



**Subsurface Consultants, Inc.**

**FAX TRANSMITTAL**

Date: May 11, 2000

Number of pages (including cover sheet):

To: Eva Chu

Phone:

Fax: 510.337.9335

cc:

From: Gene Ng

Sent From: Lafayette

SCI Job #: 838.006

Re: 2801 MacArthur Blvd.

**REMARKS:**

Urgent

For your review

Reply ASAP

Please comment

For your use

Original in mail

As requested

Eva:

Pcr the telephone message I left on your voice mail today, attached are the Oakland RBCA output tables for 2801 MacArthur Boulevard. Please note that Aniko Molnar (APA Fund) and Jeriann Alexander (SCI) would like to meet with you on either 5/17 at 1pm, or anytime on 5/18 to further discuss and these tables and implementation of the CAP (see attached transmittal letter). Please feel free to cal with any questions.

--Gene Ng



## Subsurface Consultants, Inc.

### LETTER OF TRANSMITTAL

**TO:** Ms. Eva Chu  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, California 94502

**DATE:** May 11, 2000

**FROM:** Gene Y. Ng

**PROJECT:** 2801 MacArthur Boulevard.

**SCI JOB NUMBER:** 838.006

**OFFICE SENT FROM:** Lafayette

**WE ARE SENDING YOU:** 1 copy(ies)

#### **REMARKS:**

Dear Ms. Chu:

With this letter, Subsurface Consultants, Inc. (SCI) transmits the Oakland Specific Risk-Based Corrective Action (RBCA) output tables generated for the above-referenced project. These tables were omitted from the Corrective Action Plan (CAP) dated August 13, 1999. Also attached are the Tier 3 input parameters used to generate these output tables, which were included in the CAP.

As shown on these output tables, the site-specific target levels (SSTLs) for benzene concentrations in subsurface soil are the same numbers tabulated on page 9 of the CAP. Subsurface soil SSTLs for benzene were calculated for depths ranging from 2.5 to 35 feet below ground surface (bgs). Based on the results of the CAP, the use of these SSTLs as soil cleanup levels at the project site would serve to protect human health, based on the anticipated commercial use of the site (assuming construction at grade).

We propose that Ms. Aniko Molnar, Environmental Consultant representing the APA Fund, and Jeriann Alexander of SCI meet with you after you have reviewed these tables to further discuss implementation of the CAP. As you know, the APA Fund is prepared to solicit competitive bids for implementation of the CAP as soon as possible. We would like to suggest either May 17 at 1 p.m., or anytime on May 18, for meeting at your office. Please contact Ms. Molnar at (415) 389-0810, and either Jeriann Alexander or myself to confirm a meeting time or to suggest an alternate time if these are not convenient for you.

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301 River Street ■ Suite 9 ■ Napa, California 94559-3416 ■ (707) 257-6993 ■ Fax (707) 257-6995

**TRANSMITTAL**

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If there are any questions, please feel free to call.

Sincerely,



Gene Y. Ng  
Staff Engineer

cc: Ms. Aniko Molnar  
Environmental Consultant  
7 Morning Sun Avenue  
Mill Valley, California 94941

**Table 6**  
**Tier 3 Input Parameters**  
**(Sandy Silt)**

		Risk Scenario		
		Residential		Commercial
TARGET RISK LEVELS	Units	Value for ADULT	Value for CHILD	Value for Industrial
Target cancer risk (ELCR)	unitless	1.0E-05	= adult res.	1.0E-05
Target hazard quotient	unitless	1.0	= adult res.	1.0
		Residential		Commercial
		Value for ADULT	Value for CHILD	Value for Industrial
EXPOSURE PARAMETERS	Units	Value for ADULT	Value for CHILD	Value for Industrial
Averaging time for carcinogens	yr	70	= adult res.	= adult res.
Averaging time for non-carcinogens	yr	24	6	24
Body weight	kg	70	15	70
Exposure duration	yr	24	6	24
Exposure frequency	d/yr	350	350	250
Exposure time to indoor air	hr/d	24	24	8
Exposure time to outdoor air	hr/d	16	16	8
Soil ingestion rate	mg/d	100	200	50
Indoor infiltration rate	m <sup>3</sup> /d	15	10	11
Outdoor infiltration rate	m <sup>3</sup> /d	20	10	20
Groundwater ingestion rate	L/d	2	1	1
Soil to skin adherence factor	mg/cm <sup>2</sup>	0.5	0.5	0.5
Skin surface area exposed to soil	cm <sup>2</sup>	5000	2000	5000
Exp. time to water used for recreation	d/yr	120	120	0
Exp. time to water used for recreation	hr/d	1.0	2	0
Skin surface area exposed to water used for recreation	cm <sup>2</sup>	20000	8000	0
Ingestion rate of water used for recreation	L/hr	0.05	0.05	0

**Table 6**  
**Tier 3 Input Parameters**  
**(Sandy Silt)**

SATURATED ZONE PARAMETERS	Units	Residential		Commercial
		Value for ADULT	Value for CHILD	Value for Industrial
Groundwater entry velocity	cm/yr	60	=adult res.	=adult res.
Groundwater mixing zone thickness	cm	300	=adult res.	=adult res.

