

March 25, 2009

Project 130880

Caltrans 04A2902, Task Order 1



RECEIVED

1:47 pm, Apr 06, 2009

Alameda County
Environmental Health

A World of **Solutions**[™]

Alameda County Environmental Health Services
Local Oversight Program
Attn: Mr. Steven Plunkett
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: UST Case RO0000503, Global ID T0600102133
Former Caltrans Maintenance Station, 3465 Ettie Street, Oakland, California

Dear Mr. Plunkett:

On behalf of the California Department of Transportation (Caltrans), Shaw Environmental, Inc. (Shaw) has prepared this submittal regarding the above referenced site.

Caltrans reviewed their projects files and provided all available data for the site to Shaw for review. In addition, Shaw performed a review of electronic files available through the Alameda County Online Local Oversight Program Records website. Based on our review of the above files, Shaw has prepared the enclosed Request for Case Closure.

Assuming you and the Regional Water Control Board approve this request for case closure, there should be no need for additional field activity; records indicate that all groundwater monitoring wells associated with the site were previously destroyed.

We look forward to working with you to complete the closure of this case. If you have any questions regarding this submittal, please contact me at 408.573.5975.

Sincerely,

Shaw Environmental, Inc.

A handwritten signature in black ink that reads "Andrew D. Lehane". The signature is fluid and cursive, written over a light grey rectangular background.

Andrew D. Lehane
Project Manager



A World of **Solutions**[™]

Alameda County Environmental Health Services
Local Oversight Program
Attn: Mr. Steven Plunkett
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Request for Case Closure, UST Case RO0000503, Global ID T0600102133
Former Caltrans Maintenance Station, 3465 Ettie Street, Oakland, California

Dear Mr. Plunkett:

On behalf of the California Department of Transportation (Caltrans), Shaw Environmental, Inc. (Shaw) has prepared this submittal in order to provide a detailed narrative for the case closure request. This letter summarizes previous groundwater and soil investigation results and presents the rationale for a low-risk case closure based on the Oakland-specific, risk-based corrective action (RBCA) standards.

Site Background

The site is located at 3465 Ettie Street, Oakland, California, directly under an overpass structure for Interstate 580 (Figure 1). The former maintenance station is located in northwest Oakland, approximately ½-mile southeast of San Francisco Bay and ¼-mile south of the Emeryville city limit. It was built in 1959 and is owned by Caltrans; the maintenance station is currently inactive. The property is approximately 240 feet wide and 480 feet long, covering an area of about three acres.

On October 19 and 20, 1995, two underground storage tanks (USTs) and ancillary piping, vent lines, dispenser islands, and fill ports were removed from the site and disposed off-site. Soil and groundwater samples collected at the time of the USTs removal indicated the presence of total petroleum hydrocarbons quantified as diesel (TPH-d) and waste oil range hydrocarbons.

On February 8, 1996, soil and groundwater samples were collected by Tetra Tech from two borings advanced down-gradient from the former USTs and dispensers. Detectable concentrations of total petroleum hydrocarbons quantified as oil (TPH-o) as high as 1,200 milligrams per kilogram (mg/kg) were detected in the soil samples, while the groundwater samples contained detectable concentrations of TPH-o as high as 2,300 milligrams per liter.

An additional investigation of the site area was conducted by PSI in February and March 1996 for seismic retrofitting of the freeway columns and bents. PSI drilled over 100 borings in the general area with four of the borings (BM-29 through BM-32) being adjacent to the bents at the subject site. Soil samples were collected at 0.5, 1, 2, and 5 feet below ground surface (ft bgs). The soil samples from borings BM-29 and BM-30 were analyzed for selected metals, BTEX, and total recoverable petroleum hydrocarbons (TRPH). The soil samples from borings BM-31 and BM-32 were analyzed for selected metals, BTEX, total petroleum hydrocarbon quantified as gas (TPH-g), TPH-d, and TRPH. The results of the soil analyses indicated that two soil samples from these four borings had soluble lead concentrations greater than the soluble threshold limit concentration (STLC) for lead (5 mg/L). These samples were collected at 2 ft bgs in boring BM-30 and at 1 ft bgs in boring BM-32. None of the organic compounds were detected with the exception of TRPH. TRPH concentrations ranged from non-detect to 400 mg/kg. The conclusion of the PSI report stated that there was no correlation between lead and TRPH concentrations and their spatial distribution (PSI *Report for Caltrans Distribution Structure*, April 4, 1996).

Subsequent soil and water investigations were performed by PSI in July 1997. Five borings were completed by PSI at the former USTs excavation location and the immediate vicinity; four of those borings were converted to groundwater monitoring wells (i.e., MW-1, MW-2, MW-3, and MW-4). Analytical results for soil samples collected in 1997 were non-detect for all constituents except for total oil and grease (TOG), with concentrations ranging from 10 mg/kg to 5,200 mg/kg, however, only two soil samples (B4 and B6 at 5 ft bgs) had reported TOG concentrations over 100 mg/kg.

Groundwater samples collected in September 1997 were non-detect for all constituents in well MW-2. Benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected at 1.1, 0.5, 1.2, and 1.4 micrograms per liter (ug/L), respectively in well MW-1. Methyl tert-butyl ether (MTBE) was the only detected constituent in well MW-3, at a concentration of 118 ug/L.

Subsequent quarterly groundwater monitoring and sampling events were performed in December 1997 and March 1998. MTBE was the only detected constituent in the two additional sampling events, ranging between 29 and 100 ug/L. The groundwater monitoring wells were subsequently destroyed; there are no remaining wells at the site.

Site Lithology and Hydrogeology

Soil types encountered were reported to consist primarily grayish brown gravel in the upper 3 feet of soil. The gravel was underlain by yellowish brown gravelly clay to about 7 ft bgs, which was underlain by black "Bay Mud" clay. The black "Bay Mud" clay continues from 7 ft bgs to the depth of the borings explored.

Groundwater in the vicinity of the site is found at sea level near the shore and roughly follows the topography in higher areas. Groundwater levels may be tidally influenced due to the proximity to San Francisco Bay, located approximately ½-mile to the northwest. Groundwater closest to the surface is believed to be present in an unconfined water table aquifer, with groundwater flow generally west and northwest towards the bay at a hydraulic gradient of approximately 0.01. During the 1997 site investigations, groundwater was encountered at about 11 ft bgs. Depth to water varies between 7.13 to 8.23 ft bgs in the three quarterly sampling events performed from September 1997 to March 1998.

