



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)



 Site Boundary

 Limits of WWTP Demolition

 Location of Demolished Structure (Approximate)

Review of Initial Site Conceptual Model (Backfill Limits)

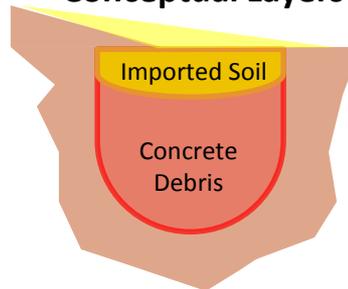


 Site Boundary

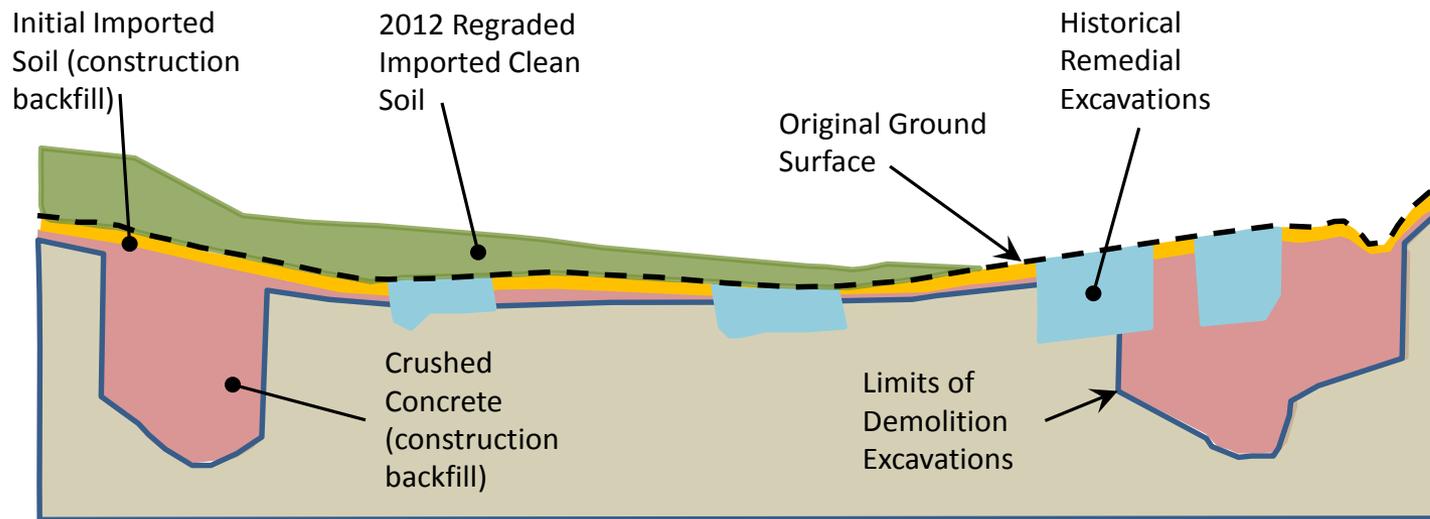
 Limits of Construction Backfill
(Initial Imported Soil & crushed concrete)

