA.
- Characterize the waste for disposal (quality and quantity)

Meeting these objectives supports contracting for implementation of the cleanup

- Approximately 500 boring locations with 1,800 samples
- Bore hole logging, chemical analysis, 3D modeling
Site Characterization Areas

- Site Boundary
- Limits of Construction Backfill
- Sidewalk Area
- Drainage Swale
Characterization Results (Sidewalk Area)

PCBs not detected
Characterization Results (Drainage System)

No PCBs in Catch Basins

Shallow swale impacts
Characterization Results
(Demolition Debris Deposits)

- Deposits distinct from other fill material.
- Deposits generally not as laterally extensive as anticipated.
- Deposits not as thick as anticipated.
Characterization Results
(Demolition Debris Deposits, cont’d)
Characterization Results
(Import Fill)

- Soil impacts more extensive laterally than anticipated.
- Soil impacts at various depths, including the surface.
- Very low levels of PCBs confirmed
Refined Site Conceptual Model
(Representative Cross Section)

- **Import Fill:** Silt, gravel, trace amount of concrete gravel
- **New Ground:**
  - Surface following
  - Recent Grading:
    - Silt, sand, sandy silt
- **Remedial Excavations:**
  - Fill composed mainly silt, gravel, or silty sand
- **Demolition Backfill (Crushed Concrete)**
- **Pre-Demolition Fill:**
  - Silt, fine rounded gravel, fine sand, clay
- **Demolition Backfill (Crushed Concrete)**

Kennedy/Jenks Consultants
Remediation Process Overview

• Prepare remediation contract documents for bidding and select contractor.
• Prepare site for earthwork and hauling operations.
• Excavate demolition debris and PCB-impacted soils and load directly to trucks for offsite disposal.
• Backfill with clean imported material, regrade, and restore the site.
• Obtain “no further action” determination from EPA.
Excavation Plan

These limits represent approximately 40,000 cy (50% increase)
Remediation Sequence

1. Site Preparation and Layout Limits of Excavation
2. Excavate, Direct Load, and Off Haul Soil and Debris
3. Restoration Backfill with Clean Import and Stabilize the Site
## Opinion of Probable Construction Cost

<table>
<thead>
<tr>
<th>Activity</th>
<th>Opinion of Cost</th>
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<tbody>
<tr>
<td>Mobilization/Demobilization</td>
<td>$160,000</td>
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<tr>
<td>Site Preparation (clear and grub, site security)</td>
<td>$160,000</td>
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<tr>
<td>Debris and Soil Removal (profiling, excavation, off-hauling, disposal)</td>
<td>$3,800,000</td>
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<tr>
<td>Site Restoration (import, backfill, grading, seeding)</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Construction Mitigation Measures (traffic, storm water, dust, etc.)</td>
<td>$933,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$6,520,000</strong></td>
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- These are planning level costs and are developed to minus 30% to plus 50% accuracy.
- These costs have not been developed based on engineering designs, but rather represent a general opinion of cost based on estimates from similar projects, standard costing guidance documents, and professional judgement.
- Excluded from estimate are soft costs, such permitting, engineering, construction management, contract compliance, bonds, insurance, and other administrate fees.
- 20% Contingency included.
CEQA Update and Project Schedule

• Jan-Mar 2017: Draft Cleanup Plan and CEQA IS/MND Prepared
• Apr 2017: Draft Cleanup Plan Submitted to EPA
  CEQA IS/MND submitted for public review
• Apr-Jun 2017: Remedial Design
• May 2017: EPA Cleanup Plan Approval
  CEQA IS/MND public review concludes
• Jun 2017: Board hearing on Approval of CEQA IS/MND
• Jul-Dec 2017: Remediation Work Complete
• Quarter 1 2018: Parcel clear for unrestricted future land use.
QUESTIONS, ANSWERS, DISCUSSION....