  

VADOSE ZONE PARAMETERS	Units	Residential		Commercial
		Value for ADULT	Value for CHILD	Value for Industrial
Lower depth of surficial soil zone	cm	100.0	=adult res.	=adult res.
Fraction organic carbon (FOC)	g oc/g soil	0.015	=adult res.	=adult res.
Vadose zone thickness	cm	759.9	=adult res.	=adult res.
Infiltration rate through the vadose zone	cm/yr	6	=adult res.	=adult res.
Depth to groundwater	cm	820	=adult res.	=adult res.
Depth to subsurface soil sources	cm	457.2	=adult res.	=adult res.
Vadose zone air content	cm <sup>3</sup> /cm <sup>3</sup>	0.15	=adult res.	=adult res.
Total soil porosity	cm <sup>3</sup> /cm <sup>3</sup>	0.4	=adult res.	=adult res.
Vadose zone water content	cm <sup>3</sup> /cm <sup>3</sup>	0.25	=adult res.	=adult res.
Soil bulk density	g/cm <sup>3</sup>	1.59	=adult res.	=adult res.
Capillary fringe thickness	cm	60.1	=adult res.	=adult res.
Capillary fringe air content	cm <sup>3</sup> /cm <sup>3</sup>	0.020	=adult res.	=adult res.
Capillary fringe water content	cm <sup>3</sup> /cm <sup>3</sup>	0.38	=adult res.	=adult res.

**Table 6**  
**Tier 3 Input Parameters**  
**(Sandy Silt)**

PARAMETERS	Units	Residential		Commercial
		Value for ADULT	Value for CHILD	Value for Industrial
Infiltration coefficient	1/s	5.60E-04	=adult res.	1.40E-03
Building floor area	cm <sup>2</sup> /cm <sup>2</sup>	229	=adult res.	305
Foundation thickness	cm	15	=adult res.	15
Alteration of cracks in building foundation	cm <sup>2</sup> /cm <sup>2</sup>	0.001	=adult res.	0.001
Foundation air content	cm <sup>3</sup> /cm <sup>3</sup>	0.25	=adult res.	=adult res.
Foundation water content	cm <sup>3</sup> /cm <sup>3</sup>	0	=adult res.	=adult res.
Particulate emission rate	g/cm <sup>2</sup> -s	1.38E-11	=adult res.	1.38E-11
Wind speed above ground surface in outdoor air zone	cm/s	322	=adult res.	=adult res.
Water surface area parallel to wind on boundary of row of buildings	cm	1500	=adult res.	=adult res.
Outdoor air exchange coefficient	cm	200	=adult res.	=adult res.
Average meteorological vapor flux	s	9.46E+08	=adult res.	7.88E+08

