

Site Development Strategy Former Service Station 1125 Mandela Parkway, Oakland, California

May 3, 2016

Site Description and Background

- 10,000 SF² vacant, unpaved parcel located at the southwest corner of 12th Street and Mandela Parkway in Oakland, California;
- 1957 to approximately 1969 former service station;
- No documented UST removal on file;
- 1999 Magnetometer Survey - no evidence of buried USTs;
- 1973 Purchased by current owner Thompson with former address 1409-1417 12th Street;

Site Description and Background (Cont.)

- Property zoned RM2 (Mixed Housing Residential) with City of Oakland, but code 4000 (Vacant Industrial) with Alameda County;
- 1999-2008 Site characterizations show elevated levels of TPH in soil and groundwater;
- 2008-2011 Dual Phase Extraction (DPE) pilot test and operation of DPE system;
- 2013/2014 Confirmation sampling shows residual TPHg and EX in soil in two approximately 30x30 foot areas in NE quadrant and west central area;
- 2014 LTCP Closure by ACEH for commercial use;
- Wells destroyed 2015.

Site Geology/Hydrogeology

- Sandy clay fill to 3 feet bgs;
- At depths between 3 feet and 20 feet bgs, subsurface materials consist of poorly graded silty sand; and
- Groundwater is first encountered at depths between approximately 11.5 to 13 feet bgs.
- GW Flow direction to the northwest is pretty consistent.

Site Contaminants of Concern

- In Soil (October 2013)
 - Primary COC is TPHg and EX
 - Max TPHg = 98 mg/kg (CSB-1 @ 10')
 - Max E = 0.0064 mg/kg (CSB-1 @ 7')
 - Max X = 0.051 mg/kg (CSB-1 @ 12')

- In Soil Vapor (August 2012)
 - Primary COC is Benzene
 - Max = <0.68 µg/M³ (CSV-1To CSV-6)

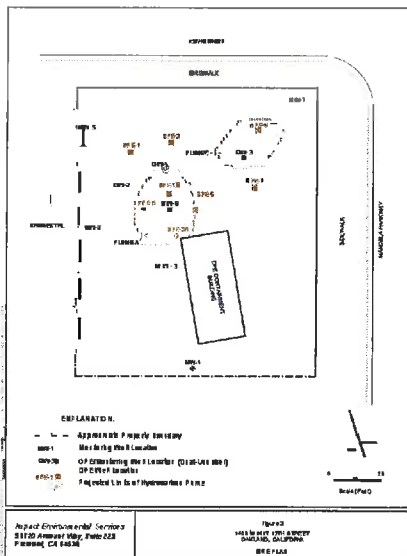
- In Groundwater (January 2013)
 - Primary COC is TPHg and Benzene
 - Max TPHg = 120 µg/L (DPE-3)
 - Max Benzene = 5.3 µg/L (DPE-3)

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Site Contaminant Summary

- Soil
 - TPHg and EX in two localized areas in NE and NW-central area of Site, but below ESLs as of October 2013
- Soil Vapor
 - No Benzene concentration exceeding 0.68 µg/M³
 - (ESL = 48 µg/L)
- Groundwater
 - Benzene at 5.3 µg/L in NW area of Site (ESL = 1.0 µg/L)
 - No offsite migration of contaminants

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ACEH Closure Status

- ACEH Conclusions
 - Soil vapor considered low risk within upper 5 feet;
 - Impacted soil remains between 5 and 10 feet bgs;
 - Subsurface structures would require further soil vapor evaluation;
 - Domestic wells prohibited.
- April 2015 ACEH Closure
 - Land use restricted to commercial/industrial;
 - ACEH can re-evaluate upon receipt of approved plans.

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Development Objectives

- Current Zoning Status
 - City of zones the site residential
 - County zones the site as commercial
- Residential Development Desired
 - Will ACEH re-evaluate current commercial restriction?
 - Mixed retail/residential option

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Development Approaches

- Options for the mitigation of potential environmental risks associated with direct contact.
 - Construct ground floor residential on the south and southeast areas, avoiding the known contaminated areas;
 - Install passive sub-slab vapor venting system with "liquid boot" type membrane beneath structures;
 - Construct podium style residential with parking below;
 - Construct ground floor retail with residential above;
 - Allow off-gassing of potential vapor in areas with no structure

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Construction Phase SMP

- Site Mitigation Plan to address construction oversight, soil profiling, sampling of suspect soil, and provide input on construction worker HASP to developer;
- SSVS—if installed—documentation and verification testing; and
- Post construction phase documentation report

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