 2012 Regraded Area

Conceptual Layers

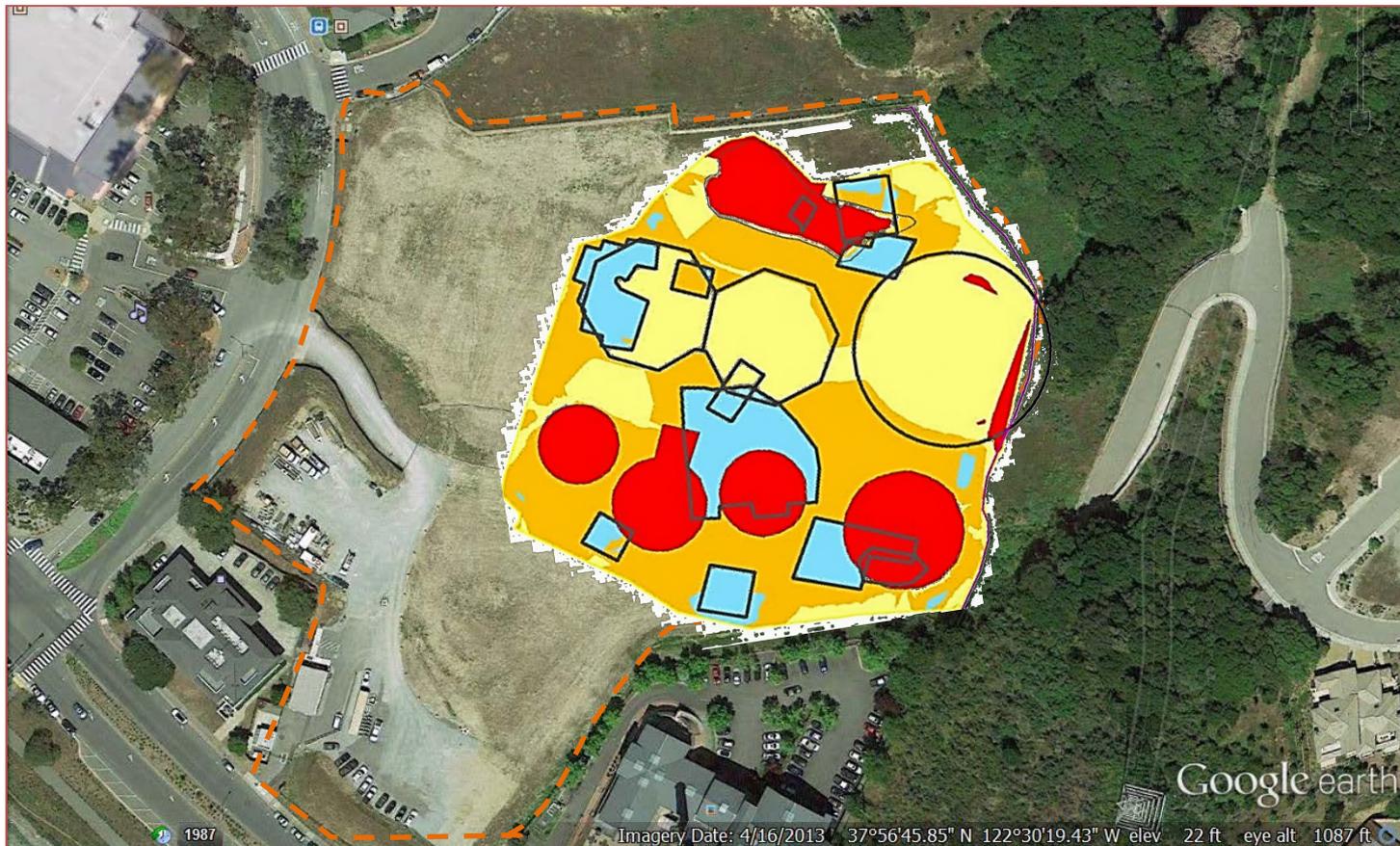


Review of Initial Site Conceptual Model (Representative Cross Section)



This initial model of the Site has been refined based upon the results of the site characterization work performed in the Winter of 2016.

Review of Initial Site Conceptual Model (Impacted Areas)



- Site Boundary
- Historical Remedial Excavations
- Construction Backfill 0-2 ft
- Construction Backfill 2-4 ft
- Construction Backfill 4-20 ft

This initial model of the Site has been refined based upon the results of the site characterization work performed in the Winter of 2016.