Oakland Tier 3 RBSSLs (2.5 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)anthracene	Benzene	Benzofluoranthene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	3.1E+03	3.1E+03	4.8E+03	1.6E+04	3.2E+00		2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Hazard					2.0E+01	5.2E+03		8.2E+01		
Subsurface Soil [mg/kg]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	2.0E+04	2.0E+04	3.1E+04	1.0E+05	2.5E+02	9.4E+04		9.0E+01	8.3E-01	
		Commercial/ Industrial	Hazard	SAT	SAT	4.4E+04	SAT	SAT			SAT	1.5E+01	SAT
		Residential	Carcinogenic	SAT	SAT		SAT				SAT	6.1E+01	
		Commercial/ Industrial	Hazard	SAT	SAT		SAT				SAT	6.8E+01	SAT
		Residential	Carcinogenic	SAT	SAT		SAT				SAT	4.0E+02	
	Inhalation of Indoor Air Vapors	Commercial/ Industrial	Hazard	Carcinogenic			4.2E+03	SAT			SAT	1.4E+00	SAT
		Residential	Carcinogenic	Hazard				SAT			SAT	4.5E+00	SAT
		Commercial/ Industrial	Carcinogenic	Hazard				SAT			SAT	4.5E+01	SAT
		Residential	Carcinogenic	Hazard				SAT			SAT	2.6E+02	
		Commercial/ Industrial	Carcinogenic	Hazard				SAT			SAT	3.2E-03	9.2E+00
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic	3.0E+02	2.0E+02	7.8E-01	SAT	4.4E+00	1.2E+02	1.0E+01	3.2E-03	9.2E+00	
		Commercial/ Industrial	Hazard					4.4E+00	1.2E+02		3.2E-03	9.2E+00	
		Residential	Carcinogenic	SAT	SAT	5.1E+00	SAT	4.4E+00	1.2E+02	4.4E+01	3.2E-03	9.2E+00	
		Commercial/ Industrial	Hazard					4.4E+00	1.2E+02		3.2E-03	9.2E+00	
		Residential	Carcinogenic	Hazard				SAT	5.0E-02	1.0E+00	5.6E-04	1.0E-03	2.0E-04
	Inhalation of Indoor Air Vapors	Commercial/ Industrial	Carcinogenic	Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00		1.0E-03	2.0E-04
		Residential	Carcinogenic	Hazard	>Sol	>Sol			5.0E-02	1.0E+00		1.0E-03	2.0E-04
		Commercial/ Industrial	Carcinogenic	Hazard	>Sol	>Sol	1.0E+01	>Sol	5.0E-02	1.0E+00	2.5E-03	1.0E-03	2.0E-04
		Residential	Carcinogenic	Hazard	>Sol	>Sol			5.0E-02	1.0E+00		1.0E-03	2.0E-04
		Commercial/ Industrial	Carcinogenic	Hazard	>Sol	>Sol	3.0E+04	>Sol			>Sol	3.8E+00	>Sol
Water for Recreation [mg/l]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	>Sol	>Sol					>Sol	1.3E+01	>Sol	
		Commercial/ Industrial	Carcinogenic	>Sol	>Sol					>Sol	1.3E+02	>Sol	
		Residential	Carcinogenic	>Sol	>Sol					>Sol	7.5E+02	>Sol	
		Commercial/ Industrial	Carcinogenic	>Sol	>Sol					>Sol	1.1E+03	>Sol	
		Residential	Carcinogenic	>Sol	>Sol					>Sol	>Sol	>Sol	>Sol
Water for Recreation [mg/l]	Ingestion/ Dermal	Commercial/ Industrial	Carcinogenic	>Sol	>Sol					>Sol	>Sol	>Sol	
		Residential	Carcinogenic	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	2.8E+01	1.6E-04	6.3E-02	1.1E-05	

\*italicized concentrations based on California MCLs  
 SAT - RBSSL exceeds saturated soil concentration of chemical  
 > Sol - RBSSL exceeds solubility of chemical in water

Oakland Tier 3 RBSLs (5.0 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benz(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic					3.2E+00		2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	2.0E+01	5.2E+03		8.2E+01		
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic						1.6E+01		8.3E+00	9.0E+01	8.3E-01
		Commercial/ Industrial	Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	2.5E+02	9.4E+04		5.2E+02	3.1E+01	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT	SAT	8.7E+04	SAT			SAT	1.2E+02	SAT	
		Commercial/ Industrial	Hazard	SAT	SAT		SAT			SAT	1.4E+02	SAT	
		Residential	Carcinogenic								SAT	8.0E+02	SAT
		Commercial/ Industrial	Hazard	SAT	SAT	4.9E+03	SAT				SAT	1.4E+00	SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic										
		Commercial/ Industrial	Hazard	3.0E+02	2.0E+02	7.8E-01	SAT		4.4E+00	1.2E+02	1.0E+01	3.2E-03	9.2E+00
		Residential	Carcinogenic										
		Commercial/ Industrial	Hazard	SAT	SAT	5.1E+00	SAT		4.4E+00	1.2E+02	4.4E+01	3.2E-03	9.2E+00
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic										
		Commercial/ Industrial	Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol		5.0E-02	1.0E+00	1.0E-03	2.0E-04	
		Residential	Carcinogenic										
		Commercial/ Industrial	Hazard	>Sol	>Sol	1.0E+01	>Sol		5.0E-02	1.0E+00	1.0E-03	1.0E-03	2.0E-04
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic										
		Commercial/ Industrial	Hazard	>Sol	>Sol	3.0E+04	>Sol						
		Residential	Carcinogenic										
		Commercial/ Industrial	Hazard	>Sol	>Sol		>Sol						
Water for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic										
		Commercial/ Industrial	Hazard	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	2.8E+01	1.6E-04	6.3E-02	1.1E-05	
		Residential	Carcinogenic										
		Commercial/ Industrial	Hazard										