City of Oakland RBCA Standards

Shaw has evaluated the site following the guidance for low-risk site closure set forth in the Oakland Tiered Risk-based Corrective Action (RBCA) Process. The City of Oakland RBCA Eligibility Checklist (see Attachment A) was completed to determine if the site was eligible for comparison with the Tier 1 and/or Tier 2 risk-based screening levels (RBSLs), or whether comparison using Tier 3 site specific target levels (SSTLs) was necessary. Results of the checklist indicate that establishment of Tier 3 SSTLs was necessary for the subject site since the groundwater occurs less than 10 ft bgs, and inhalation of volatilized contaminants of concern (COCs) from groundwater to indoor air or outdoor air is a pathway of concern, but groundwater ingestion is not.

Tier 3 SSTLs were calculated for the site using the “Oakland Risk-Based Corrective Action Spreadsheet” available on the City of Oakland Public Work Agency, Environmental Services Division (PWA) website. Based on the site lithology and hydrogeology, Shaw used the clayey silt input default parameters and the site specific depth to groundwater data to calculate Tier 3 SSTLs. Input parameters and Tier 3 SSTLs values for the subject site are included in Attachments B.

Detected chemical concentrations in previous soil and groundwater samples at the subject site were compared with Tier 3 SSTLs values in Tables 1 to 3. The applied RBSLs and SSTLs were based on viable exposure pathways associated with present and potential future property uses of the subject site. Since shallow-depth groundwater beneath the site is not used for drinking water purposes, the only exposure pathways applicable for the site are indoor and outdoor inhalation risk from groundwater and soil, and direct exposure to soil (i.e. future construction work). Additionally, since the site is underneath Interstate 580, and the surrounding areas are of primarily commercial use, the subject site would be classified as commercial property when using the Tier 1 and Tier 3 tables.

Table 1 shows that the detected concentrations of COCs in groundwater from previous sampling events are all below the Tier 3 SSTLs values for indoor and outdoor inhalation risks. Tables 2 and 3 show that the detected concentrations of COCs in soil

from previous site investigations are also below the Tier 3 SSTLs values for the three different exposure pathways of concern.

Rationale for Case Closure

Shaw has reviewed the available files regarding the site and compared site conditions with the criteria presented in the Oakland Tiered RBCA Process regarding case closure. Based on our review, we believe the site meets the criteria for case closure. More specifically:

- The USTs have been removed and there are no known sources associated with the USTs remaining.
- The site has been adequately characterized through the collection of soil and groundwater samples within the former USTs excavation and the immediate vicinity.
- The site investigations indicate that soil and groundwater impacts are highly localized and stable.
- Groundwater in the vicinity of the site is not likely to be used as a source of drinking water in the foreseeable future.
- All detected chemicals in soil and groundwater are below the Tier 3 SSTLs developed using the software from City of Oakland PWA for the Oakland Tiered RBCA Process.
- In our opinion, there are no known risks to human health or the environment presented by this site.

Disclaimer

This report was prepared under the supervision and direction of the undersigned. The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with Shaw's client. This report is solely for the use and information of Shaw's client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. Shaw is not responsible for the impacts

of any changes in environmental standards, practices, or regulations subsequent to performance of services. Portions of this report were prepared using information supplied by other consultants or contractors employed by the client. Shaw does not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

Caltrans and Shaw appreciate your attention to this request for case closure. Should you have any questions regarding this request, please do not hesitate to contact me at 408.573.5975.

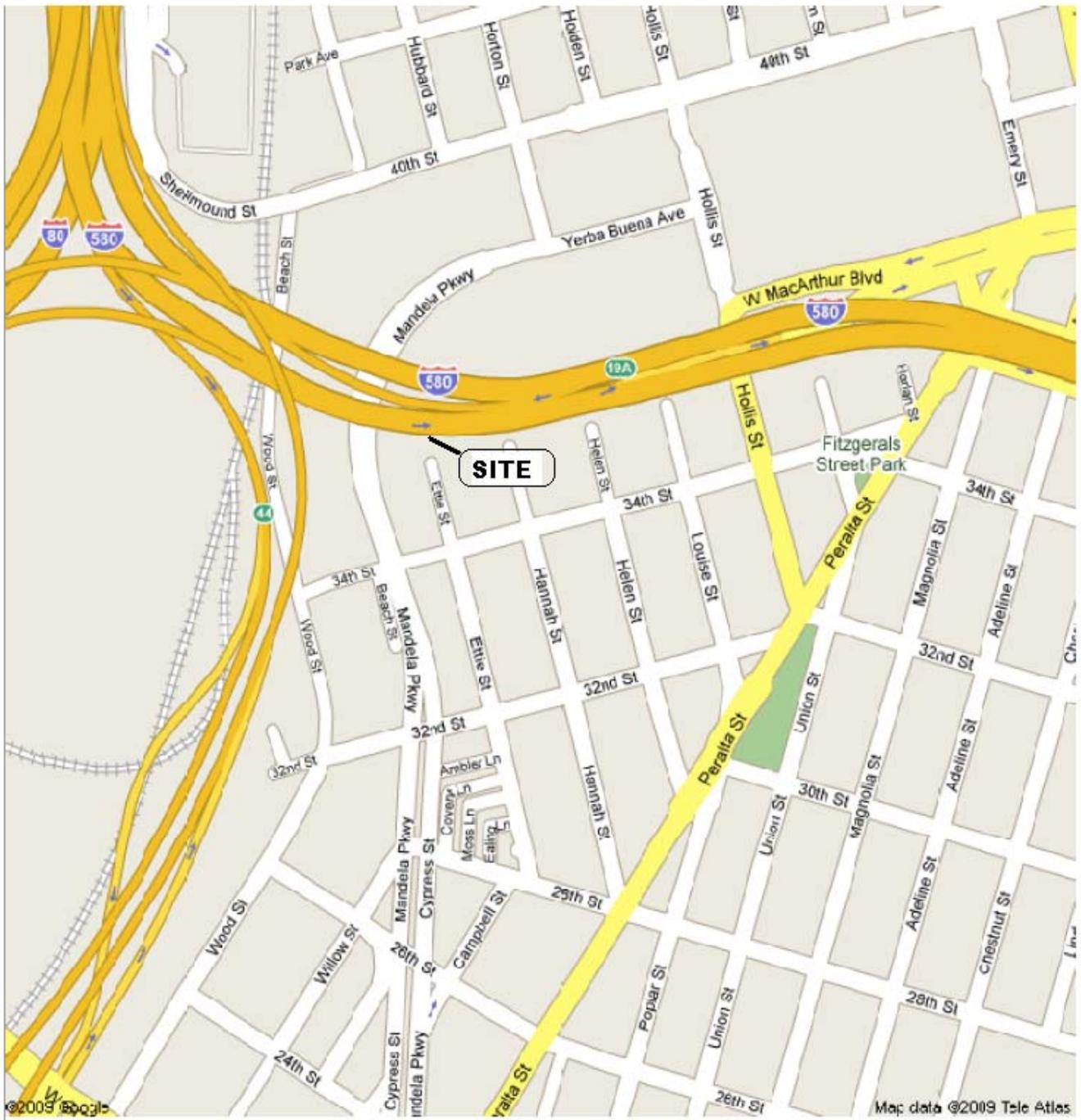
Sincerely,
Shaw Environmental, Inc.