2016 Site Characterization

- 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

Sample Collection



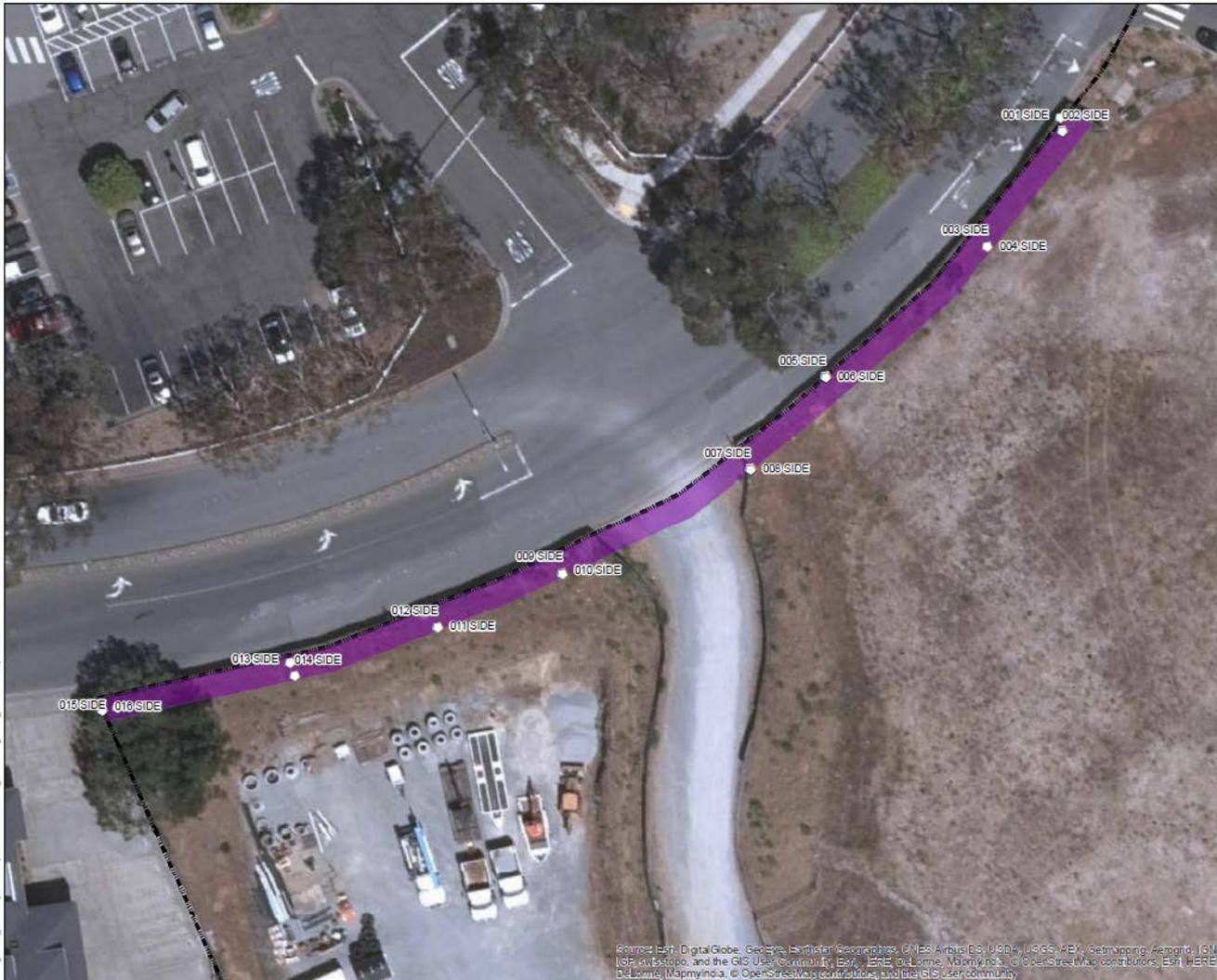
Legend

- Sidewalk and Swale Surface and Near Surface Sample Locations
- Grid Boring
- Interior Perimeter Boring
- ◆ Perimeter Boring
- Approximate Property Boundary

2016 Borings

- Grid Boring
- Interior Perimeter Boring
- ◆ Perimeter Boring

Characterization Results (Sidewalk Area)



Legend

-  Sidewalk Surface and Near Surface Sample Locations
-  Conceptual Sidewalk (8 ft wide)
-  Approximate Property Boundary



PCBs not detected

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Characterization Results (Drainage System)



Legend

2016 Samples

- Max Total PCBs Below 0.24 mg/kg (Includes detects and non-detects)
- Max Total PCBs Equal to or Exceeds 0.24 mg/kg

Historical Samples

- ⊕ Total PCBs Below 0.24 mg/kg (Includes detects, non-detects, and locations without data)
- ⊕ Total PCBs Equal to or Exceeds 0.24 mg/kg
- ◆ Questa Excavation J, K, and H Confirmation Samples Exceeding 0.24 mg/kg
- ◆ Questa Excavation G Confirmation Samples Exceeding 0.24 mg/kg

Maximum Extent of Swale (20 ft wide)



Characterization Results

(Demolition Debris Deposits)