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



Oakland Tier 3 RBSLs (7.5 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benz(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic					3.2E+00			2.7E+01	2.5E-01	
		Commercial/ Industrial	Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	2.0E+01	5.2E+03		8.2E+01		
Subsurface Soil [mg/kg]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	2.0E+04	2.0E+04	3.1E+04	1.0E+05	2.5E+02	9.4E+04		5.2E+02	8.3E-01	
		Commercial/ Industrial	Hazard	SAT	SAT	1.3E+05	SAT				SAT	4.6E+01	SAT
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	1.8E+02	
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	2.1E+02	SAT
	Ingestion of Groundwater Impacted by Leachate	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT	SAT	SAT	SAT				1.2E+03	SAT
			Commercial/ Industrial	Hazard	SAT	SAT	4.4E+03	SAT				1.4E+00	SAT
		Ingestion of Groundwater	Residential	Carcinogenic	3.0E+02	2.0E+02	7.8E-01	SAT				4.7E+00	SAT
			Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	4.7E+01
	Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic					4.4E+00	1.2E+02	1.0E-01	3.2E-03	9.2E+00
			Commercial/ Industrial	Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00		1.0E-03	2.0E-04
Inhalation of Indoor Air Vapors		Residential	Carcinogenic	>Sol	>Sol	1.0E+01	>Sol		5.0E-02	1.0E+00	1.0E-03	2.0E-04	
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol		5.0E-02	1.0E+00	1.0E-03	2.0E-04	
Inhalation of Outdoor Air Vapors		Residential	Carcinogenic	>Sol	>Sol	3.0E+04	>Sol		5.0E-02	1.0E+00	1.0E-03	2.0E-04	
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol		5.0E-02	1.0E+00	1.0E-03	2.0E-04	
Water for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	2.8E+01	1.6E-04	6.3E-02	1.1E-05	
		Commercial/ Industrial	Hazard					1.2E-01	2.8E+01		1.8E-01		

\*italicized concentrations based on California MCL's  
 SAT = RBSL exceeds saturated soil concentration of chemical  
 > SOL = RBSL exceeds solubility of chemical in water

Oakland Tier 3 RBSLs (10.0 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benz(a)-pyrene		
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	3.1E+03	3.1E+03	4.8E+03	1.6E+04	3.2E+00		2.5E+00	2.7E+01	2.5E-01		
		Commercial/ Industrial	Hazard					2.0E+01	5.2E+03		8.2E+01	8.2E+01		
Subsurface Soil [mg/kg]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	2.0E+04	2.0E+04	3.1E+04	1.0E+05	2.5E+02	9.4E+04		5.2E+02	8.3E-01		
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	6.2E+01	SAT	
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic									2.4E+02		
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	2.7E+02	SAT	
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic									1.6E+03	SAT	
			Hazard	SAT	SAT	4.4E+03						1.5E+00	SAT	
		Commercial/ Industrial	Carcinogenic										4.9E+00	
			Hazard	SAT	SAT							SAT	4.9E+01	SAT
		Residential	Carcinogenic										2.9E+02	
			Hazard	SAT	SAT	3.0E+02	2.0E+02	7.9E-01	SAT	4.4E+00	1.2E+02	1.0E+01	3.2E-03	9.2E+00
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic											
		Commercial/ Industrial	Hazard											
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic											
		Commercial/ Industrial	Hazard											
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic											
		Commercial/ Industrial	Hazard											
	Ingestion/ Dermal	Residential	Carcinogenic	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	1.2E-01	2.8E+01	1.6E-04	6.3E-02	1.1E-05	
		Commercial/ Industrial	Hazard											

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

Oakland Tier 3 RBSLs (12.5 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benzo(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	3.1E+03	3.1E+03	4.8E+03	1.6E+04	3.2E+00		2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Hazard					2.0E+01	5.2E+03		8.2E+01		
Subsurface Soil [mg/kg]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	2.0E+04	2.0E+04	3.1E+04	1.0E+05	2.5E+02	9.4E+04	8.3E+00	9.0E+01	8.3E-01	
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	7.7E+01	SAT
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	3.1E+02	
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	3.4E+02	SAT
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	1.5E+00	SAT
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	5.0E+00	SAT
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	5.0E+01	SAT
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	2.9E+02	
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	3.2E+03	9.2E+00
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT				SAT	3.2E+03	9.2E+00
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic	3.0E+02	2.0E+02	7.8E-01	SAT	4.4E+00	1.2E+02	1.0E+01	3.2E-03	9.2E+00	
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT	4.4E+00	1.2E+02		4.4E+01	3.2E-03	9.2E+00
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT	SAT	5.1E+00	SAT	4.4E+00	1.2E+02	1.0E+00	3.2E-03	9.2E+00	
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT	5.0E-02	1.0E+00	1.0E-03	1.0E-03	2.0E-04	
	Ingestion of Groundwater	Residential	Carcinogenic	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	5.0E-02	1.0E+00	5.6E-04	1.0E-03	2.0E-04
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	5.0E-02	1.0E+00	2.5E-03	1.0E-03	2.0E-04
		Residential	Carcinogenic	>Sol	>Sol	1.0E+01	>Sol	5.0E-02	5.0E-02	1.0E+00		1.0E-03	2.0E-04
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol				>Sol	3.8E+00	>Sol
		Residential	Carcinogenic	>Sol	>Sol	3.0E+04	>Sol					1.3E+01	
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol					1.3E+02	>Sol
Water for Recreation [mg/l]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	>Sol	>Sol	>Sol	>Sol			>Sol	7.5E+02	>Sol	
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol				>Sol	>Sol	>Sol
	Ingestion/ Dermal	Residential	Carcinogenic	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	1.2E-01		1.6E-04	6.3E-02	1.1E-05
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol					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