Andrew D. Lehane
Project Manager
RCE 55798

cc: Mr. Ray Boyer, Caltrans
Mr. William Whiteley, Caltrans

Attachments: Figure 1 - Site Location Map
Table 1 - COC Concentrations in Groundwater
Table 2 - COC Concentrations in Soil (Petroleum Hydrocarbons, BTEX,
and MTBE)
Table 3 - COC Concentrations in Soil (Metals)
Attachment A – Completed Oakland RBCA Eligibility Checklist
Attachment B – Tier 3 SSTLs Table



**FIGURE 1 - SITE LOCATION MAP
 FORMER CALTRANS MAINT. STATION
 3465 ETTIE STREET
 OAKLAND, CA 94608**

ATTACHMENT A
COMPLETED OAKLAND RBCA ELIGIBILITY CHECKLIST

Oakland RBCA Eligibility Checklist



The Oakland Tier 1 RBSLs and Tier 2 SSTLs are intended to address human health concerns at the majority of sites in Oakland where commonly-found contaminants are present. Complicated sites—especially those with continuing releases, ecological concerns or unusual subsurface conditions—will likely require a Tier 3 analysis. The following checklist is designed to assist you in determining your site’s eligibility for the Oakland RBCA levels.

CRITERIA	YES	NO
1. Is there a continuing, <i>primary</i> source of a chemical of concern, such as a leaking container, tank or pipe? (This does <i>not</i> include residual sources.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Is there any mobile or potentially-mobile free product?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Are there more than five chemicals of concern at the site at a concentration greater than the lowest applicable Oakland RBCA level?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Are there any preferential vapor migration pathways—such as gravel channels or utility corridors—that are potential conduits for the migration, on-site or off-site, of a volatilized chemical of concern?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Do both of the following conditions exist? (a) Groundwater is at depths less than 300 cm (10 feet) (b) Inhalation of volatilized chemicals of concern from groundwater in indoor or outdoor air is a pathway of concern but groundwater ingestion is <i>not</i> *	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Are there any existing on-site or off-site structures intended for future use where exposure to indoor air vapors from either soil or groundwater is of concern <i>and</i> one of the following three conditions is present? (a) A slab-on-grade foundation that is less than 15 cm (6 inches) thick (b) An enclosed, below-grade space (e.g., a basement) that has floors or walls less than 15 cm (6 inches) thick (c) A crawl space that is not ventilated	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Are there any immediate, acute health risks to humans associated with contamination at the site, including explosive levels of a chemical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Are there any complete exposure pathways to nearby ecological receptors, such as endangered species, wildlife refuge areas, wetlands, surface water bodies or other protected areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*If groundwater ingestion *is* a pathway of concern, the associated Oakland RBCA levels will be more stringent than those for any groundwater-related inhalation scenario, rendering depth to groundwater irrelevant in the risk analysis.

If you answer “no” to all questions, your site is eligible for the Oakland RBCA levels. If you answer “yes” to any of the questions, your site is *not* eligible for the Oakland RBCA levels at this time.

ATTACHMENT B
TIER 3 SSTLS TABLE

Inputs

Input Parameters	Units	Residential		Commercial/ Industrial
		Child	Adult	Worker
Soil-Specific Parameters				
Capillary fringe thickness	cm	=adult residential	152	=adult residential
Capillary fringe air content	cm ³ /cm ³		0.010	
Capillary fringe water content	cm ³ /cm ³		0.49	
Fraction organic carbon (FOC*)	g oc/g soil		0.02	
Groundwater Darcy velocity	cm/yr		6	
Groundwater mixing zone thickness	cm		1524	
Infiltration rate through the vadose zone	cm/yr		3	
Soil bulk density	g/cm ³		1.33	
Soil to skin adherence factor	mg/cm ²	1	1	1
Total soil porosity	cm ³ /cm ³	=adult residential	0.5	=adult residential
Vadose zone air content	cm ³ /cm ³		0.1	
Vadose zone water content	cm ³ /cm ³		0.4	
Vadose zone thickness	cm		92	
Structural and Climatic Parameters				
Areal fraction of cracks in building foundation	cm ² /cm ²	=adult residential	0.001	0.001
Foundation air content	cm ³ /cm ³		0.26	=adult residential
Foundation water content	cm ³ /cm ³		0.12	
Foundation thickness	cm		15	15
Lower depth of surficial soil zone	cm		100.0	=adult residential
Depth to subsurface soil sources	cm		100	
Depth to groundwater	cm		244	
Width of source area parallel to wind or groundwater flow direction	cm		1500	
Outdoor air mixing zone height	cm		200	
Particulate emission rate	g/cm ² -s		1.38E-11	1.38E-11
Wind speed above ground surface in outdoor air mixing zone	cm/s		322	=adult residential

Inputs

Input Parameters	Units	Residential		Commercial/ Industrial
		Child	Adult	Worker
Exposure Parameters				
Averaging time for carcinogens	yr	=adult residential	70	=adult residential
Averaging time for non-carcinogens	yr	6	24	25
Averaging time for vapor flux	s	=adult residential	9.46E+08	7.88E+08
Body weight	kg	15	70	70
Building air volume/floor area	cm ³ /cm ²	=adult residential	229	305
Exposure duration	yr	6	24	25
Exposure frequency	d/yr	350	350	250
Exposure frequency to water used for recreation	d/yr	120	120	0
Exposure time to indoor air	hr/d	24	24	9
Exposure time to outdoor air	hr/d	16	16	9
Exposure time to water used for recreation	hr/d	2	1.0	0
Groundwater ingestion rate	L/d	1	2	1
Indoor air exchange rate	1/s	=adult residential	5.60E-04	1.40E-03
Indoor inhalation rate	m ³ /d	10	15	20
Ingestion rate of water used for recreation	L/hr	0.05	0.05	0
Outdoor inhalation rate	m ³ /d	10	20	20
Skin surface area exposed to soil	cm ²	2000	5000	5000
Skin surface area exposed to water used for recreator	cm ²	8000	20000	0
Soil ingestion rate	mg/d	200	100	50
TARGET RISK LEVELS				
Individual Excess Lifetime Cancer Risk	unitless	=adult residential	1.0E-05	1.0E-05
Hazard quotient	unitless		1.0	1.0