Legend

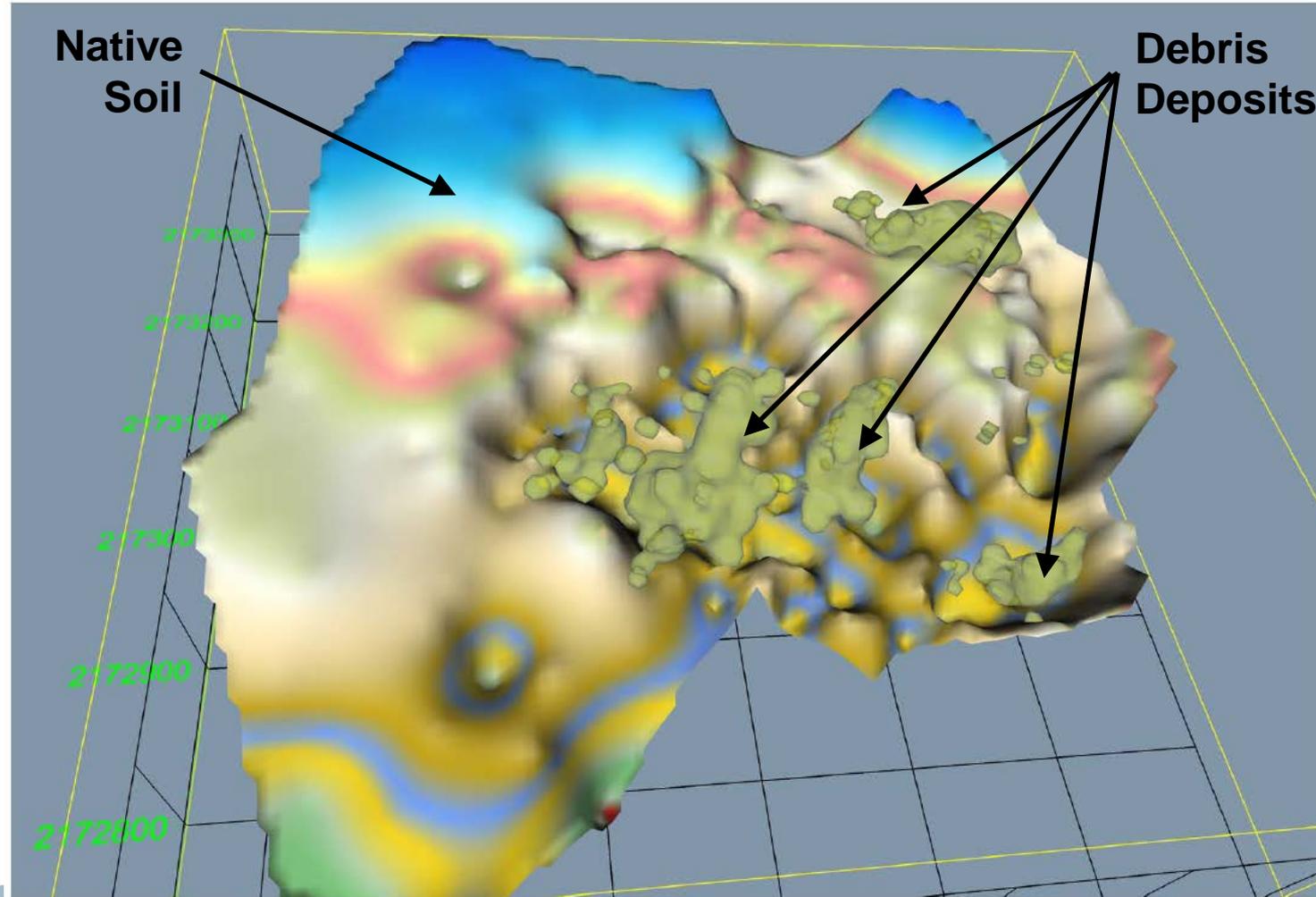
-  Demolition Backfill Encountered In 2016 Boring
-  2016 Boring Location
-  Sidewalk and Swale Surface and Near Surface Sample Locations
-  Approximate Property Boundary



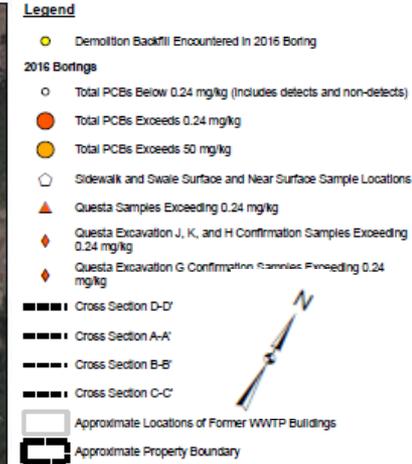
- Deposits distinct from other fill material.
- Deposits generally not as laterally extensive as anticipated.
- Deposits not as thick as anticipated.