Oakland Tier 3 RBSLs (15.0 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benzo(a)-anthracene	Benzene	Benzo(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	3.2E+00		2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Carcinogenic Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	1.6E+01	5.2E+03	8.3E+00	9.0E+01	8.3E-01	
Subsurface Soil [mg/kg]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT			SAT	9.3E+01	SAT	
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT			SAT	3.7E+02	SAT	
		Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	SAT	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	4.6E+03	SAT				SAT	1.5E+00	SAT
		Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	5.1E+00	SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic Hazard	Carcinogenic Hazard	3.0E+02	2.0E+02	7.6E-01	SAT	4.4E+00	1.2E+02	1.0E+01	3.2E-03	9.2E+00
		Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard	SAT	SAT	SAT	SAT	4.4E+00	1.2E+02	4.4E+01	3.2E-03	9.2E+00
		Residential	Carcinogenic Hazard	Carcinogenic Hazard	SAT	SAT	5.1E+00	SAT	4.4E+00	1.2E+02		3.2E-03	9.2E+00
		Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard					5.0E-02	1.0E+00	5.6E-04	1.0E-03	2.0E-04
		Residential	Carcinogenic Hazard	Carcinogenic Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00		1.0E-03	2.0E-04
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic Hazard	>Sol	>Sol	1.0E+01	>Sol	5.0E-02	1.0E+00		1.0E-03	2.0E-04	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	3.0E+04	>Sol	5.0E-02	1.0E+00	2.5E-03	1.0E-03	2.0E-04	
		Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00		1.0E-03	2.0E-04	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00		1.0E-03	2.0E-04	
		Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00		1.0E-03	2.0E-04	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	Carcinogenic Hazard	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	2.8E+01	1.6E-04	6.3E-02	1.1E-05
		Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard					1.2E-01			1.8E-01	
		Residential	Carcinogenic Hazard	Carcinogenic Hazard									
		Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard									
		Residential	Carcinogenic Hazard	Carcinogenic Hazard									

\*Indicated concentrations based on California MCLs  
 SAT = RBSL exceeds saturated soil concentration of chemical  
 > Sol = RBSL exceeds solubility of chemical in water

Oakland Tier 3 RBSLs (17.5 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benzof(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	3.2E+00		2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Carcinogenic Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	1.6E+01		8.3E+00	9.0E+01	8.3E-01	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT			SAT	1.1E+02	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT			SAT	4.3E+02	SAT
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	SAT	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	4.8E+02	SAT
		Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	SAT	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	5.2E+00	SAT
		Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	1.6E+00	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	5.2E+01	SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic Hazard	Carcinogenic Hazard	3.0E+02	2.0E+02	7.8E-01	SAT	4.4E+00	1.2E+02	1.0E+01	3.2E-03	9.2E+00
		Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard	SAT	SAT	SAT	SAT	4.4E+00	1.2E+02	4.4E+01	3.2E-03	9.2E+00
		Residential	Carcinogenic Hazard	Carcinogenic Hazard	SAT	SAT	SAT	SAT	4.4E+00	1.2E+02	4.4E+01	3.2E-03	9.2E+00
		Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard	SAT	SAT	SAT	SAT	4.4E+00	1.2E+02	4.4E+01	3.2E-03	9.2E+00
		Residential	Carcinogenic Hazard	Carcinogenic Hazard	SAT	SAT	SAT	SAT	5.0E-02	1.0E+00	5.6E-04	1.0E-03	2.0E-04
		Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00	1.0E-03	1.0E-03	2.0E-04
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic Hazard	>Sol	>Sol	1.0E+01	>Sol	5.0E-02	1.0E+00	>Sol	1.0E-03	2.0E-04	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	3.0E+04	>Sol	5.0E-02	1.0E+00	>Sol	3.8E+00	>Sol	
		Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00	>Sol	1.3E+01	>Sol	
	Inhalation of Indoor Air Vapors	Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00	2.5E-03	1.0E-03	2.0E-04
		Residential	Carcinogenic Hazard	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00	>Sol	1.0E-03	2.0E-04
		Commercial/ Industrial	Carcinogenic Hazard	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00	>Sol	3.8E+00	>Sol
Water for Recreation [mg/l]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	2.0E-02		1.6E-04	6.3E-02	1.1E-05	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	1.2E-01		1.6E-04	1.8E-01		
		Residential	Carcinogenic Hazard	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02		1.6E-04	6.3E-02	1.1E-05	
		Commercial/ Industrial	Carcinogenic Hazard	1.1E+00	1.7E+00	4.2E+01	>Sol	1.2E-01		1.6E-04	1.8E-01		