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaph-thene	Acenaph-thylene	Acetone	Anthra-cene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benzo(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic					2.6E+00		1.7E+00	1.9E+01	1.7E-01	
			Hazard	2.3E+03	2.3E+03	3.7E+03	1.2E+04	1.8E+01	5.0E+03		6.3E+01		
		Commercial/ Industrial	Carcinogenic						9.5E+00		4.3E+00	4.9E+01	4.3E-01
			Hazard	1.1E+04	1.1E+04	1.8E+04	5.6E+04	1.5E+02	7.1E+04			3.0E+02	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic							SAT	1.9E+00	SAT	
			Hazard	SAT	SAT	6.3E+03	SAT				6.2E+00		
		Commercial/ Industrial	Carcinogenic								SAT	3.0E+01	SAT
			Hazard	SAT	SAT	1.8E+05	SAT					1.8E+02	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic								SAT	1.6E+02	SAT
			Hazard	SAT	SAT	1.2E+05	SAT					6.5E+02	
		Commercial/ Industrial	Carcinogenic								SAT	6.2E+02	SAT
			Hazard	SAT	SAT	SAT	SAT					SAT	
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic						<i>4.4E+00</i>	<i>1.3E+02</i>	1.4E+01	<i>4.5E-03</i>	<i>1.2E+01</i>
			Hazard	4.0E+02	2.7E+02	1.5E+00	SAT	<i>4.4E+00</i>	<i>1.3E+02</i>		<i>4.5E-03</i>	<i>1.2E+01</i>	
		Commercial/ Industrial	Carcinogenic						<i>4.4E+00</i>	<i>1.3E+02</i>	5.8E+01	<i>4.5E-03</i>	<i>1.2E+01</i>
			Hazard	SAT	SAT	9.7E+00	SAT	<i>4.4E+00</i>	<i>1.3E+02</i>		<i>4.5E-03</i>	<i>1.2E+01</i>	
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic							>SOL	5.5E+00	>SOL	
			Hazard	>SOL	>SOL	2.1E+04	>SOL				1.8E+01		
		Commercial/ Industrial	Carcinogenic								>SOL	8.7E+01	>SOL
			Hazard	>SOL	>SOL	6.1E+05	>SOL					5.3E+02	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic								>SOL	>SOL	>SOL
			Hazard	>SOL	>SOL	7.3E+05	>SOL				>SOL	>SOL	
		Commercial/ Industrial	Carcinogenic								>SOL	>SOL	>SOL
			Hazard	>SOL	>SOL	>SOL	>SOL					>SOL	
	Ingestion of Groundwater	Residential	Carcinogenic						<i>5.0E-02</i>	<i>1.0E+00</i>	5.6E-04	<i>1.0E-03</i>	<i>2.0E-04</i>
			Hazard	9.4E-01	9.4E-01	1.6E+00	>SOL	<i>5.0E-02</i>	<i>1.0E+00</i>		<i>1.0E-03</i>	<i>2.0E-04</i>	
		Commercial/ Industrial	Carcinogenic						<i>5.0E-02</i>	<i>1.0E+00</i>	2.4E-03	<i>1.0E-03</i>	<i>2.0E-04</i>
			Hazard	>SOL	>SOL	1.0E+01	>SOL	<i>5.0E-02</i>	<i>1.0E+00</i>		<i>1.0E-03</i>	<i>2.0E-04</i>	
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic					2.0E-02		1.6E-04	6.3E-02	1.1E-05	
			Hazard	1.1E+00	1.7E+00	4.2E+01	>SOL	1.2E-01	2.8E+01		1.8E-01		

*Italicized concentrations based on California MCLs
SAT = RBSL exceeds saturated soil concentration of chemical
>SOL = RBSL exceeds solubility of chemical in water

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Benzo(b)-fluoranthene	Benzo(g,h,i)-perylene	Benzo(k)-fluoranthene	Beryllium	Bis(2-ethylhexyl)-phthalate	Butyl benzyl phthalate	Cadmium	Carbon Disulfide
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	1.7E+00		1.7E+00	4.5E+04	2.4E+02		2.1E+04	
			Hazard		1.6E+02		3.6E+02	7.8E+02	7.8E+03	3.6E+01	1.4E+03
		Commercial/ Industrial	Carcinogenic	4.3E+00		4.3E+00	1.7E+05	6.2E+02		7.9E+04	
			Hazard		7.4E+02		5.1E+03	3.7E+03	3.7E+04	5.1E+02	6.5E+03
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT		SAT		SAT			
			Hazard		SAT		SAT		2.9E+00		
		Commercial/ Industrial	Carcinogenic	SAT		SAT		SAT			
			Hazard		SAT		SAT		8.4E+01		
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	SAT		SAT		SAT			
			Hazard		SAT		SAT		3.1E+02		
		Commercial/ Industrial	Carcinogenic	SAT		SAT		SAT			
			Hazard		SAT		SAT		SAT		
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic	SAT		SAT	9.6E+00	7.3E+04		1.1E+00	
			Hazard		SAT		9.6E+00	SAT	SAT	1.1E+00	6.0E+00
Commercial/ Industrial		Carcinogenic	SAT		SAT	9.6E+00	SAT		1.1E+00		
		Hazard		SAT		9.6E+00	SAT	SAT	1.1E+00	3.9E+01	
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	>SOL		>SOL		>SOL			
			Hazard		>SOL		>SOL		2.6E+01		
		Commercial/ Industrial	Carcinogenic	>SOL		>SOL		>SOL			
			Hazard		>SOL		>SOL		7.5E+02		
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	>SOL		>SOL		>SOL			
			Hazard		>SOL		>SOL		>SOL		
		Commercial/ Industrial	Carcinogenic	>SOL		>SOL		>SOL			
			Hazard		>SOL		>SOL		>SOL		
	Ingestion of Groundwater	Residential	Carcinogenic	5.6E-04		5.6E-04	4.0E-03	8.0E-02		5.0E-03	
			Hazard		>SOL		4.0E-03	3.1E-01	>SOL	5.0E-03	1.6E+00
Commercial/ Industrial		Carcinogenic	>SOL		>SOL	4.0E-03	>SOL		5.0E-03		
		Hazard		>SOL		4.0E-03	>SOL	>SOL	5.0E-03	1.0E+01	
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic	1.1E-04		1.2E-04		>SOL			
			Hazard		>SOL		2.0E+00	>SOL	>SOL	2.0E-01	9.4E+00