Characterization Results

(Demolition Debris Deposits, cont'd)

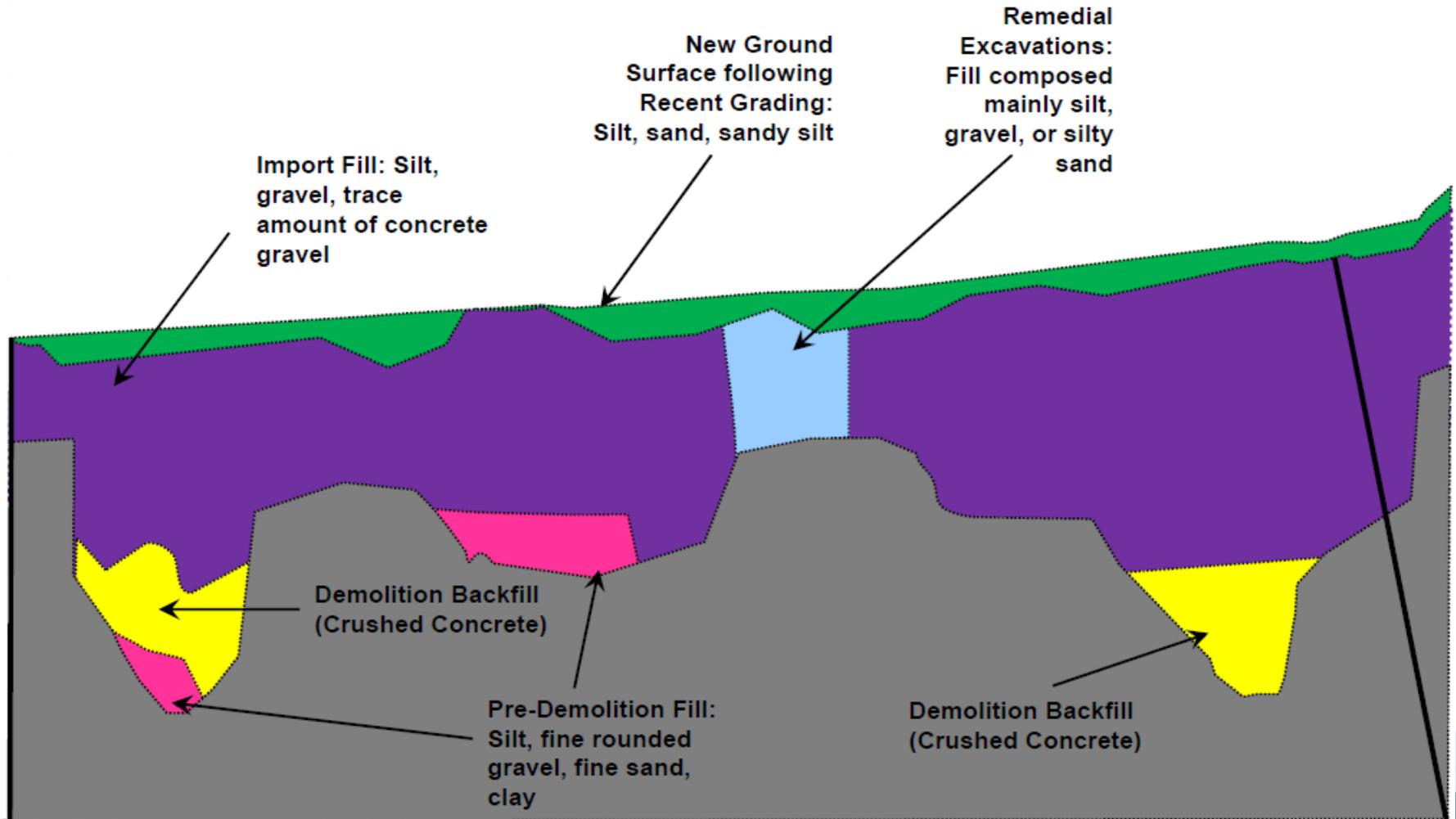


Characterization Results (Import Fill)



- Soil impacts more extensive laterally than anticipated.
- Soil impacts at various depths, including the surface.
- Very low levels of PCBs confirmed