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

Oakland Tier 3 RBSLs (20.0 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benzo(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	3.1E+03	3.1E+03	4.8E+03	1.6E+04	3.2E+00		2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Hazard					2.0E+01	5.2E+03		8.2E+01	8.2E+01	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	2.0E+04	2.0E+04	3.1E+04	1.0E+05	1.8E+01		8.3E+00	9.0E+01	9.0E+01	8.3E-01
		Commercial/ Industrial	Hazard					2.5E+02	9.4E+04		5.2E+02	5.2E+02	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT	SAT	SAT	SAT			SAT	1.2E+02	SAT	
		Commercial/ Industrial	Hazard								4.9E+02	4.9E+02	
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	SAT	
		Commercial/ Industrial	Hazard								SAT	5.5E+02	SAT
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	SAT	
		Commercial/ Industrial	Hazard								SAT	1.6E+00	SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	5.4E+00	
		Commercial/ Industrial	Hazard								SAT	5.4E+01	SAT
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	3.1E+02	
		Commercial/ Industrial	Hazard								SAT	3.2E-03	9.2E+00
		Residential	Carcinogenic	SAT	SAT	SAT	SAT			1.2E+02	1.0E+01	3.2E-03	9.2E+00
		Commercial/ Industrial	Hazard							1.2E+02	3.2E-03	3.2E-03	9.2E+00
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic	SAT	SAT	5.1E+00	SAT	4.4E+00	1.2E+02		3.2E-03	9.2E+00	
		Commercial/ Industrial	Hazard					4.4E+00	1.2E+02		3.2E-03	9.2E+00	
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				3.2E-03	9.2E+00	
		Commercial/ Industrial	Hazard								3.2E-03	9.2E+00	
		Residential	Carcinogenic	SAT	SAT	SAT	SAT			1.2E+02	5.6E-04	1.0E-03	2.0E-04
		Commercial/ Industrial	Hazard							1.0E+00	1.0E-03	1.0E-03	2.0E-04
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT	SAT	SAT	SAT					1.0E-03	2.0E-04
		Commercial/ Industrial	Hazard									1.0E-03	2.0E-04
		Residential	Carcinogenic	SAT	SAT	SAT	SAT					1.0E-03	2.0E-04
		Commercial/ Industrial	Hazard									1.0E-03	2.0E-04
		Residential	Carcinogenic	SAT	SAT	SAT	SAT					1.0E-03	2.0E-04
		Commercial/ Industrial	Hazard									1.0E-03	2.0E-04
Water for Recreation [mg/l]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	SAT	SAT	SAT	SAT				3.8E+00	>Sol	
		Commercial/ Industrial	Hazard								1.3E+01	>Sol	
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				1.3E+02	>Sol	
		Commercial/ Industrial	Hazard								1.3E+02	>Sol	
		Residential	Carcinogenic	SAT	SAT	SAT	SAT				7.5E+02	>Sol	
		Commercial/ Industrial	Hazard								7.5E+02	>Sol	
Water for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	2.8E+01	1.6E-04	6.3E-02	1.1E-05	
		Commercial/ Industrial	Hazard					1.2E-01	2.8E+01		1.6E-04	1.1E-05	

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

Oakland Tier 3 RBSLs (22.5 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benz(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	3.2E+00	5.2E+03	2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Carcinogenic Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	1.8E+01	9.4E+04	8.3E+00	9.0E+01	8.3E-01	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT			SAT	1.4E+02	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT			SAT	5.5E+02	SAT
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				1.6E+00	SAT	
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	4.9E+03	SAT				5.5E+00	SAT	
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic Hazard	3.0E+02	2.0E+02	7.8E-01	SAT	4.4E+00	1.2E+02	1.0E+01	1.0E+01	3.2E-03	9.2E+00
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	5.1E+00	SAT	4.4E+00	1.2E+02	4.4E+01	4.4E+01	3.2E-03	9.2E+00
	Ingestion of Groundwater	Residential	Carcinogenic Hazard					5.0E-02	1.0E+00	1.0E+00	5.6E-04	1.0E-03	2.0E-04
		Commercial/ Industrial	Carcinogenic Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00	1.0E+00	2.5E-03	1.0E-03	2.0E-04
Groundwater [mg/l]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic Hazard	>Sol	>Sol	1.0E+01	>Sol	5.0E-02	1.0E+00		1.0E-03	2.0E-04	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	3.0E+04	>Sol			>Sol	3.8E+00	>Sol	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol				1.3E+01		
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol				1.3E+02	>Sol	
Water for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic Hazard	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	2.8E+01	1.6E-04	6.3E-02	1.1E-05	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	1.2E-01	2.8E+01		1.8E-01		
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol						
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol						

\*italicized concentrations based on California MCLs  
 SAT = RBSL exceeds saturated soil concentration of chemical  
 > Sol = RBSL exceeds solubility of chemical in water