*Italicized concentrations based on California MCLs
SAT = RBSL exceeds saturated soil concentration of chemical
>SOL = RBSL exceeds solubility of chemical in water

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Carbon Tetrachloride	Chloro-benzene	Chloroform	Chromium (III)	Chromium (VI)	Chrysene	Copper	Cresol(-m)	Cresol(-o)	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	1.2E+01		6.2E+01		1.2E+01	1.7E+01				
			Hazard	2.6E+01	6.6E+02	3.7E+02	7.1E+04	3.6E+02		2.6E+03	1.9E+03	1.9E+03	
		Commercial/ Industrial	Carcinogenic	3.3E+01		1.6E+02		6.6E+01	4.3E+01				
			Hazard	1.2E+02	3.1E+03	1.8E+03	1.0E+06	5.1E+03		3.8E+04	9.2E+03	9.2E+03	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	6.7E-01		9.3E+00			SAT				
			Hazard	1.1E+00	1.9E+00	3.5E+01					SAT	SAT	
		Commercial/ Industrial	Carcinogenic	1.1E+01		1.5E+02			SAT				
			Hazard	3.2E+01	5.5E+01	1.0E+03					SAT	SAT	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	6.1E+01		8.1E+02			SAT				
			Hazard	1.2E+02	2.1E+02	3.6E+03						SAT	SAT
		Commercial/ Industrial	Carcinogenic	2.3E+02		3.1E+03			SAT				
			Hazard	7.0E+02	SAT	SAT						SAT	SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic	<i>5.9E-03</i>	<i>1.6E-01</i>	<i>3.4E-01</i>		2.9E+00	SAT	<i>1.2E+00</i>			
			Hazard	<i>5.9E-03</i>	<i>1.6E-01</i>	<i>3.4E-01</i>	8.5E+07	2.9E+00		<i>1.2E+00</i>	4.8E+00	5.0E+00	
		Commercial/ Industrial	Carcinogenic	<i>5.9E-03</i>	<i>1.6E-01</i>	<i>3.4E-01</i>		2.9E+00	SAT	<i>1.2E+00</i>			
			Hazard	<i>5.9E-03</i>	<i>1.6E-01</i>	<i>3.4E-01</i>	5.6E+08	2.9E+00		<i>1.2E+00</i>	3.2E+01	3.3E+01	
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	3.3E+00		3.0E+01			>SOL				
			Hazard	5.5E+00	5.5E+01	1.1E+02					>SOL	>SOL	
		Commercial/ Industrial	Carcinogenic	5.2E+01		4.8E+02			>SOL				
			Hazard	1.6E+02	>SOL	3.3E+03						>SOL	>SOL
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	>SOL		>SOL			>SOL				
			Hazard	>SOL	>SOL	>SOL					>SOL	>SOL	
		Commercial/ Industrial	Carcinogenic	>SOL		>SOL			>SOL				
			Hazard	>SOL	>SOL	>SOL						>SOL	>SOL
	Ingestion of Groundwater	Residential	Carcinogenic	<i>5.0E-04</i>	<i>7.0E-02</i>	<i>1.0E-01</i>		5.0E-02	>SOL	<i>1.3E+00</i>			
			Hazard	<i>5.0E-04</i>	<i>7.0E-02</i>	<i>1.0E-01</i>	1.6E+01	5.0E-02		<i>1.3E+00</i>	7.8E-01	7.8E-01	
		Commercial/ Industrial	Carcinogenic	<i>5.0E-04</i>	<i>7.0E-02</i>	<i>1.0E-01</i>		5.0E-02	>SOL	<i>1.3E+00</i>			
			Hazard	<i>5.0E-04</i>	<i>7.0E-02</i>	<i>1.0E-01</i>	1.0E+02	5.0E-02		<i>1.3E+00</i>	5.1E+00	5.1E+00	
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic	4.1E-02		3.9E-01		6.8E-02	>SOL				
			Hazard	7.1E-02	1.2E+00	1.9E+00	3.8E+02	1.9E+00		1.5E+01	6.7E+00	6.4E+00	

*Italicized concentrations based on California MCLs
SAT = RBSL exceeds saturated soil concentration of chemical
>SOL = RBSL exceeds solubility of chemical in water