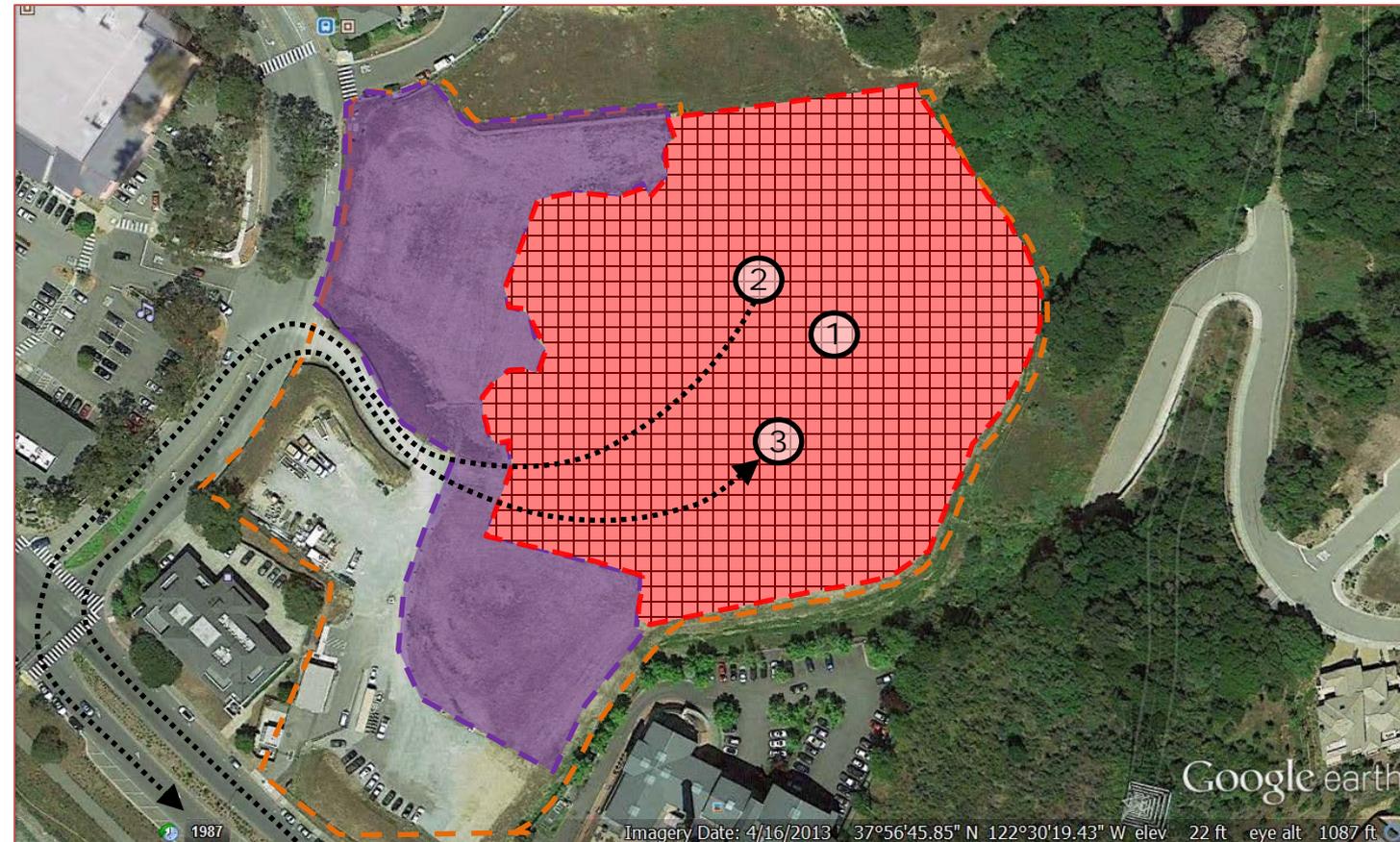
Refined Site Conceptual Model (Representative Cross Section)

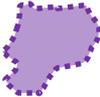
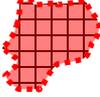


Remediation Process Overview

- 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.

Remediation Sequence



-  Site Boundary
-  Loading and Off Haul Operation
-  Excavation Area

-  Site Preparation and Layout Limits of Excavation
-  Excavate, Direct Load, and Off Haul Soil and Debris
-  Restoration Backfill with Clean Import and Stabilize the Site

Opinion of Probable Construction Cost

Activity	Opinion of Cost
Mobilization/Demobilization	\$160,000
Site Preparation (clear and grub, site security)	\$160,000
Debris and Soil Removal (profiling, excavation, off-hauling, disposal)	\$3,800,000
Site Restoration (import, backfill, grading, seeding)	\$1,500,000
Construction Mitigation Measures (traffic, storm water, dust, etc.)	\$933,000
Total	\$6,520,000

- 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 as permitting, engineering, construction management, contract compliance, bonds, insurance, and other administrative 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....**