Oakland Tier 3 RBSLs (25.0 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benzof(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	2.0E+01	5.2E+03	2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Carcinogenic Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	1.6E+01	9.4E+04	8.3E+00	9.0E+01	8.3E-01	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT		SAT	1.5E+02	SAT	
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT		SAT	6.1E+02	SAT	
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	5.0E+03	SAT	SAT		SAT	1.7E+00	SAT	
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT		SAT	5.6E+00	SAT	
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic Hazard	3.0E+02	2.0E+02	7.8E-01	SAT	4.4E+00	1.2E+02	1.2E+02	1.0E+01	3.2E-03	9.2E+00
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	5.1E+00	SAT	4.4E+00	1.2E+02	1.2E+02	4.4E+01	3.2E-03	9.2E+00
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00	5.6E-04	1.0E-03	2.0E-04	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	1.0E+01	>Sol	5.0E-02	1.0E+00	2.5E-03	1.0E-03	2.0E-04	
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic Hazard	>Sol	>Sol	3.0E+04	>Sol				>Sol	3.8E+00	>Sol
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol				>Sol	1.3E+01	>Sol
Water for Recreation [mg/l]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol				7.5E+02	>Sol	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol				1.1E+03	>Sol	
	Ingestion/ Dermal	Residential	Carcinogenic Hazard	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	2.8E+01	1.6E-04	6.3E-02	1.8E-01	
		Commercial/ Industrial	Carcinogenic Hazard					1.2E-01					

\*Italicized concentrations based on California MCLs  
 SAT - RBSL exceeds saturated soil concentration of chemical  
 > Sol - RBSL exceeds solubility of chemical in water



Oakland Tier 3 RBSLs (27.5 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benzo(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	2.0E+01	5.2E+03	2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Carcinogenic Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	2.5E+02	9.4E+04	8.3E+00	9.0E+01	8.3E-01	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT			SAT	1.7E+02	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT			SAT	7.5E+02	SAT
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	5.1E+03	SAT	SAT		SAT	1.7E+00	SAT	
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT			SAT	5.7E+00	SAT	
		Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	5.7E+01	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	3.3E+02	SAT
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic Hazard	3.0E+02	2.0E+02	7.8E-01	SAT	4.4E+00	1.2E+02	1.0E+01	3.2E-03	9.2E+00	
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT	4.4E+00	1.2E+02	4.4E+01	3.2E-03	9.2E+00	
		Residential	Carcinogenic Hazard	SAT	SAT	5.1E+00	SAT	5.0E-02	1.0E+00	5.6E-04	1.0E-03	2.0E-04	
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	1.0E+01	SAT	5.0E-02	1.0E+00	2.5E-03	1.0E-03	2.0E-04	
Water for Recreation [mg/l]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	>Sol	>Sol	3.0E+04	>Sol	>Sol		>Sol	3.8E+00	>Sol	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	>Sol		>Sol	1.3E+01	>Sol	
		Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	>Sol		>Sol	7.5E+02	>Sol	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	>Sol		>Sol	1.1E+03	>Sol	
Water for Recreation [mg/l]	Ingestion/ Dermal	Residential	Carcinogenic Hazard	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02		1.6E-04	6.3E-02	1.1E-05	
		Commercial/ Industrial	Carcinogenic 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

Oakland Tier 3 RBSLs (30.0 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)anthracene	Benzene	Benz(a)pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic	3.1E+03	3.1E+03	4.8E+03	1.8E+04	2.0E+01	5.2E+03	2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	1.8E+01	9.4E+04	8.3E+00	9.0E+01	8.3E-01	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	SAT	SAT	SAT	SAT	SAT			SAT	1.9E+02	SAT
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT	SAT			SAT	7.3E+02	SAT
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	SAT	SAT	5.1E+03	SAT			SAT	1.8E+00	SAT	
		Commercial/ Industrial	Hazard	SAT	SAT	SAT	SAT			SAT	5.8E+00	SAT	
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic	SAT	SAT	SAT	SAT				SAT	3.4E+02	SAT
		Commercial/ Industrial	Hazard	3.0E+02	2.0E+02	7.8E-01	SAT	4.4E+00	1.2E+02	1.2E+02	1.0E+01	3.2E-03	9.2E+00
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00	5.6E-04	1.0E-03	2.0E-04	
		Commercial/ Industrial	Hazard	>Sol	>Sol	1.0E+01	>Sol	5.0E-02	1.0E+00	2.5E-03	1.0E-03	1.0E-03	2.0E-04
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic	>Sol	>Sol	>Sol	>Sol				>Sol	3.8E+00	>Sol
		Commercial/ Industrial	Hazard	>Sol	>Sol	3.0E+04	>Sol				>Sol	1.3E+01	>Sol
Water for Recreation [mg/l]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic	>Sol	>Sol	>Sol	>Sol				7.5E-02	>Sol	
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol				>Sol	>Sol	>Sol
	Ingestion/ Dermal	Residential	Carcinogenic	1.1E+00	1.7E+00	4.2E+01	>Sol	2.0E-02	1.2E-01	1.6E-04	6.3E-02	1.1E-05	
		Commercial/ Industrial	Hazard	>Sol	>Sol	>Sol	>Sol					1.8E-01	