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Cresol(-p)	Cyanide	Dibenz(a,h)-anthracene	Dichloro ethane (1,1-)	Dichloro ethane (1,2-) (EDC)	Dichloro ethylene (1,1,-)	Dichloro ethylene (cis 1,2-)	Dichloro ethene (trans 1,2)
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic			4.9E-01	3.3E+02	2.7E+01	3.3E+00		
			Hazard	1.9E+02	2.8E+03		3.8E+03	1.1E+02	3.3E+02	3.7E+02	7.4E+02
		Commercial/ Industrial	Carcinogenic			1.3E+00	8.7E+02	7.1E+01	8.5E+00		
			Hazard	9.2E+02	4.1E+04		1.8E+04	5.1E+02	1.6E+03	1.8E+03	3.5E+03
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic			SAT	2.4E+01	5.4E+00	2.3E-01		
			Hazard	SAT			3.8E+02	2.1E+01	7.2E+00	4.0E+01	4.9E+01
		Commercial/ Industrial	Carcinogenic			SAT	3.9E+02	8.6E+01	3.6E+00		
			Hazard	SAT			SAT	6.2E+02	2.1E+02	1.2E+03	1.4E+03
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic			SAT	2.1E+03	4.2E+02	2.1E+01		
			Hazard	5.1E+04			SAT	2.0E+03	7.8E+02	SAT	5.2E+03
		Commercial/ Industrial	Carcinogenic			SAT	SAT	1.6E+03	7.8E+01		
			Hazard	SAT			SAT	SAT	SAT	SAT	SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic		6.2E+00	3.8E+01	1.4E-02	9.9E-04	2.8E-02	1.9E-02	4.2E-02
			Hazard	4.6E-01	6.2E+00		1.4E-02	9.9E-04	2.8E-02	1.9E-02	4.2E-02
		Commercial/ Industrial	Carcinogenic		6.2E+00	1.6E+02	1.4E-02	9.9E-04	2.8E-02	1.9E-02	4.2E-02
			Hazard	3.0E+00	6.2E+00		1.4E-02	9.9E-04	2.8E-02	1.9E-02	4.2E-02
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic			>SOL	9.5E+01	1.4E+01	2.3E+00		
			Hazard	>SOL			1.5E+03	5.6E+01	7.4E+01	1.1E+02	1.7E+02
		Commercial/ Industrial	Carcinogenic			>SOL	1.5E+03	2.3E+02	3.7E+01		
			Hazard	>SOL			>SOL	1.6E+03	2.1E+03	3.2E+03	5.0E+03
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic			>SOL	>SOL	3.1E+03	9.4E+02		
			Hazard	>SOL			>SOL	>SOL	>SOL	>SOL	>SOL
		Commercial/ Industrial	Carcinogenic			>SOL	>SOL	>SOL	>SOL		
			Hazard	>SOL			>SOL	>SOL	>SOL	>SOL	>SOL
	Ingestion of Groundwater	Residential	Carcinogenic		2.0E-01	1.6E-04	5.0E-03	5.0E-04	6.0E-03	6.0E-03	1.0E-02
			Hazard	7.8E-02	2.0E-01		5.0E-03	5.0E-04	6.0E-03	6.0E-03	1.0E-02
		Commercial/ Industrial	Carcinogenic		2.0E-01	7.0E-04	5.0E-03	5.0E-04	6.0E-03	6.0E-03	1.0E-02
			Hazard	5.1E-01	2.0E-01		5.0E-03	5.0E-04	6.0E-03	6.0E-03	1.0E-02
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic			1.4E-05	2.1E+00	2.4E-01	1.3E-02		
			Hazard	5.9E-01	7.0E+00		1.9E+01	7.2E-01	1.2E+00	1.8E+00	3.5E+00

*Italicized concentrations based on California MCLs
SAT = RBSL exceeds saturated soil concentration of chemical
>SOL = RBSL exceeds solubility of chemical in water

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Dimethyl-benza(a) anthracene (7,12)	Dimethyl phenol (2,4)	di-n-Butyl-phthalate	di-n-octyl phthalate	Dinitro toluene (2,4)	Dioxane (1,4)	Ethyl-benzene	Ethylene Dibromide	Flouran-thene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic					6.3E+00	7.0E+01		5.5E-01		
			Hazard	1.2E+03	7.7E+02	3.9E+03	7.8E+02			3.9E+03	2.2E+00	1.6E+03	
		Commercial/ Industrial	Carcinogenic					1.7E+01	1.8E+02		1.4E+00		
			Hazard	5.6E+03	3.7E+03	1.9E+04	3.7E+03			1.8E+04	1.0E+01	7.4E+03	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic					SAT	SAT		7.5E+00		
			Hazard		SAT	SAT	SAT			SAT	2.1E+00	SAT	
		Commercial/ Industrial	Carcinogenic					SAT	SAT		1.2E+02		
			Hazard		SAT	SAT	SAT			SAT	6.1E+01	SAT	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic						SAT	SAT		4.5E+02	
			Hazard		SAT	SAT	SAT			SAT	1.5E+02	SAT	
		Commercial/ Industrial	Carcinogenic					SAT	SAT		1.7E+03		
			Hazard		SAT	SAT	SAT			SAT	8.7E+02	SAT	
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic						1.5E-02	SAT	1.6E+01	1.8E-04	
			Hazard	SAT	4.3E+00	7.9E+06	SAT			1.6E+01	1.8E-04	SAT	
		Commercial/ Industrial	Carcinogenic					6.2E-02	SAT	1.6E+01	1.8E-04		
			Hazard	SAT	2.8E+01	SAT	SAT			1.6E+01	1.8E-04	SAT	
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic					>SOL	>SOL		8.0E+00		
			Hazard		>SOL	>SOL	>SOL			>SOL	2.2E+00	>SOL	
		Commercial/ Industrial	Carcinogenic					>SOL	>SOL		1.3E+02		
			Hazard		>SOL	>SOL	>SOL			>SOL	6.5E+01	>SOL	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic						>SOL	>SOL		1.1E+03	
			Hazard		>SOL	>SOL	>SOL			>SOL	3.6E+02	>SOL	
		Commercial/ Industrial	Carcinogenic					>SOL	>SOL		4.1E+03		
			Hazard		>SOL	>SOL	>SOL			>SOL	2.1E+03	>SOL	
	Ingestion of Groundwater	Residential	Carcinogenic						2.2E-03	>SOL	7.0E-01	5.0E-05	
			Hazard	>SOL	3.1E-01	1.6E+00	>SOL			7.0E-01	5.0E-05	>SOL	
		Commercial/ Industrial	Carcinogenic					9.2E-03	>SOL	7.0E-01	5.0E-05		
			Hazard	>SOL	2.0E+00	1.0E+01	>SOL			7.0E-01	5.0E-05	>SOL	
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic					6.4E-02	>SOL		5.9E-03		
			Hazard	>SOL	2.7E+00	7.3E+00	2.1E-03			3.6E+00	1.7E-02	>SOL	

*Italicized concentrations based on California MCLs
SAT = RBSL exceeds saturated soil concentration of chemical
>SOL = RBSL exceeds solubility of chemical in water