\*Validized concentrations based on California MCLs  
 SAT = RBSL exceeds saturated soil concentration of chemical  
 > Sol = RBSL exceeds solubility of chemical in water

Oakland Tier 3 RBSLs (32.5 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benz(a)-pyrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	2.0E+01	5.2E+03	2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Carcinogenic Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	2.5E+02	9.4E+04	8.3E+00	9.0E+01	8.3E-01	
Subsurface Soil [mg/kg]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				7.9E+02		
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT				8.9E+02	SAT	
	Residential	Inhalation of Indoor Air Vapors	Carcinogenic Hazard	SAT	SAT	5.2E+03	SAT				SAT	1.8E+00	SAT
			Carcinogenic Hazard	SAT	SAT		SAT					6.0E+00	
	Commercial/ Industrial	Ingestion of Groundwater Impacted by Leachate	Carcinogenic Hazard	SAT	SAT	SAT	SAT				SAT	6.0E+01	SAT
			Carcinogenic Hazard	SAT	SAT	SAT	SAT					3.5E+02	
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00	5.8E-04	1.0E-03	2.0E-04	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	1.0E+01	>Sol	5.0E-02	1.0E+00	2.5E-03	1.0E-03	1.0E-03	2.0E-04
	Residential	Inhalation of Indoor Air Vapors	Carcinogenic Hazard	>Sol	>Sol	3.0E+04	>Sol				>Sol	3.8E+00	>Sol
			Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol					1.3E+01	
	Commercial/ Industrial	Inhalation of Outdoor Air Vapors	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol				>Sol	1.3E+02	>Sol
			Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol					7.5E+02	
	Residential	Ingestion/ Dermal	Carcinogenic Hazard	1.1E-00	1.7E+00	4.2E+01	>Sol	2.0E-02	1.2E-01	2.8E+01	1.6E-04	6.3E-02	1.1E-05
			Carcinogenic Hazard	1.1E-00	1.7E+00	4.2E+01	>Sol	1.2E-01	1.8E-01				

\*Indicated concentrations based on California MCLs  
 SAT = RBSL exceeds saturated soil concentration of chemical  
 > Sol = RBSL exceeds solubility of chemical in water

Oakland Tier 3 RBSLs (35.0 feet bgs)

Medium	Exposure Pathway	Land Use	Type of Risk	Acenaphthene	Acenaphthylene	Acetone	Anthracene	Arsenic	Barium	Benz(a)-anthracene	Benzene	Benzofluoranthrene	
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	Residential	Carcinogenic Hazard	3.1E+03	3.1E+03	4.8E+03	1.6E+04	2.0E+01	5.2E+03	2.5E+00	2.7E+01	2.5E-01	
		Commercial/ Industrial	Carcinogenic Hazard	2.0E+04	2.0E+04	3.1E+04	1.0E+05	2.5E+02	9.4E+04	8.3E+00	9.0E+01	8.3E-01	
	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT			SAT	2.2E+02	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT	SAT			SAT	9.6E+02	SAT
Subsurface Soil [mg/kg]	Inhalation of Indoor Air Vapors	Residential	Carcinogenic Hazard	SAT	SAT	SAT	SAT				1.8E+00	6.1E+00	SAT
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT				6.1E+01	6.1E+01	SAT
	Ingestion of Groundwater Impacted by Leachate	Residential	Carcinogenic Hazard	SAT	SAT	5.3E+03	SAT					3.5E+02	
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT					3.2E-03	9.2E+00
Groundwater [mg/l]	Ingestion of Groundwater	Residential	Carcinogenic Hazard	3.0E+02	2.0E+02	7.9E-01	SAT	4.4E+00	1.2E+02	1.0E+01	3.2E-03	3.2E-03	9.2E+00
		Commercial/ Industrial	Carcinogenic Hazard	SAT	SAT	SAT	SAT	4.4E+00	1.2E+02	4.4E+01	3.2E-03	3.2E-03	9.2E+00
	Inhalation of Indoor Air Vapors	Residential	Carcinogenic Hazard	9.4E-01	9.4E-01	1.6E+00	>Sol	5.0E-02	1.0E+00	1.0E+00	5.6E-04	1.0E-03	2.0E-04
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00	1.0E+00	2.5E-03	1.0E-03	2.0E-04
Water for Recreation [mg/l]	Inhalation of Outdoor Air Vapors	Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00	>Sol	3.8E+00	>Sol	
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	5.0E-02	1.0E+00	>Sol	1.3E+01	>Sol	
	Ingestion/ Dermal	Residential	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol
		Commercial/ Industrial	Carcinogenic Hazard	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol	>Sol

\*Halicized concentrations based on California MCLs  
 SAT = RBSL exceeds saturated soil concentration of chemical  
 > Sol = RBSL exceeds solubility of chemical in water