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Fluorene	Indeno-(1,2,3-CD) pyrene	Mercury	Methanol	Methyl ethyl ketone	Methylene Chloride	Methyl-naphthalene (2-)	MTBE	Naphthalene
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic		1.7E+00				1.4E+02			
			Hazard	1.6E+03	3.9E+00	1.9E+04	2.2E+04	2.3E+03	1.6E+03	2.0E+02	1.6E+03	
		Commercial/ Industrial	Carcinogenic		4.3E+00			3.7E+02				
			Hazard	7.4E+03	1.8E+01	8.9E+04	1.0E+05	1.1E+04	7.4E+03	9.3E+02	7.4E+03	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic		SAT				4.2E+01			
			Hazard	SAT	1.5E+01	1.9E+05	2.4E+04	2.5E+03	SAT	1.4E+04	SAT	
		Commercial/ Industrial	Carcinogenic		SAT			6.7E+02				
			Hazard	SAT		SAT	SAT	SAT	SAT	SAT	SAT	SAT
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic		SAT				3.5E+03			
			Hazard	SAT	1.6E+03	SAT	SAT	SAT	SAT	SAT	SAT	SAT
		Commercial/ Industrial	Carcinogenic		SAT			SAT				
			Hazard	SAT	9.4E+03	SAT	SAT	SAT	SAT	SAT	SAT	SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic		SAT	<i>3.2E-01</i>			8.2E-03		<i>2.1E-02</i>	<i>2.4E+00</i>
			Hazard	5.2E+02	<i>3.2E-01</i>	7.1E+00	1.1E+01	8.2E-03	3.2E+02	<i>2.1E-02</i>	<i>2.4E+00</i>	
		Commercial/ Industrial	Carcinogenic		SAT	<i>3.2E-01</i>		8.2E-03		<i>2.1E-02</i>	<i>2.4E+00</i>	
			Hazard	SAT	<i>3.2E-01</i>	4.7E+01	7.3E+01	8.2E-03	2.1E+03	<i>2.1E-02</i>	<i>2.4E+00</i>	
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic		>SOL				1.8E+02			
			Hazard	>SOL	1.4E+00	6.4E+05	6.4E+04	1.0E+04	>SOL	3.4E+04	>SOL	
		Commercial/ Industrial	Carcinogenic		>SOL			2.8E+03				
			Hazard	>SOL	4.1E+01	>SOL	>SOL	>SOL	>SOL	>SOL	>SOL	>SOL
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic		>SOL				>SOL			
			Hazard	>SOL	5.9E+02	>SOL	>SOL	>SOL	>SOL	>SOL	>SOL	>SOL
		Commercial/ Industrial	Carcinogenic		>SOL			>SOL				
			Hazard	>SOL	3.4E+03	>SOL	>SOL	>SOL	>SOL	>SOL	>SOL	>SOL
	Ingestion of Groundwater	Residential	Carcinogenic		>SOL	<i>2.0E-03</i>			5.0E-03		<i>1.3E-02</i>	<i>2.0E-02</i>
			Hazard	6.3E-01	<i>2.0E-03</i>	7.8E+00	9.4E+00	5.0E-03	6.3E-01	<i>1.3E-02</i>	<i>2.0E-02</i>	
		Commercial/ Industrial	Carcinogenic		>SOL	<i>2.0E-03</i>		5.0E-03		<i>1.3E-02</i>	<i>2.0E-02</i>	
			Hazard	>SOL	<i>2.0E-03</i>	5.1E+01	6.1E+01	5.0E-03	4.1E+00	<i>1.3E-02</i>	<i>2.0E-02</i>	
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic		>SOL				1.3E+00			
			Hazard	3.1E-01		3.6E-02	2.2E+02	1.5E+02	1.6E+01	6.1E-01	1.5E+00	1.5E+00

*Italicized concentrations based on California MCLs
SAT = RBSL exceeds saturated soil concentration of chemical
>SOL = RBSL exceeds solubility of chemical in water

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Nickel	Nitro benzene	PCBs	Phenan-threne	Phenol	Pyrene	Pyridine	Selenium	Silver	Stryene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	3.4E+05	3.7E+03	3.6E-01				2.0E+03				
			Hazard	1.4E+03		9.8E-01	1.2E+04	2.3E+04	1.2E+03		3.6E+02	3.6E+02	7.7E+03	
		Commercial/ Industrial	Carcinogenic	1.3E+06	9.9E+03	1.1E+00				5.1E+03				
			Hazard	2.0E+04		5.8E+00	5.6E+04	1.1E+05	5.6E+03		5.1E+03	5.1E+03	3.7E+04	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic		SAT	1.6E+03				6.6E+04				
			Hazard			SAT	SAT	SAT	SAT				SAT	
		Commercial/ Industrial	Carcinogenic		SAT	SAT				1.1E+06				
			Hazard			SAT	SAT	SAT	SAT					SAT
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic		SAT	SAT				3.9E+05				
			Hazard			SAT	SAT	SAT	SAT					SAT
		Commercial/ Industrial	Carcinogenic		SAT	SAT				SAT				
			Hazard			SAT	SAT	SAT	SAT					SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic	<i>2.0E+01</i>	6.5E+00	<i>9.4E+00</i>					2.8E+00	<i>8.0E-01</i>	<i>2.6E+00</i>	<i>4.8E+00</i>
			Hazard	<i>2.0E+01</i>		<i>9.4E+00</i>	SAT	2.5E+01	SAT		<i>8.0E-01</i>	<i>2.6E+00</i>	<i>4.8E+00</i>	
		Commercial/ Industrial	Carcinogenic	<i>2.0E+01</i>	2.8E+01	<i>9.4E+00</i>					1.2E+01	<i>8.0E-01</i>	<i>2.6E+00</i>	<i>4.8E+00</i>
			Hazard	<i>2.0E+01</i>		<i>9.4E+00</i>	SAT	1.6E+02	SAT		<i>8.0E-01</i>	<i>2.6E+00</i>	<i>4.8E+00</i>	
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic		>SOL	3.1E-01				4.8E+04				
			Hazard			>SOL	>SOL	>SOL	>SOL				>SOL	
		Commercial/ Industrial	Carcinogenic		>SOL	>SOL				7.7E+05				
			Hazard			>SOL	>SOL	>SOL	>SOL					>SOL
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic		>SOL	>SOL				5.0E+05				
			Hazard			>SOL	>SOL	>SOL	>SOL				>SOL	
		Commercial/ Industrial	Carcinogenic		>SOL	>SOL				>SOL				
			Hazard			>SOL	>SOL	>SOL	>SOL					>SOL
	Ingestion of Groundwater	Residential	Carcinogenic	<i>1.0E-01</i>	1.3E+00	<i>5.0E-04</i>					6.7E-01	<i>5.0E-02</i>	<i>1.0E-01</i>	<i>1.0E-01</i>
			Hazard	<i>1.0E-01</i>		<i>5.0E-04</i>	>SOL	9.4E+00	>SOL		<i>5.0E-02</i>	<i>1.0E-01</i>	<i>1.0E-01</i>	
		Commercial/ Industrial	Carcinogenic	<i>1.0E-01</i>	5.7E+00	<i>5.0E-04</i>					2.9E+00	<i>5.0E-02</i>	<i>1.0E-01</i>	<i>1.0E-01</i>
			Hazard	<i>1.0E-01</i>		<i>5.0E-04</i>	>SOL	6.1E+01	>SOL		<i>5.0E-02</i>	<i>1.0E-01</i>	<i>1.0E-01</i>	
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic		2.8E+01	1.6E-05				2.6E+01				
			Hazard	7.9E+00		4.4E-05	>SOL	1.5E+02	>SOL		2.0E+00	2.1E+00	9.3E+00	

*Italicized concentrations based on California MCLs
SAT = RBSL exceeds saturated soil concentration of chemical
>SOL = RBSL exceeds solubility of chemical in water

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Tetrachloroethane (1,1,2,2 -)	Tetrachloroethylene (PCE)	Tetraethyl Lead	Toluene	Trichloroethane (1,1,1-)	Trichloroethane (1,1,2-)	Trichloroethylene (TCE)	Vanadium	Vinyl Chloride
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	7.2E+00	3.8E+01				2.7E+01	1.3E+02		3.5E+00
			Hazard	1.0E+03	3.7E+02	3.9E-03	7.1E+03	1.4E+03	1.5E+02	2.2E+02	5.0E+02	
		Commercial/ Industrial	Carcinogenic	1.9E+01	1.0E+02				7.0E+01	3.3E+02		9.1E+00
			Hazard	4.7E+03	1.8E+03	1.9E-02	3.4E+04	6.5E+03	7.2E+02	1.1E+03	7.2E+03	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	1.8E+01	7.6E+00				1.5E+01	2.7E+01		3.0E-02
			Hazard	2.5E+03	3.1E+01		9.3E+02	6.6E+02	8.4E+01	3.2E+01		
		Commercial/ Industrial	Carcinogenic	2.9E+02	1.2E+02				2.4E+02	4.4E+02		4.8E-01
			Hazard	SAT	SAT		SAT	SAT	2.4E+03	9.3E+02		
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	1.0E+03	6.9E+02				1.1E+03	2.5E+03		2.7E+00
			Hazard	SAT	SAT		SAT	SAT	SAT	3.4E+03		
		Commercial/ Industrial	Carcinogenic	3.9E+03	SAT				4.2E+03	SAT		1.0E+01
			Hazard	SAT	SAT		SAT	SAT	SAT	SAT		
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic	6.6E-03	5.2E-02	4.6E+00	1.8E+00	1.5E+00	2.0E-02	5.5E-02		1.1E-03
			Hazard	6.6E-03	5.2E-02	4.6E+00	1.8E+00	1.5E+00	2.0E-02	5.5E-02	3.3E+02	1.1E-03
		Commercial/ Industrial	Carcinogenic	6.6E-03	5.2E-02	4.6E+00	1.8E+00	1.5E+00	2.0E-02	5.5E-02		1.1E-03
			Hazard	6.6E-03	5.2E-02	4.6E+00	1.8E+00	1.5E+00	2.0E-02	5.5E-02	2.2E+03	1.1E-03
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	1.0E+01	2.6E+01				1.8E+01	5.3E+01		6.6E-01
			Hazard	1.4E+03	1.1E+02		>SOL	>SOL	1.0E+02	6.2E+01		
		Commercial/ Industrial	Carcinogenic	1.6E+02	>SOL				2.8E+02	8.4E+02		1.0E+01
			Hazard	>SOL	>SOL		>SOL	>SOL	2.9E+03	>SOL		
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	1.3E+03	>SOL				3.6E+03	>SOL		2.6E+02
			Hazard	>SOL	>SOL		>SOL	>SOL	>SOL	>SOL		
		Commercial/ Industrial	Carcinogenic	>SOL	>SOL				>SOL	>SOL		1.0E+03
			Hazard	>SOL	>SOL		>SOL	>SOL	>SOL	>SOL		
	Ingestion of Groundwater	Residential	Carcinogenic	1.0E-03	5.0E-03	1.5E-02	1.5E-01	2.0E-01	5.0E-03	5.0E-03		5.0E-04
			Hazard	1.0E-03	5.0E-03	1.5E-02	1.5E-01	2.0E-01	5.0E-03	5.0E-03	1.1E-01	5.0E-04
		Commercial/ Industrial	Carcinogenic	1.0E-03	5.0E-03	1.5E-02	1.5E-01	2.0E-01	5.0E-03	5.0E-03		5.0E-04
			Hazard	1.0E-03	5.0E-03	1.5E-02	1.5E-01	2.0E-01	5.0E-03	5.0E-03	7.2E-01	5.0E-04
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic	4.5E-02	6.0E-02				1.8E-01	4.6E-02		2.6E-02
			Hazard	4.9E+00	5.3E-01	6.7E-06	1.1E+01	4.3E+00	7.8E-01	7.2E-02	2.8E+00	

*Italicized concentrations based on California MCLs
SAT = RBSL exceeds saturated soil concentration of chemical
>SOL = RBSL exceeds solubility of chemical in water

Attachment B
3465 Ettie Street, Oakland, CA
Tier 3 RBSLs

Medium	Exposure Pathway	Land Use	Type of Risk	Xylenes	Zinc
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic		
			Hazard	5.3E+04	2.1E+04
		Commercial/ Industrial	Carcinogenic		
			Hazard	2.6E+05	3.1E+05
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic		
			Hazard	SAT	
		Commercial/ Industrial	Carcinogenic		
			Hazard	SAT	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic		
			Hazard	SAT	
		Commercial/ Industrial	Carcinogenic		
			Hazard	SAT	
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic	<i>2.7E+01</i>	
			Hazard	<i>2.7E+01</i>	8.9E+02
		Commercial/ Industrial	Carcinogenic	<i>2.7E+01</i>	
			Hazard	<i>2.7E+01</i>	5.8E+03
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic		
			Hazard	>SOL	
		Commercial/ Industrial	Carcinogenic		
			Hazard	>SOL	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic		
			Hazard	>SOL	
		Commercial/ Industrial	Carcinogenic		
			Hazard	>SOL	
	Ingestion of Groundwater	Residential	Carcinogenic	<i>1.8E+00</i>	
			Hazard	<i>1.8E+00</i>	4.7E+00
		Commercial/ Industrial	Carcinogenic	<i>1.8E+00</i>	
			Hazard	<i>1.8E+00</i>	3.1E+01
Water Used for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic		
			Hazard	6.6E+01	1.2E+02

*Italicized concentrations based on California MCLs

SAT = RBSL exceeds saturated soil concentration of chemical

>SOL = RBSL exceeds solubility of chemical in water